

# Publikationen

[JSS+22]

[PDFBIB](#)

Janisch, T., Stollenwerk, A., Siekmann, U., and Kopp, R., "Treatment of children with Hyperbaric Oxygenation (HBOT) : an Europe-wide survey", *Minerva pediatrics*, vol. 74, iss. 2, pp. 116-120, 2022

## Treatment of children with Hyperbaric Oxygenation (HBOT) : an Europe-wide survey

### Bibtex entry :

```
@article { JSS+22,
  author = { Janisch, Thorsten and Stollenwerk, André and Siekmann,
    Ulrich and Kopp, R{"u}dger },
  title = { Treatment of children with Hyperbaric Oxygenation (HBOT)
:
  an Europe-wide survey },
  journal = { Minerva pediatrics },
  publisher = { Edizioni Minerva Medica },
  pages = { 116-120 },
  volume = { 74 },
  number = { 2 },
  year = { 2022 },
  address = { Torino },
  issn = { 1827-1715 },
  doi = { 10.23736/S2724-5276.20.05741-2 },
  typ = { PUB:(DE-HGF)16 },
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http://publications.rwth-aachen.de/record/787714/files/787714.pdf },
}
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[KDK+22]

[PDFBIB](#)

Kloock, M. M., Dirksen, M., Kowalewski, S., and Alrifaae, B., "Generation of Coupling Topologies for Multi-Agent Systems using Non-Cooperative Games", in *Proc. 2022 IEEE Intelligent Vehicles Symposium (IV) : [Proceedings] - IEEE, 2022. - ISBN 978-1-6654-8821-1 - doi:10.1109/IV51971.2022.9827431, 2022, IEEE.*

## Generation of Coupling Topologies for Multi-Agent

# Systems using Non-Cooperative Games

## Bibtex entry :

```
@inproceedings { KDK+22,
  author = { Kloock, Maximilian Martin and Dirksen, Matthis and
    Kowalewski, Stefan and Alrifaae, Bassam },
  title = { Generation of Coupling Topologies for Multi-Agent Systems
    using Non-Cooperative Games },
  booktitle = { 2022 IEEE Intelligent Vehicles Symposium (IV) :
    [Proceedings] - IEEE, 2022. - ISBN 978-1-6654-8821-1 -
    doi:10.1109/IV51971.2022.9827431 },
  publisher = { IEEE },
  year = { 2022 },
  organization = { 2022 IEEE Intelligent Vehicles Symposium (IV),
    Aachen
      (Germany), 2022-06-04 - 2022-06-09 },
  doi = { 10.1109/IV51971.2022.9827431 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-2022-07956 },
  cin = { 122810 },
  url = {
http://publications.rwth-aachen.de/record/852149/files/852149.pdf },
}
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[Boh21]

[PDFBIB](#)

Bohlender, D., "Symbolic methods for formal verification of industrial control software", PhD Thesis, Aachen, 2021.

# Symbolic methods for formal verification of industrial control software

## Bibtex entry :

```
@phdthesis { Boh21,
  author = { Bohlender, Dimitri },
  othercontributors = { Kowalewski, Stefan and Hermanns, Holger },
  title = { Symbolic methods for formal verification of industrial
    control software },
  publisher = { RWTH Aachen University },
  school = { RWTH Aachen University },
  pages = { 1 Online-Ressource : Illustrationen, Diagramme },
  series = { Aachener Informatik-Berichte },
  year = { 2021 },
  address = { Aachen },
  doi = { 10.18154/RWTH-2021-10633 },
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  reportid = { RWTH-2021-10633 },
  cin = { 122810 / 120000 },
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url = {
http://publications.rwth-aachen.de/record/835546/files/835546.pdf },
}
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[FFK+21]

[PDFBIB](#)

Fonck, S., Fritsch, S. J., Kowalewski, S., Hensen, R., and Stollenwerk, A., "Algorithmic distinction of ARDS and Heart Failure in ICU data from medical embedded systems by using a computer model", *IFAC-PapersOnLine*, vol. 54, iss. 4, pp. 135-140, 2021

## Algorithmic distinction of ARDS and Heart Failure in ICU data from medical embedded systems by using a computer model

### Bibtex entry :

```
@article { FFK+21,
  author = { Fonck, Simon and Fritsch, Sebastian Johannes and
    Kowalewski,
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  title = { Algorithmic distinction of ARDS and Heart Failure in ICU
    data from medical embedded systems by using a computer model },
  journal = { IFAC-PapersOnLine },
  publisher = { Elsevier },
  pages = { 135-140 },
  volume = { 54 },
  number = { 4 },
  year = { 2021 },
  address = { Frankfurt ; M{"u"}nchen [u.a.] },
  issn = { 2405-8963 },
  organization = { 4th IFAC Conference on Embedded Systems,
    Computational
      Intelligence and Telematics in Control, Valenciennes
      (France), 2021-07-05 - 2021-07-07 },
  doi = { 10.1016/j.ifacol.2021.10.023 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2021-10204 },
  cin = { 122810 / 120000 / 9210120 / 9210105 },
  url = {
http://publications.rwth-aachen.de/record/834987/files/834987.pdf },
  illkey = { SMITH - Medizininformatik-Konsortium (BMBF-01ZZ1803K) },
}
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[JSG+21]

[PDFBIB](#)

Jatzkowski, I., Stolte, T., Graubohm, R., Maurer, M., Kampmann, A., Alrifaae, B., Kowalewski, S., Buchholz, M., and Dietmayer, K., "Integration of a Vehicle Operating Mode Management into UNICARagil's Automotive Service-oriented Software Architecture", in *Proc. 30. Aachen Colloquium Sustainable Mobility : October 4th-6th, 2021 / scientific management: Univ.-Prof. Dr.-Ing. Lutz Eckstein, Univ.-Prof. Dr.-Ing. Stefan Pischinger ; organizational management:*

Michaela Wacker (M. Sc.), Jonas Müller (M. Sc.) ; organized by: Institute for Automotive Engineering (RWTH Aachen University), Institute for Combustion Engines (RWTH Aachen University), Aachen, 2021, Aachener Kolloquium Fahrzeug- und Motorentchnik GbR, pp. 595-614.

## Integration of a Vehicle Operating Mode Management into UNICARagil's Automotive Service-oriented Software Architecture

### Bibtex entry :

```
@inproceedings { JSG+21,
  author = { Jatzkowski, Inga and Stolte, Torben and Graubohm, Robert
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  Maurer, Markus and Kampmann, Alexandru and Alrifaae, Bassam
and Kowalewski, Stefan and Buchholz, Michael and Dietmayer,
Klaus },
  title = { Integration of a Vehicle Operating Mode Management into
UNICARagil's Automotive Service-oriented Software
Architecture },
  booktitle = { 30. Aachen Colloquium Sustainable Mobility : October
4th-6th, 2021 / scientific management: Univ.-Prof. Dr.-Ing.
Lutz Eckstein, Univ.-Prof. Dr.-Ing. Stefan Pischinger ;
organizational management: Michaela Wacker (M. Sc.), Jonas
M{"u"}ller (M. Sc.) ; organized by: Institute for Automotive
Engineering (RWTH Aachen University), Institute for
Combustion Engines (RWTH Aachen University) },
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},
  pages = { 595-614 },
  year = { 2021 },
  address = { Aachen },
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online,
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}
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[KHK+21]

[PDFBIB](#)

Kloock, M. M., He, Q., Kowalewski, S., and Alrifaae, B., "Trajectory Verification for Networked and Autonomous Vehicles using Temporal Logic and Model Checking", in *Proc. 2021 IEEE International Intelligent Transportation Systems Conference (ITSC) : 19-22 Sept. 2021 / publisher: IEEE, [Piscataway, NJ], 2021, IEEE, pp. 244-250.*

# Trajectory Verification for Networked and Autonomous Vehicles using Temporal Logic and Model Checking

## Bibtex entry :

```
@inproceedings { KHK+21,
  author = { Kloock, Maximilian Martin and He, Qingyun and
    Kowalewski,
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  title = { Trajectory Verification for Networked and Autonomous
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  booktitle = { 2021 IEEE International Intelligent Transportation
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      Conference (ITSC) : 19-22 Sept. 2021 / publisher: IEEE },
  publisher = { IEEE },
  pages = { 244-250 },
  year = { 2021 },
  address = { [Piscataway, NJ] },
  organization = { 24th International Intelligent Transportation
    Systems
      Conference, Indianapolis, IN (USA), 2021-09-19 - 2021-09-22 },
  doi = { 10.1109/ITSC48978.2021.9564414 },
  typ = { PUB:(DE-HGF)7 },
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}
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[KSM+21]

[PDFBIB](#)

Kloock, M. M., Scheffe, P., Maczijekowski, J., Kampmann, A., Mokhtarian, A., Kowalewski, S., and Alrifaae, B., "Cyber-Physical Mobility Lab : An Open-Source Platform for Networked and Autonomous Vehicles", in *Proc. 2021 European Control Conference (ECC)*, [Piscataway, NJ], 2021, IEEE, pp. 1937-1944.

# Cyber-Physical Mobility Lab : An Open-Source Platform for Networked and Autonomous Vehicles

## Bibtex entry :

```
@inproceedings { KSM+21,
  author = { Kloock, Maximilian Martin and Scheffe, Patrick and
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      Armin and Kowalewski, Stefan and Alrifaae, Bassam },
  title = { Cyber-Physical Mobility Lab : An Open-Source Platform for
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  booktitle = { 2021 European Control Conference (ECC) },
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pages = { 1937-1944 },
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2021-06-29 -
    2021-07-02 },
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}

```

[LKL+21]

[PDFBIB](#)

Lamberti, M., Kopp, R., Lübke, C., Leonhardt, S., Walter, M., and Stollenwerk, A., "Safety and Automation Concepts for Artificial Impantable Lungs - SmartLungControl", *Biomedical engineering*, vol. 66, iss. s1, 2021

## Safety and Automation Concepts for Artificial Impantable Lungs - SmartLungControl

### Bibtex entry :

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@article { LKL+21,
  author = { Lamberti, Michael and Kopp, R{"u}diger and L{"u}bke,
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    and Leonhardt, Steffen and Walter, Marian and Stollenwerk,
    André },
  title = { Safety and Automation Concepts for Artificial Impantable
    Lungs - SmartLungControl },
  journal = { Biomedical engineering },
  publisher = { de Gruyter },
  volume = { 66 },
  number = { s1 },
  year = { 2021 },
  address = { Berlin [u.a.] },
  issn = { 0013-5585 },
  organization = { 55nd DGBMT Annual Conference on Biomedical
    Engineering,
    Hannover (Germany), 2021-10-05 - 2021-10-07 },
  doi = { 10.1515/bmt-2021-6028 },
  typ = { PUB:(DE-HGF)1 },
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  cin = { 611010 / 122810533000-3 / 120000 },
  url = { https://doi.org/10.1515/bmt-2021-6028 },
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[MBF+21]

[PDFBIB](#)

Marx, G., Bickenbach, J., Fritsch, S. J., Kunze, J. B., Maassen, O., Deffge, S., Kistermann, J., Haferkamp, S. D., Lutz, I., Voellm, N. K., Lowitsch, V., Polzin, R., Sharafutdinov, K., Mayer, H., Kuepfer, L., Burghaus, R., Schmitt, W., Lippert, J., Riedel, M., Barakat, C., Stollenwerk, A., Fonck, S., Putensen, C., Zenker, S., Erdfelder, F., Grigutsch, D., Kram, R., Beyer, S., Kampe, K., Gewehr, J. E., Salman, F., Juers, P., Kluge, S., Tiller, D., Wisotzki, E., Gross, S., Homeister, L., Bloos, F., Scherag, A., Ammon, D., Mueller, S., Palm, J., Simon, P., Jahn, N., Loeffler, M., Wendt, T., Schuerholz, T., Groeber, P., and Schuppert, A., "Algorithmic surveillance of ICU patients with acute respiratory distress syndrome (ASIC) : protocol for a multicentre stepped-wedge cluster randomised quality improvement strategy", *BMJ open*, vol. 11, iss. 4, pp. 1-7, 2021

## **Algorithmic surveillance of ICU patients with acute respiratory distress syndrome (ASIC) : protocol for a multicentre stepped-wedge cluster randomised quality improvement strategy**

### **Bibtex entry :**

```
@article { MBF+21,  
  author = { Marx, Gernot and Bickenbach, Johannes and Fritsch,  
Sebastian  
  Johannes and Kunze, Julian Benedict and Maassen, Oliver and  
Deffge, Saskia and Kistermann, Jennifer and Haferkamp, Silke  
Dorothee and Lutz, Irina and Voellm, Nora Kristiana and  
Lowitsch, Volker and Polzin, Richard and Sharafutdinov,  
Konstantin and Mayer, Hannah and Kuepfer, Lars and Burghaus,  
Rolf and Schmitt, Walter and Lippert, Joerg and Riedel,  
Morris and Barakat, Chadi and Stollenwerk, André and Fonck,  
Simon and Putensen, Christian and Zenker, Sven and  
Erdfelder, Felix and Grigutsch, Daniel and Kram, Rainer and  
Beyer, Susanne and Kampe, Knut and Gewehr, Jan Erik and  
Salman, Friederike and Juers, Patrick and Kluge, Stefan and  
Tiller, Daniel and Wisotzki, Emilia and Gross, Sebastian and  
Homeister, Lorenz and Bloos, Frank and Scherag, André and  
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Philipp and Jahn, Nora and Loeffler, Markus and Wendt,  
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Schuppert, Andreas },  
  title = { Algorithmic surveillance of ICU patients with acute  
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improvement strategy },  
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doi = { 10.1136/bmjopen-2020-045589 },
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http://publications.rwth-aachen.de/record/817136/files/817136.pdf },
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[MKL+21]

[PDFBIB](#)

Mokhtarian, A., Kampmann, A., Lüer, M., Kowalewski, S., and Alrifaae, B., "A Cloud Architecture for Networked and Autonomous Vehicles", *IFAC-PapersOnLine*, vol. 54, iss. 2, pp. 233-239, 2021

## A Cloud Architecture for Networked and Autonomous Vehicles

### Bibtex entry :

```
@article { MKL+21,
  author = { Mokhtarian, Armin and Kampmann, Alexandru and L{"u}er,
    Maximilian and Kowalewski, Stefan and Alrifaae, Bassam },
  title = { A Cloud Architecture for Networked and Autonomous
Vehicles },
  journal = { IFAC-PapersOnLine },
  publisher = { Elsevier },
  pages = { 233-239 },
  volume = { 54 },
  number = { 2 },
  year = { 2021 },
  address = { Frankfurt },
  issn = { 2405-8963 },
  organization = { 16th IFAC Symposium on Control in Transportation
Systems,
  online, 2021-06-08 - 2021-06-10 },
  doi = { 10.1016/j.ifacol.2021.06.028 },
  typ = { PUB:(DE-HGF)16 },
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  url = {
http://publications.rwth-aachen.de/record/828696/files/828696.pdf },
}
```

[PSS+21]

[PDFBIB](#)

Preuss, R., Smieschek, M., Stollenwerk, A., Kowalewski, S., and Heinrichs, T., "Behälterreinigungsmaschine", 2021.



# Behälterreinigungsmaschine

## Bibtex entry :

```
@techreport { PSS+21,  
  author = { Preuss, R{"u}diger and Smieschek, Manfred and  
Stollenwerk,  
  André and Kowalewski, Stefan and Heinrichs, Timo },  
  title = { Beh{"a"}lterreinigungsmaschine },  
  pages = { 19 Seiten : Illustrationen },  
  year = { 2021 },  
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https://worldwide.espacenet.com/patent/search/family/066998405/publicat  
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}
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[Sch21]

[PDFBIB](#)

Schweigler, M., "Ground surface pattern recognition for enhanced navigation", PhD Thesis, Aachen, 2021.

## Ground surface pattern recognition for enhanced navigation

## Bibtex entry :

```
@phdthesis { Sch21,  
  author = { Schweigler, Martin },  
  othercontributors = { Kowalewski, Stefan and Abel, Dirk },  
  title = { Ground surface pattern recognition for enhanced  
navigation },  
  publisher = { RWTH Aachen University },  
  school = { RWTH Aachen University },  
  pages = { 1 Online-Ressource : Illustrationen, Diagramme, Karten },  
  series = { Aachener Informatik-Berichte },  
  year = { 2021 },  
  address = { Aachen },  
  doi = { 10.18154/RWTH-2021-05828 },  
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  url = {  
http://publications.rwth-aachen.de/record/820793/files/820793.pdf },  
}
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[Tho21]

[PDFBIB](#)

Thönnessen, D., "Hardware-in-the-Loop testing of industrial automation systems using PLC languages", PhD Thesis, Aachen, 2021.

## Hardware-in-the-Loop testing of industrial automation systems using PLC languages

### Bibtex entry :

```
@phdthesis { Tho21,
  author = { Th{"o}nnessen, David },
  othercontributors = { Kowalewski, Stefan and Fabian, Martin },
  title = { Hardware-in-the-Loop testing of industrial automation
    systems using PLC languages },
  publisher = { RWTH Aachen University },
  school = { RWTH Aachen University },
  pages = { 1 Online-Ressource : Illustrationen, Diagramme },
  series = { Aachener Informatik-Berichte },
  year = { 2021 },
  address = { Aachen },
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  typ = { PUB:(DE-HGF)11 },
  reportid = { RWTH-2021-08705 },
  cin = { 122810 / 120000 },
  url = {
http://publications.rwth-aachen.de/record/826036/files/826036.pdf },
}
```

[BBF+20]

[PDFBIB](#)

Buglowski, M., Bleilevens, C., Fabry, G., Kowalewski, S., and Stollenwerk, A., "Flussgesteuerte pH-Regulierung in einem automatisierten Nierenperfusionssystem", *Proceedings on automation in medical engineering*, vol. 1, iss. 1, 2020

## Flussgesteuerte pH-Regulierung in einem automatisierten Nierenperfusionssystem

### Bibtex entry :

```
@article { BBF+20,
  author = { Buglowski, Mateusz and Bleilevens, Christian and Fabry,
    Gregor and Kowalewski, Stefan and Stollenwerk, André },
  title = { Flussgesteuerte pH-Regulierung in einem automatisierten
    Nierenperfusionssystem },
  journal = { Proceedings on automation in medical engineering },
  publisher = { Infinite Science },
  volume = { 1 },
  number = { 1 },
  year = { 2020 },
  address = { L{"u}beck },
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organization = { Automation in Medical Engineering, L{"u}beck
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    2020-03-02 - 2020-03-03 },
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typ = { PUB:(DE-HGF)16 },
reportid = { RWTH-2020-02624 },
cin = { 122810 / 120000533000-3 / 9210105 },
url = { https://doi.org/10.18416/AUTOMED.2020 },
illkey = { BMBF-031L0134B - Alternativmethoden - Verbund: AutoMock
-
    Entwicklung eines vollautomatisierten in vitro Teststands
    (Mock Loop) - Ein k{"u}nstlicher Kreislauf als
    Ersatzmethode zur Biokompatibilit{"a}tstestung von
    Membranoxygenatoren und zur Transplantationssimulation
    (BMBF-031L0134B) },
}

```

[BBG+20]

PDFBIB

Buchsbaum, M. S. K., Brecher, C., Grochowski, M., and Kowalewski, S., "Identifikation von Informationen zur Beschreibung der Systemgrenzen eines sicheren, cyber-physischen Automatisierungssystems", in *Proc. Entwurf komplexer Automatisierungssysteme : EKA 2020 : Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen : 16. Fachtagung mit Spezial-Workshop*, Magdeburg, 2020, Institut für Automation und Kommunikation e.V. - An-Institut der Otto-von-Guericke-Universität Magdeburg, p. 10.

## Identifikation von Informationen zur Beschreibung der Systemgrenzen eines sicheren, cyber-physischen Automatisierungssystems

### Bibtex entry :

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@inproceedings { BBG+20,
    author = { Buchsbaum, Melanie Sarah Katharina and Brecher,
Christian
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    title = { Identifikation von Informationen zur Beschreibung der
    Systemgrenzen eines sicheren, cyber-physischen
    Automatisierungssystems },
    booktitle = { Entwurf komplexer Automatisierungssysteme : EKA 2020
:
    Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen :
    16. Fachtagung mit Spezial-Workshop },
    publisher = { Institut f{"u}r Automation und Kommunikation e.V. -
    An-Institut der Otto-von-Guericke-Universit{"a}t Magdeburg },
    pages = { 10 Seiten },
    year = { 2020 },
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    organization = { 16. Fachtagung EKA-Entwurf komplexer
    Automatisierungssysteme, cancelled },
}

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typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2020-05987 },
cin = { 417200 / 417310 / 080067 / 122810 / 120000 },
}
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[BKR+20]

[PDFBIB](#)

Bürger, J. C., Kausch, H., Raco, D., Ringert, J. O., Rumpe, B., Stüber, S. W., and Wiartalla, M., "Towards an Isabelle Theory for distributed, interactive systems : the untimed case", , Düren2020.

## Towards an Isabelle Theory for distributed, interactive systems : the untimed case

### Bibtex entry :

```
@techreport { BKR+20,
  author = { B{"u}rger, Jens Christoph and Kausch, Hendrik and Raco,
    Deni and Ringert, Jan Oliver and Rumpe, Bernhard and
    St{"u}ber, Sebastian Wolfram and Wiartalla, Marc },
  title = { Towards an Isabelle Theory for distributed, interactive
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  publisher = { Shaker Verlag },
  pages = { 254 Seiten },
  volume = { 45 },
  series = { Aachener Informatik-Berichte, Software-Engineering },
  year = { 2020 },
  address = { D{"u}ren },
  doi = { 10.18154/RWTH-2020-10398 },
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https://www.shaker.de/de/content/catalogue/index.asp?lang=de&ID=8&ISBN=978-3-8440-7265-5 },
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[DCC20]

[PDFBIB](#)

Dzafic, D., Candiotti, J. L., and Cooper, R. A., "Improving wheelchair route planning through instrumentation and navigation systems", in *Proc. 42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society in conjunction with the 43rd Annual Conference of the Canadian Medical and Biological Engineering Society : July 20-24, 2020 via the EMBS Virtual Academy / IEEE, EMB ; conference chairs: Mohamad Sawan (Westlake University), Carolyn McGregor AM (Ontario Tech University), Atam Dhawan (NJIT)*, Piscataway, NJ, 2020, IEEE, pp. 5737-5740.

## Improving wheelchair route planning through

## instrumentation and navigation systems

### Bibtex entry :

```
@inproceedings { DCC20,
  author = { Dzafic, Dzenan and Candiotti, Jorge L. and Cooper, Rory
A. },
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and navigation systems },
  booktitle = { 42nd Annual International Conferences of the IEEE
Engineering in Medicine and Biology Society in conjunction
with the 43rd Annual Conference of the Canadian Medical and
Biological Engineering Society : July 20-24, 2020 via the
EMBS Virtual Academy / IEEE, EMB ; conference chairs:
Mohamad Sawan (Westlake University), Carolyn McGregor AM
(Ontario Tech University), Atam Dhawan (NJIT) },
  publisher = { IEEE },
  pages = { 5737-5740 },
  year = { 2020 },
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[FFL20]

[PDFBIB](#)

Friedrichs, T., Fögen, K., and Lichter, H., "A Comparison Infrastructure for Fault Characterization Algorithms", in *Proc. 2020 IEEE 13th International Conference on Software Testing, Verification and Validation workshops : ICSTW 2020 : proceedings : 23-27 March 2020, Porto, Portugal / publisher: IEEE, Piscataway, NJ, 2020, IEEE, pp. 201-210.*

## A Comparison Infrastructure for Fault Characterization Algorithms

### Bibtex entry :

```
@inproceedings { FFL20,
  author = { Friedrichs, Torben and F{"o}gen, Konrad and Lichter,
Horst },
  title = { A Comparison Infrastructure for Fault Characterization
Algorithms },
  booktitle = { 2020 IEEE 13th International Conference on Software
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Testing,
  Verification and Validation workshops : ICSTW 2020 :
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organization = { 9th Workshop on Combinatorial Testing, online,
2020-10-24 -
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doi = { 10.1109/ICSTW50294.2020.00042 },
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url = { http://publications.rwth-aachen.de/record/808670 },
}

```

[GKB+20]

PDFBIB

Grochowski, M., Kowalewski, S., Buchsbaum, M. S. K., and Brecher, C., "Befähigung der Testautomatisierung für ein cyber-physisches Produktionssystem", in *Proc. Entwurf komplexer Automatisierungssysteme : EKA 2020 : Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen : 16. Fachtagung mit Spezial-Workshop*, Magdeburg, 2020, Institut für Automation und Kommunikation e.V. - An-Institut der Otto-von-Guericke-Universität Magdeburg, p. 10.

## Befähigung der Testautomatisierung für ein cyber-physisches Produktionssystem

### Bibtex entry :

```

@inproceedings { GKB+20,
  author = { Grochowski, Marco and Kowalewski, Stefan and Buchsbaum,
  Melanie Sarah Katharina and Brecher, Christian },
  title = { Bef{\a}higung der Testautomatisierung f{\u}r ein
  cyber-physisches Produktionssystem },
  booktitle = { Entwurf komplexer Automatisierungssysteme : EKA 2020
:
  Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen :
  16. Fachtagung mit Spezial-Workshop },
  publisher = { Institut f{\u}r Automation und Kommunikation e.V. -
  An-Institut der Otto-von-Guericke-Universit{\a}t Magdeburg },
  pages = { 10 Seiten },
  year = { 2020 },
  address = { Magdeburg },
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  Automatisierungssysteme, cancelled },
  typ = { PUB:(DE-HGF)7 },
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cin = { 417200 / 417310 / 080067 / 122810 / 120000 },
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[GSB+20]

PDFBIB

Grochowski, M., Simon, H., Bohlender, D., Kowalewski, S., Löcklin, A., Müller, T., Jazdi, N., Zeller, A., and Weyrich, M., "Formale Methoden für rekonfigurierbare cyber-physische Systeme in der Produktion", *Automatisierungstechnik*, vol. 68, iss. 1, pp. 3-14, 2020

## Formale Methoden für rekonfigurierbare cyber-physische Systeme in der Produktion

### Bibtex entry :

```
@article { GSB+20,
  author = { Grochowski, Marco and Simon, Hendrik and Bohlender,
Dimitri
    and Kowalewski, Stefan and L{"o}cklin, Andreas and
M{"u}ller, Timo and Jazdi, Nasser and Zeller, Andreas and
Weyrich, Michael },
  title = { Formale Methoden f{"u}r rekonfigurierbare cyber-
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  typ = { PUB:(DE-HGF)16 },
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  cin = { 122810 / 120000 },
}
```

[KGE+20]

PDFBIB

König, G., Grochowski, M., Eckert, M., Jakobczak, F., Stollenwerk, J., Kowalewski, S., and Loosen, P., "Apparat zur automatisierten Justage optischer Systeme", *DGaO-Proceedings*, vol. 2020, 2020

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### Bibtex entry :

```
@article { KGE+20,
  author = { K{"o}nig, Georg and Grochowski, Marco and Eckert,
```

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Marvin
    and Jakobczak, F. and Stollenwerk, Jochen and Kowalewski, S.
    and Loosen, Peter },
title = { Apparat zur automatisierten Justage optischer Systeme },
journal = { DGa0-Proceedings },
volume = { 2020 },
year = { 2020 },
address = { Erlangen-N{"u}rnberg: Dt. Gesellschaft f{"u}r
angewandte
    Optik },
issn = { 1614-8436 },
organization = { 121. Jahrestagung der deutschen Gesellschaft
f{"u}r
    angewandte Optik, Bremen (Germany), 2020-06-02 - 2020-06-06 },
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}

```

[KMR+20]

[PDFBIB](#)

Kampmann, A., Mokhtarian, A., Rogalski, J., Kowalewski, S., and Alrifaae, B., "Agile Latency Estimation for a Real-time Service-oriented Software Architecture", *IFAC-PapersOnLine*, vol. 53, iss. 2, pp. 5795-5800, 2020

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### Bibtex entry :

```

@article { KMR+20,
    author = { Kampmann, Alexandru and Mokhtarian, Armin and Rogalski,
Jan
    and Kowalewski, Stefan and Alrifaae, Bassam },
title = { Agile Latency Estimation for a Real-time Service-oriented
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journal = { IFAC-PapersOnLine },
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pages = { 5795-5800 },
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address = { Frankfurt ; M{"u}nchen [u.a.] },
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organization = { 21st IFAC World Congress on Automatic Control -
Meeting
    Societal Challenges, Berlin (Germany), 2020-07-11 -
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doi = { 10.1016/j.ifacol.2020.12.1619 },
typ = { PUB:(DE-HGF)16 },
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cin = { 122810 / 120000 },
url = {
http://publications.rwth-aachen.de/record/822016/files/822016.pdf },
}
```

[KST+20]

[PDFBIB](#)

Kloock, M. M., Scheffe, P., Tülleners, I., Maczijewski, J., Kowalewski, S., and Alrifaae, B., "Vision-Based Real-Time Indoor Positioning System for Multiple Vehicles", *IFAC-PapersOnLine*, vol. 53, iss. 2, pp. 15446-15453, 2020

## Vision-Based Real-Time Indoor Positioning System for Multiple Vehicles

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```
@article { KST+20,
author = { Kloock, Maximilian Martin and Scheffe, Patrick and
T{"u"}lleners, Isabelle and Maczijewski, Janis and
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title = { Vision-Based Real-Time Indoor Positioning System for
Multiple Vehicles },
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number = { 2 },
year = { 2020 },
address = { Frankfurt },
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organization = { 21th IFAC World Congress, online, 2020-07-11 -
2020-07-17 },
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url = {
http://publications.rwth-aachen.de/record/817298/files/817298.pdf },
}
```

[LvW+20]

[PDFBIB](#)

Lampe, B., van Kempen, R., Woopen, T., Kampmann, A., Alrifaae, B., and Eckstein, L., "Reducing Uncertainty by Fusing Dynamic Occupancy Grid Maps in a Cloud-based Collective Environment Model", in *Proc. 2020 IEEE Intelligent Vehicles Symposium (IV)* / publisher: IEEE, Piscataway, NJ, 2020, IEEE, pp. 837-843.

# Reducing Uncertainty by Fusing Dynamic Occupancy Grid Maps in a Cloud-based Collective Environment Model

## Bibtex entry :

```
@inproceedings { LvW+20,
  author = { Lampe, Bastian and van Kempen, Raphael and Woopen, Timo
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Maps
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publisher:
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2020-10-19
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[LvW+20a]

[PDFBIB](#)

Lampe, B., van Kempen, R., Woopen, T., Kampmann, A., Alrifaae, B., and Eckstein, L., "Reducing Uncertainty by Fusing Dynamic Occupancy Grid Maps in a Cloud-based Collective Environment Model", , p. 7, 2020

# Reducing Uncertainty by Fusing Dynamic Occupancy Grid Maps in a Cloud-based Collective Environment Model

## Bibtex entry :

```
@article { LvW+20a,
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}

```

[MKA+20]

PDFBIB

Mokhtarian, A., Kampmann, A., Alrifaae, B., Kowalewski, S., Lampe, B., and Eckstein, L., "Agile Requirement Engineering for a Cloud System for Automated and Networked Vehicles", in *Proc. 2nd International Workshop on Autonomous Systems Design : ASD 2020, March 13, 2020, Grenoble, France, converted to a virtual event due to COVID-19, held in April 2020 / edited by Sebastian Steinhorst, Jyotirmoy V. Deshmukh*, Saarbrücken/Wadern, Germany, 2020 in OpenAccess Series in Informatics, Schloss Dagstuhl - Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, August, p. 4:1-4:8.

## Agile Requirement Engineering for a Cloud System for Automated and Networked Vehicles

### Bibtex entry :

```

@inproceedings { MKA+20,
  author = { Mokhtarian, Armin and Kampmann, Alexandru and Alrifaae,
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GmbH,
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  year = { 2020 },
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Design,
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}

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}

[MKA+20a]

[PDFBIB](#)

Mokhtarian, A., Kampmann, A., Alrifaae, B., and Kowalewski, S., "The Dynamic Service-oriented Software Architecture for the UNICARagil Project", in *Proc. 29. Aachen Colloquium Sustainable Mobility : October 5th-7th, 2020, digital event / scientific management: Univ.-Prof. Dr.-Ing. Lutz Eckstein, Univ.-Prof. Dr.-Ing. Stefan Pischinger ; organizational management: Michaela Wacker (M. Sc.), Jonas Müller (M. Sc.) ; organized by: Institute for Automotive Engineering, RWTH Aachen University; Institute for Combustion Engines, RWTH Aachen University. - 1: October 6th, 2020, Aachen, 2020, Institute for Automotive Engineering, RWTH Aachen University ; Aachen : Institute for Combustion Engines, RWTH Aachen University, pp. 275-284.*

## The Dynamic Service-oriented Software Architecture for the UNICARagil Project

### Bibtex entry :

```
@inproceedings { MKA+20a,
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    Stefan Pischinger ; organizational management: Michaela
    Wacker (M. Sc.), Jonas M{"u"}ller (M. Sc.) ; organized by:
    Institute for Automotive Engineering, RWTH Aachen
    University; Institute for Combustion Engines, RWTH Aachen
    University. - 1: October 6th, 2020 },
  publisher = { Institute for Automotive Engineering, RWTH Aachen
University
    ; Aachen : Institute for Combustion Engines, RWTH Aachen
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  pages = { 275-284 },
  year = { 2020 },
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    Kolloquium Fahrzeug- und Motorentechnik, online, 2020-02-05
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  url = {
http://publications.rwth-aachen.de/record/807282/files/807282.pdf },
}
```

[Obs20]

PDFBIB

Obster, M., "Unterstützung der SPS-Programmierung durch statische Analyse während der Programmeingabe", PhD Thesis, Aachen, 2020.

## Unterstützung der SPS-Programmierung durch statische Analyse während der Programmeingabe

### Bibtex entry :

```
@phdthesis { Obs20,
  author = { Obster, Mathias },
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  pages = { 1 Online-Ressource (xi, 118 Seiten) : Illustrationen },
  series = { Aachener Informatik-Berichte },
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http://publications.rwth-aachen.de/record/812214/files/812214.pdf },
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```

[SMK+20]

PDFBIB

Scheffe, P., Maczijewski, J., Kloock, M. M., Kampmann, A., Derks, A., Kowalewski, S., and Alrifaae, B., "Networked and Autonomous Model-scale Vehicles for Experiments in Research and Education", *IFAC-PapersOnLine*, vol. 53, iss. 2, pp. 17332-17337, 2020

## Networked and Autonomous Model-scale Vehicles for Experiments in Research and Education

### Bibtex entry :

```
@article { SMK+20,
  author = { Scheffe, Patrick and Maczijewski, Janis and Kloock,
    Maximilian Martin and Kampmann, Alexandru and Derks, Andreas
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  title = { Networked and Autonomous Model-scale Vehicles for
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volume = { 53 },
number = { 2 },
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http://publications.rwth-aachen.de/record/817552/files/817552.pdf },
}

```

[SRT+20]

[PDFBIB](#)

Smieschek, M., Rakel, S., Thönnessen, D., Derks, A., Stollenwerk, A., and Kowalewski, S., "A Remote Test Environment for a Large-Scale Microcontroller Laboratory Course", in *Proc. Cyber physical systems : model-based design : 9th international workshop, CyPhy 2019 and 15th international workshop, WESE 2019, New York City, NY, USA, October 17-18, 2019 : revised selected papers / Roger Chamberlain, Martin Edin Grimheden, Walid Taha (eds.)*, Cham, 2020 in *Lecture Notes in Computer Science*, Springer, pp. 231-246.

## A Remote Test Environment for a Large-Scale Microcontroller Laboratory Course

### Bibtex entry :

```

@inproceedings { SRT+20,
  author = { Smieschek, Manfred and Rakel, Stefan and Th{"o}nnessen,
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  title = { A Remote Test Environment for a Large-Scale
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  booktitle = { Cyber physical systems : model-based design : 9th
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    workshop, WESE 2019, New York City, NY, USA, October 17-18,
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  doi = { 10.1007/978-3-030-41131-2_11 },
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http://publications.rwth-aachen.de/record/783169/files/Remote%20Pool%20
Final.pdf },
}

```

[SS20]

[PDFBIB](#)

Stollenwerk, A. and Smieschek, M., "Eingabe und Übertragung von Instandhaltungsinformationen für das Condition Monitoring - Digitalisierung von Offline-Informationen", , Düsseldorf / Berlin, VDI/VDE 3711, 2020.

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### Bibtex entry :

```

@techreport { SS20,
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https://www.vdi.de/richtlinien/details/vdivde-3711-eingabe-und-uebertra
gung-von-instandhaltungsinformationen-fuer-das-condition-monitoring-
digitalisierung-von-offline-informationen },
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  Demonstratoren in realen Umgebungen und Evaluation mit Fokus
  auf Standardisierung (I40Demo); Teilvorhaben: 'Use Case 2:
  Plug&Produce - Feldger{\a}tetausch im Betrieb' und 'Use
  Case 4: Predictive Maintenance' (BMWi-03TNF001B) },
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```

[Sto20]

[PDFBIB](#)

Stollenwerk, A., "An Embedded Graduate Lab Course with Spirit", in *Proc. Cyber Physical Systems. Model-Based Design : 9th International Workshop, CyPhy 2019, and 15th International*

*Workshop, WESE 2019, New York City, NY, USA, October 17-18, 2019, Revised Selected Papers / edited by Roger Chamberlain, Martin Edin Grimheden, Walid Taha., Cham, 2020 in Lecture Notes in Computer Science, Springer International Publishing ; Cham : Imprint: Springer, pp. 247-263.*

## An Embedded Graduate Lab Course with Spirit

### Bibtex entry :

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@inproceedings { Sto20,
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}
```

[BCK+19]

[PDFBIB](#)

Bohlender, D., Chiyah Garcia, F. J., Köhl, M., Menghi, C., and Wortmann, A., "On Explainability and its Characterization", *Explainable Software for Cyber-Physical Systems (ES4CPS) : Report from the GI Dagstuhl Seminar 19023 : January 06-11 2019, Schloss Dagstuhl / Edited By: Joel Greenyer ; Malte Lochau ; Thomas Vogel*, pp. 4-7, 2019

## On Explainability and its Characterization

### Bibtex entry :

```
@article { BCK+19,
  author = { Bohlender, Dimitri and Chiyah Garcia, Francisco J. and
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journal = { Explainable Software for Cyber-Physical Systems
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pages = { 4-7 },
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organization = { GI Dagstuhl Seminar 19023 on Explainable Software
for
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    2019-01-11 },
doi = { 10.18154/RWTH-2020-01625 },
typ = { PUB:(DE-HGF)25 },
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}

```

[BK19]

[PDFBIB](#)

Bohlender, D. and Kowalewski, S., "Leveraging Horn clause solving for compositional verification of PLC software", *Discrete event dynamic systems*, vol. 30, pp. 1-24, 2019

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### Bibtex entry :

```

@article { BK19,
    author = { Bohlender, Dimitri and Kowalewski, Stefan },
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    verification of PLC software },
    journal = { Discrete event dynamic systems },
    publisher = { Springer Science + Business Media B.V },
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    volume = { 30 },
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    issn = { 1573-7594 },
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    url = { http://publications.rwth-aachen.de/record/775404 },
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```

[BK19a]

[PDFBIB](#)

Bohlender, D. and Köhl, M. A., "Towards a Characterization of Explainable Systems", , 2019

# Towards a Characterization of Explainable Systems

## Bibtex entry :

```
@article { BK19a,  
  author = { Bohlender, Dimitri and K{"o}hl, Maximilian A. },  
  title = { Towards a Characterization of Explainable Systems },  
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https://www.semanticscholar.org/paper/Towards-a-Characterization-of-Exp  
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K%C3%B6hl/b3516a71fed895a1a88b7d9842eca41c0fb48b7d },  
}
```

[Der19]

[PDFBIB](#)

Dernehl, C. M., "Verification of embedded software models by combining abstract interpretation, symbolic execution and stability analysis", PhD Thesis, Aachen, 2019.

## Verification of embedded software models by combining abstract interpretation, symbolic execution and stability analysis

## Bibtex entry :

```
@phdthesis { Der19,  
  author = { Dernehl, Christian Michael },  
  othercontributors = { Kowalewski, Stefan and Moormann, Dieter },  
  title = { Verification of embedded software models by combining  
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Science },  
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http://publications.rwth-aachen.de/record/761850/files/761850.pdf },  
}
```

[FDG+19]

[PDFBIB](#)

Fabry, G., Doorschodt, B. M., Grzanna, T., Boor, P., Elliott, A. R., Stollenwerk, A., Tolba, R. H., Rossaint, R., and Bleilevens, C., "Cold Preflush of Porcine Kidney Grafts Prior to Normothermic Machine Perfusion Aggravates Ischemia Reperfusion Injury", *Scientific reports*, vol. 9, p. 9, 2019

## Cold Preflush of Porcine Kidney Grafts Prior to Normothermic Machine Perfusion Aggravates Ischemia Reperfusion Injury

**Bibtex entry :**

```
@article { FDG+19,
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          (Mock Loop) - Ein k{"u"}nstlicher Kreislauf als
          Ersatzmethode zur Biokompatibilit{"a"}tstestung von
          Membranoxygenatoren und zur Transplantationssimulation
          (BMBF-031L0134B) },
}
```

[GKB+19]

[PDFBIB](#)

Grochowski, M., Kowalewski, S., Buchsbaum, M. S. K., and Brecher, C., "Applying Runtime Monitoring to the Industrial Internet of Things", in *Proc. 2019 24th IEEE International Conference on Emerging Technologies and Factory Automation (ETFA) : Paraninfo Building, University of*

Zaragoza, Zaragoza, Spain, 10-13 September, 2019 : proceedings / organized by: University of Zaragoza, Spain ; sponsored by: the Institute of Electrical and Electronics Engineers (IEEE), IEEE Industrial Electronics Society (IES), Aragón Institute for Engineering Research (I3A), Spain, Piscataway, NJ, 2019, IEEE.

## Applying Runtime Monitoring to the Industrial Internet of Things

### Bibtex entry :

```
@inproceedings { GKB+19,
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  booktitle = { 2019 24th IEEE International Conference on Emerging
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    September, 2019 : proceedings / organized by: University of
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}
```

[GKB+19a]

[PDFBIB](#)

Grochowski, M., Kowalewski, S., Buchsbaum, M. S. K., and Brecher, C., "Applying Passive Testing to an Industrial Internet of Things Plant", in *Proc. VALID 2019 : the Eleventh International Conference on Advances in System Testing and Validation Lifecycle : November 24-28, 2019, Valencia, Spain / IARIA ; VALID 2019 editors: Jos van Rooyen (Identify - Software Quality Services, the Netherlands), Samuele Buro (University of Verona, Italy), Marco Campion (University of Verona, Italy), Michele Pasqua (University of Verona, Italy), [Wilmington, DE, USA], 2019, IARIA, pp. 31-37.*

# Applying Passive Testing to an Industrial Internet of Things Plant

## Bibtex entry :

```
@inproceedings { GKB+19a,
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    Melanie Sarah Katharina and Brecher, Christian },
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    editors: Jos van Rooyen (Identify - Software Quality
    Services, the Netherlands), Samuele Buro (University of
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http://thinkmind.org/index.php?view=article&articleid=valid_2019_2_30_4
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}
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[Gob19]

[PDFBIB](#)

Göbe, F., "Runtime supervision of PLC programs using discrete-event systems", PhD Thesis, Aachen, 2019.

## Runtime supervision of PLC programs using discrete-event systems

## Bibtex entry :

```
@phdthesis { Gob19,
  author = { G{"o}be, Florian },
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    systems },
    publisher = { RWTH Aachen University, Department of Computer
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    url = {
http://publications.rwth-aachen.de/record/773311/files/773311.pdf },
}
```

[Gro19]

[PDFBIB](#)

Grobosch, S., "Formale Methoden für die Entwicklung von eingebetteter Software in kleinen und mittleren Unternehmen", PhD Thesis, Düren, 2019.

## Formale Methoden für die Entwicklung von eingebetteter Software in kleinen und mittleren Unternehmen

### Bibtex entry :

```
@phdthesis { Gro19,
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http://publications.rwth-aachen.de/record/768999/files/768999.pdf },
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[KAK+19]

[PDFBIB](#)

Kampmann, A., Alrifaae, B., Kohout, M., Wüstenberg, A., Woopen, T., Nolte, M., Eckstein, L., and Kowalewski, S., "A Dynamic Service-Oriented Software Architecture for Highly Automated Vehicles", in *Proc. The 2019 IEEE Intelligent Transportation Systems Conference - ITSC : Auckland, New Zealand, 27-30 October 2019 / IEEE, IEEE-ITSC 2019, ITSS - IEEE Intelligent Transportation Systems Society*, Piscataway, NJ, 2019, IEEE, pp. 2101-2108.

## A Dynamic Service-Oriented Software Architecture for Highly Automated Vehicles

### Bibtex entry :

```
@inproceedings { KAK+19,
  author = { Kampmann, Alexandru and Alrifaae, Bassam and Kohout,
Markus
    and W{"u}stenberg, Andreas and Woopen, Timo and Nolte,
    Marcus and Eckstein, Lutz and Kowalewski, Stefan },
  title = { A Dynamic Service-Oriented Software Architecture for
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  booktitle = { The 2019 IEEE Intelligent Transportation Systems
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  url = { http://publications.rwth-aachen.de/record/773699 },
}
```

[KBL+19]

[PDFBIB](#)

Köhl, M. A., Baum, K., Langer, M., Oster, D., Speith, T., and Bohlender, D., "Explainability as a Non-Functional Requirement", in *Proc. 2019 IEEE 27th International Requirements Engineering Conference : 23-27 September 2019, Jeju Island, South Korea : proceedings / editors: Daniela Damian and Anna Perini (Program Chairs), Seok-Won Lee (General Chair)*, Piscataway, NJ, 2019, IEEE, pp. 363-368.

# Explainability as a Non-Functional Requirement

## Bibtex entry :

```
@inproceedings { KBL+19,
  author = { K{"o}hl, Maximilian A. and Baum, Kevin and Langer,
Markus
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  booktitle = { 2019 IEEE 27th International Requirements Engineering
Conference : 23-27 September 2019, Jeju Island, South Korea
: proceedings / editors: Daniela Damian and Anna Perini
(Program Chairs), Seok-Won Lee (General Chair) },
  publisher = { IEEE },
  pages = { 363-368 },
  year = { 2019 },
  address = { Piscataway, JN },
  organization = { 2019 IEEE 27th International Requirements
Engineering
Conference, Jeju Island (South Korea), 2019-09-23 -
2019-09-27 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/775403 },
}
```

[KBS+19]

[PDFBIB](#)

Kühn, J., Buglowski, M., Stollenwerk, A., Kowalewski, S., Walter, M., Leonhardt, S., Petran, J., Kopp, R., Rossaint, R., and Janisch, T., "Fault Identification in a Blood Pump Using Neural Networks", in *Proc. World Congress on Medical Physics and Biomedical Engineering 2018 : June 3-8, 2018, Prague, Czech Republic (Vol.2) / edited by Lenka Lhotska, Lucie Sukupova, Igor Lacković, Geoffrey S. Ibbott*, Singapore, 2019 in IFMBE Proceedings, Springer Singapore, pp. 27-32.

# Fault Identification in a Blood Pump Using Neural Networks

## Bibtex entry :

```
@inproceedings { KBS+19,
  author = { K{"u}hn, Jan and Buglowski, Mateusz and Stollenwerk,
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Rolf and Janisch, Thorsten },
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Networks },
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booktitle = { World Congress on Medical Physics and Biomedical
Engineering
    2018 : June 3-8, 2018, Prague, Czech Republic (Vol.2) /
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    Geoffrey S. Ibbott },
publisher = { Springer Singapore },
pages = { 27-32 },
series = { IFMBE Proceedings },
year = { 2019 },
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organization = { IUPESM World Congress on Medical Physics and
Biomedical
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    2018-06-08 },
doi = { 10.1007/978-981-10-9038-7_6 },
typ = { PUB:(DE-HGF)7 },
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    Entwicklung eines vollautomatisierten in vitro Teststands
    (Mock Loop) - Ein kunstlicher Kreislauf als
    Ersatzmethode zur Biokompatibilit tstestung von
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```

[KKM+19]

[PDFBIB](#)

Kloock, M. M., Kragl, L., Maczijewski, J., Alrifaae, B., and Kowalewski, S., "Distributed Model Predictive Pose Control of Multiple Nonholonomic Vehicles", in *Proc. IV19 : 30th IEEE Intelligent Vehicles Symposium : 9-12 June 2019, Paris / publisher: IEEE, [Piscataway, New Jersey], 2019, IEEE, pp. 1620-1625.*

## Distributed Model Predictive Pose Control of Multiple Nonholonomic Vehicles

### Bibtex entry :

```

@inproceedings { KKM+19,
    author = { Kloock, Maximilian Martin and Kragl, Ludwig and
Maczijewski,
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url = { http://publications.rwth-aachen.de/record/766610 },
}

```

[KNR+19]

[PDFBIB](#)

Keilhoff, D., Niedballa, D., Reuss, H., Buchholz, M., Gies, F., Dietmayer, K., Lauer, M., Stiller, C., Ackermann, S., Winner, H., Kampmann, A., Alrifaae, B., Kowalewski, S., Klein, F., Struth, M. M., Woopen, T., and Eckstein, L., "UNICARagil - New architectures for disruptive vehicle concepts", in *Proc. 19. Internationales Stuttgarter Symposium : Automobil- und Motorentchnik / herausgegeben von Michael Bargende, Hans-Christian Reuss, Andreas Wagner, Jochen Wiedemann*, Wiesbaden, 2019 in Proceedings Springer eBooks, Springer Fachmedien Wiesbaden, pp. 830-842.

## UNICARagil - New architectures for disruptive vehicle concepts

### Bibtex entry :

```

@inproceedings { KNR+19,
  author = { Keilhoff, Dan and Niedballa, Dennis and Reuss,
    Hans-Christian and Buchholz, Michael and Gies, Fabian and
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    and Ackermann, Stefan and Winner, Hermann and Kampmann,
    Alexandru and Alrifaae, Bassam and Kowalewski, Stefan and
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Automobil- und
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doi = { 10.1007/978-3-658-25939-6_65 },
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url = { http://publications.rwth-aachen.de/record/770823 },
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```

[KSB+19]

[PDFBIB](#)

Kloock, M. M., Scheffe, P., Botz, L., Maczijewski, J., Alrifaae, B., and Kowalewski, S., "Networked Model Predictive Vehicle Race Control", in *Proc. The 2019 IEEE Intelligent Transportation Systems Conference - ITSC : Auckland, New Zealand, 27-30 October 2019 / IEEE, IEEE-ITSC 2019, ITSS - IEEE Intelligent Transportation Systems Society*, Piscataway, NJ, 2019, IEEE, pp. 1552-1557.

## Networked Model Predictive Vehicle Race Control

### Bibtex entry :

```

@inproceedings { KSB+19,
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}

```

[KSM+19]

[PDFBIB](#)

Kloock, M. M., Scheffe, P., Marquardt, S., Maczijewski, J., Alrifaae, B., and Kowalewski, S., "Distributed Model Predictive Intersection Control of Multiple Vehicles", in *Proc. The 2019 IEEE Intelligent Transportation Systems Conference - ITSC : Auckland, New Zealand, 27-30 October 2019 / IEEE, IEEE-ITSC 2019, ITSS - IEEE Intelligent Transportation Systems Society*, Piscataway, NJ, 2019, IEEE, p. 8917117, 1735-1740.

# Distributed Model Predictive Intersection Control of Multiple Vehicles

## Bibtex entry :

```
@inproceedings { KSM+19,
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[KTF19]

[PDFBIB](#)

Khan, A., Thönnessen, D., and Fabian, M., "On-the-fly conformance testing of safety PLC code using QuickCheck", in *Proc. 2019 IEEE 17th International Conference on Industrial Informatics (INDIN) : Aalto University, Helsinki-Espoo, Finland, 22-25 July, 2019 : proceedings / organized by: Aalto University, Finland; Tampere University, Finland; Finnish Society of Automation, Finland ; sponsored by: the Institute of Electrical and Electronics Engineers (IEEE), IEEE Industrial Electronics Society (IES)*, Piscataway, NJ, 2019, IEEE, pp. 419-424.

## On-the-fly conformance testing of safety PLC code using QuickCheck

## Bibtex entry :

```
@inproceedings { KTF19,
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Finnish Society of Automation, Finland ; sponsored by: the
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Informatics, Helsinki (Finland), 2019-07-22 - 2019-07-25 },
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url = { http://publications.rwth-aachen.de/record/760542 },
}

```

[KWA+19]

[PDFBIB](#)

Kampmann, A., Wüstenberg, A., Alrifaae, B., and Kowalewski, S., "A Portable Implementation of the Real-Time Publish-Subscribe Protocol for Microcontrollers in Distributed Robotic Applications", in *Proc. The 2019 IEEE Intelligent Transportation Systems Conference - ITSC : Auckland, New Zealand, 27-30 October 2019 / IEEE, IEEE-ITSC 2019, ITSS - IEEE Intelligent Transportation Systems Society*, Piscataway, NJ, 2019, IEEE, pp. 443-448.

## A Portable Implementation of the Real-Time Publish-Subscribe Protocol for Microcontrollers in Distributed Robotic Applications

### Bibtex entry :

```

@inproceedings { KWA+19,
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- ITSC : Auckland, New Zealand, 27-30 October 2019 / IEEE,
IEEE-ITSC 2019, ITSS - IEEE Intelligent Transportation
Systems Society },
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organization = { 22nd IEEE Intelligent Transportation Systems
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[PAS+19]

[PDFBIB](#)

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### Bibtex entry :

```
@article { PAS+19,
    author = { Pomprapa, Anake and Ahmed, Waqar and Stollenwerk, André
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    Kowalewski, Stefan and Leonhardt, Steffen },
    title = { Deep Learning of Arrhythmia Analysis Based on
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    url = { http://www.ijbem.org/volume21/number1/48-58.pdf },
}
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[Sch19]

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# Software für den Einsatz in zeitheterogenen Netzwerken

## Bibtex entry :

```
@phdthesis { Sch19,
  author = { Schommer, John },
  othercontributors = { Kowalewski, Stefan and Rumpe, Bernhard },
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    Software f{"u}r den Einsatz in zeitheterogenen Netzwerken },
  school = { RWTH Aachen University },
  pages = { 1 Online-Ressource (xv, 177 Seiten) : Illustrationen,
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[SKS+19]

[PDFBIB](#)

Smieschek, M., Kobsik, G., Stollenwerk, A., Kowalewski, S., Orlikowsky, T., and Schoberer, M., "Aided Hand Detection in Thermal Imaging Using RGB Stereo Vision", in *Proc. Biomedical engineering ranging from wellness to intensive care : 2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC) : 41st EMB Conference : July 23-27, Berlin / IEEE, EMB ; conference editorial board chair: Riccardo Barbieri, Milan, Italy, Piscataway, NJ, 2019, IEEE, pp. 6314-6317.*

## Aided Hand Detection in Thermal Imaging Using RGB Stereo Vision

### Bibtex entry :

```
@inproceedings { SKS+19,
  author = { Smieschek, Manfred and Kobsik, Gregor and Stollenwerk,
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    Schoberer, Mark },
  title = { Aided Hand Detection in Thermal Imaging Using RGB Stereo
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  booktitle = { Biomedical engineering ranging from wellness to
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      care : 2019 41st Annual International Conference of the IEEE
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      EMB Conference : July 23-27, Berlin / IEEE, EMB ; conference
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pages = { 6314-6317 },
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in Medicine & Biology Society, Berlin (Germany), 2019-07-23
- 2019-07-27 },
doi = { 10.1109/EMBC.2019.8856990 },
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}

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[TSF+19]

[PDFBIB](#)

Thönnessen, D., Smallbone, N., Fabian, M., Claessen, K., and Kowalewski, S., "Testing Safety PLCs Using QuickCheck", in *Proc. 2019 IEEE 15th International Conference on Automation Science and Engineering : (CASE) : August 22-26, 2019, Vancouver, BC, Canada / sponsored by IEEE Robotics and Automation Society ; CASE editorial board: editor-in-chief: Spiridon (Spyros) Reveliotis ; editors: Cappelleri, David; Dimarogonas, Dimos V.; Dotoli, Mariagrazia; Fanti, Maria Pia; LUTZ, Philippe; Seatzu, Carla; Xie, Xiaolan*, Piscataway, NJ, 2019, IEEE, pp. 1388-1393.

## Testing Safety PLCs Using QuickCheck

### Bibtex entry :

```

@inproceedings { TSF+19,
author = { Th{"o}nnessen, David and Smallbone, Nick and Fabian,
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and Claessen, Koen and Kowalewski, Stefan },
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Science and Engineering : (CASE) : August 22-26, 2019,
Vancouver, BC, Canada / sponsored by IEEE Robotics and
Automation Society ; CASE editorial board: editor-in-chief:
Spiridon (Spyros) Reveliotis ; editors: Cappelleri, David;
Dimarogonas, Dimos V.; Dotoli, Mariagrazia; Fanti, Maria
Pia; LUTZ, Philippe; Seatzu, Carla; Xie, Xiaolan },
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}

[VK19]

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### Bibtex entry :

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@inproceedings { VK19,
  author = { V{"o"}lker, Marcus and Kowalewski, Stefan },
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  doi = { 10.1007/978-3-030-32304-2_5 },
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    http://publications.rwth-aachen.de/record/768806/files/768806.pdf },
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```

[VKR+19]

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## Verification of Cooperative Vehicle Behavior using Temporal Logic

### Bibtex entry :

```
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author = { V{"o}lker, Marcus and Kloock, Maximilian Martin and
          Rabanus, Leon and Alrifaae, Bassam and Kowalewski, Stefan },
title = { Verification of Cooperative Vehicle Behavior using
Temporal
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publisher = { Elsevier },
pages = { 99-104 },
volume = { 52 },
number = { 8 },
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address = { Frankfurt ; M{"u}nchen [u.a.] },
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Vehicles,
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doi = { 10.1016/j.ifacol.2019.08.055 },
typ = { PUB:(DE-HGF)16 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/766778 },
}

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[AM18]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { AM18,
author = { Alrifaae, Bassam and Maczijekowski, Janis },
title = { Real-time Trajectory optimization for Autonomous Vehicle
          Racing using Sequential Linearization },
booktitle = { 2018 IEEE Intelligent Vehicles Symposium (IV) : 26-30
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(Peoples
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typ = { PUB:(DE-HGF)7 },
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url = { http://publications.rwth-aachen.de/record/748563 },
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[BFH+18]

[PDFBIB](#)

Bordasch, M., Facchi, C., Heidepriem, S., Jähnert, J., Jung, T., Köllner, C., Kraas, A., Krause, J., Krüning, K., Kugler, A., Maschler, B., Schleicher, C., Siegrist, D., Simon, H., Störmer, C., Thönnessen, D., Wassermann, E., Weyrich, M., Wimmer, T., and Zeller, A., "VDI Status Report Testing of Networked Systems for Industrie 4.0", 2018.

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@techreport { BFH+18,
  author = { Bordasch, Manuel and Facchi, Christian and Heidepriem,
    Sebastian and J{"a}hnert, J{"u}rger and Jung, Tobias and
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    and Kr{"u}ning, Kai and Kugler, Alexander and Maschler,
    Benjamin and Schleicher, Christian and Siegrist, Daniel and
    Simon, Hendrik and St{"o}rmer, Christoph and
    Th{"o}nnessen, David and Wassermann, Erik and Weyrich,
    Michael and Wimmer, Thomas and Zeller, Andreas },
  title = { VDI Status Report Testing of Networked Systems for
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  pages = { 1-20 },
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https://www.vdi.de/ueber-uns/presse/publikationen/details?tx\_vdi\_publications\_publicationdetails%5Bpublication%5D=19&cHash=e6b4c230eafa31d95ceb75395274c78c },
}
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[BHK18]

[PDFBIB](#)

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# Cycle-Bounded Model Checking of PLC Software via Dynamic Large-Block Encoding

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@inproceedings { BHK18,
  author = { Bohlender, Dimitri and Hamm, Daniel and Kowalewski,
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Large-Block Encoding },
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Symposium on
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sponsored by: ACM Special Interest Group on Applied
Computing ; conference chairs: Hisham M. Haddad (Kennesaw
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  url = { http://publications.rwth-aachen.de/record/752221 },
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[BK18]

[PDFBIB](#)

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# Compositional Verification of PLC Software using Horn Clauses and Mode Abstraction

## Bibtex entry :

```
@article { BK18,
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year = { 2018 },
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Systems,
    Castellammare di Stabia (Italy), 2018-05-30 - 2018-06-01 },
doi = { 10.1016/j.ifacol.2018.06.336 },
typ = { PUB:(DE-HGF)16 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/730763 },
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[BK18a]

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## Design and Verification of Restart-Robust Industrial Control Software

### Bibtex entry :

```

@inproceedings { BK18a,
  author = { Bohlender, Dimitri and Kowalewski, Stefan },
  title = { Design and Verification of Restart-Robust Industrial
Control
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[CMW+18]

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## Controlled Natural Languages for Hazard Analysis and Risk Assessment

### Bibtex entry :

```
@inproceedings { CMW+18,
  author = { Chomicz, Paul and M{"u"}ller-Lerwe, Armin and Wegner,
    G{"o"}tz-Philipp and Busch, Rainer and Kowalewski, Stefan },
  title = { Controlled Natural Languages for Hazard Analysis and Risk
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      Ireland, August 27-28, 2018 / edited by Brian Davis
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  url = { http://ebooks.iospress.nl/volumearticle/49768 },
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```

[GAK18]

**PDFBIB**

Göbe, F., Aydin, S., and Kowalewski, S., "Applicability of supervisory control theory for the supervision of PLC programs", in *Proc. 2017 22nd IEEE International Conference on Emerging Technologies and Factory Automation : September 12-15, 2017, Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus, [Piscataway, NJ]*, 2018 in *IEEE International Conference on Emerging Technologies and Factory Automation-ETFA*, IEEE, p. 8.

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## Bibtex entry :

```
@inproceedings { GAK18,
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Technologies and Factory Automation : September 12-15, 2017,
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  pages = { 8 Seiten },
  series = { IEEE International Conference on Emerging Technologies
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  year = { 2018 },
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  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2018-223454 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/722221 },
}
```

[GSA+18]

[PDFBIB](#)

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## A GPS-aided Inertial Navigation System for Vehicular Navigation using a Smartphone

## Bibtex entry :

```
@article { GSA+18,
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Bassam and Kowalewski, Stefan },
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Intelligence and Telematics in Control, Farod (Portugal),
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}

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[KRG+18]

[PDFBIB](#)

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},
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publisher = { Springer Fachmedien },
pages = { 44-47 },
volume = { 79 },
number = { 5 },
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cin = { 412310 / 121510 / 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/731737 },
}

```

[KRG+18a]

[PDFBIB](#)

Kriebel, S., Richenhagen, J. M., Granrath, C., and Kugler, C., "Systems Engineering mit SysML : Der Weg in die Zukunft?", *Motortechnische Zeitschrift : MTZ*, vol. 79, iss. 5, pp. 48-53, 2018



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## Bibtex entry :

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@article { KRG+18a,
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[KSK+18]

[PDFBIB](#)

Kühn, J., Stollenwerk, A., Kowalewski, S., Fabry, G., Grzanna, T., Doorschodt, B., Tolba, R. H., Rossaint, R., and Bleilevens, C., "A long-term setup for kidney perfusion"." 2018.

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### Bibtex entry :

```
@inproceedings { KSK+18,
  author = { K{"u}hn, Jan and Stollenwerk, André and Kowalewski,
    Stefan
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    Entwicklung eines vollautomatisierten in vitro Teststands  
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[MVC+18]

[PDFBIB](#)

Merchant, F., Vatwani, T., Chattopadhyay, A., Raha, S., Nandy, S. K., and Narayan, R., "Efficient Realization of Householder Transform Through Algorithm-Architecture Co-Design for Acceleration of QR Factorization", *IEEE transactions on parallel and distributed systems*, vol. 29, iss. 8, pp. 1707-1720, 2018

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### Bibtex entry :

```
@article { MVC+18,  
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            Anupam and Raha, Soumyendu and Nandy, S. K. and Narayan,  
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  title = { Efficient Realization of Householder Transform Through  
            Algorithm-Architecture Co-Design for Acceleration of QR  
            Factorization },  
  journal = { IEEE transactions on parallel and distributed systems  
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  url = { http://publications.rwth-aachen.de/record/731326 },  
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```

[OK18]

[PDFBIB](#)

Obster, M. and Kowalewski, S., "A live static code analysis architecture for PLC software", in *Proc. 2017 22nd IEEE International Conference on Emerging Technologies and Factory Automation : September 12-15, 2017, Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus, [Piscataway, NJ]*, 2018 in IEEE International Conference on Emerging Technologies and Factory

Automation-ETFA, IEEE, p. 4.

## A live static code analysis architecture for PLC software

### Bibtex entry :

```
@inproceedings { OK18,
  author = { Obster, Mathias and Kowalewski, Stefan },
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},
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Technologies and Factory Automation : September 12-15, 2017,
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[PAS+18]

[PDFBIB](#)

Pomprapa, A., Ahmed, W., Stollenwerk, A., Kowalewski, S., Uguz, D. U., and Leonhardt, S., "Arrhythmia Analysis in a Non-contact cECG Chair using Convolutional Neural Network", in *Proc. Proceedings of the 11th International Conference on Bioelectromagnetism : 23-25 May 2018, Aachen, Germany / Organizing Committee for ICBEM 2018 in Aachen: Prof. Steffen Leonhardt, RWTH Aachen University, Germany, Prof. Jaakko Malmivuo, Technische Universität Berlin, Germany, Dr. Marian Walter, RWTH Aachen University, Germany, Benjamin Hentze, RWTH Aachen University, Germany Markus Lüken, RWTH Aachen University, Germany ; Scientific Committee for ICBEM 2018 in Aachen: Prof. Catherine Disselhorst-Klug, RWTH Aachen University, Germany [und 27 weitere], Aachen, 2018, p. 4.*

## Arrhythmia Analysis in a Non-contact cECG Chair using Convolutional Neural Network

### Bibtex entry :

```
@inproceedings { PAS+18,
  author = { Pomprapa, Anake and Ahmed, Waqar and Stollenwerk, André
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and

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    Kowalewski, Stefan and Uguz, Durmus Umutcan and Leonhardt,
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    Leonhardt, RWTH Aachen University, Germany, Prof. Jaakko
    Malmivuo, Technische Universit{"a}t Berlin, Germany, Dr.
    Marian Walter, RWTH Aachen University, Germany, Benjamin
    Hentze, RWTH Aachen University, Germany Markus L{"u}ken,
    RWTH Aachen University, Germany ; Scientific Committee for
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}

```

[PAS+18a]

[PDFBIB](#)

Pomprapa, A., Ahmed, W., Sayani, M. S., Stollenwerk, A., Kowalewski, S., and Leonhardt, S., "Classification of Obstructive Sleep Apnea Using Machine Learning", *American journal of respiratory and critical care medicine*, vol. 197, iss. Abstract Issue, p. 1, 2018

## Classification of Obstructive Sleep Apnea Using Machine Learning

### Bibtex entry :

```

@article { PAS+18a,
  author = { Pomprapa, Anake and Ahmed, W. and Sayani, M. S. and
    Stollenwerk, André and Kowalewski, Stefan and Leonhardt,
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  title = { Classification of Obstructive Sleep Apnea Using Machine
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volume = { 197 },
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https://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2018.197.1\_MeetingAbstracts.A7449 },
}

```

[PAS+18b]

[PDFBIB](#)

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### Bibtex entry :

```

@article { PAS+18b,
    author = { Pomprapa, Anake and Ahmed, Waqar and Stollenwerk, André
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title = { Arrhythmia Analysis in a Non-contact cECG Chair using
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journal = { International journal of bioelectromagnetism : IJBEM },
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pages = { 47-50 },
volume = { 20 },
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```

[PSA+18]

[PDFBIB](#)

Pomprapa, A., Sayani, M. S., Anwar, T., Stollenwerk, A., Kowalewski, S., von Platen, P. H., and Leonhardt, S., "Apnea Detection in a Contactless Multisensor System using Deep Learning Algorithm", in *Proc. [13th Russian-German Conference on Biomedical Engineering (RGC), RGC, 2018-05-23 - 2018-05-25, Aachen, Germany]*, 2018.

## Apnea Detection in a Contactless Multisensor System using Deep Learning Algorithm

### Bibtex entry :

```
@inproceedings { PSA+18,
  author = { Pomprapa, Anake and Sayani, Mohammad Salman and Anwar, Toni
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  title = { Apnea Detection in a Contactless Multisensor System using Deep Learning Algorithm },
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http://publications.rwth-aachen.de/record/723540/files/723540.pdf },
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```

[SBK18]

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Stollenwerk, A., Buglowski, M., and Kühn, J., "Mock loop for bubble generation in a centrifugal blood pump for fault simulation", *Current Directions in Biomedical Engineering*, vol. 4, iss. 1, pp. 33-36, 2018

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@article { SBK18,
  author = { Stollenwerk, André and Buglowski, Mateusz and K{"u}hn, Jan },
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pump
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cin = { 122810 / 120000 },
url = {
http://publications.rwth-aachen.de/record/752262/files/752262.pdf },
}

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[SGT+18]

[PDFBIB](#)

Schweigler, M., Grochowski, M., Tamrakar, S., and Kowalewski, S., "Ground Surface Pattern Recognition with Hidden Markov Models for Low Cost Positioning Improvement", in *Proc. 8th International Conference on Pattern Recognition Systems (ICPRS 2017) : 11-13 July 2017*, [Stevenage], 2018, IET, pp. 1-6.

## Ground Surface Pattern Recognition with Hidden Markov Models for Low Cost Positioning Improvement

### Bibtex entry :

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@inproceedings { SGT+18,
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/752258 },
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```

[SHS+18]

[PDFBIB](#)

Smieschek, M., Hinrichs, T., Stollenwerk, A., Kowalewski, S., and Preuß, R., "A New Condition Indicator for Slow-Rotating Roller Chains based on the Angle and Torque of the Driving Motor", in *Proc. 2018 IEEE 14th International Conference on Automation Science and Engineering (CASE) : 20-24 Aug. 2018 / general chair: Birgit Vogel-Heuser (Technical University of Munich) ; publisher: IEEE, Piscataway, NJ, 2018, IEEE, pp. 642-644.*

## A New Condition Indicator for Slow-Rotating Roller Chains based on the Angle and Torque of the Driving Motor

### Bibtex entry :

```

@inproceedings { SHS+18,
  author = { Smieschek, Manfred and Hinrichs, Timo and Stollenwerk,
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    ; publisher: IEEE },
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  year = { 2018 },
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    Plug&Produce - Feldgerätaustausch im Betrieb' und 'Use
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```

[SK18]

[PDFBIB](#)

Simon, H. and Kowalewski, S., "Mode-Aware Concolic Testing for PLC Software", in *Proc. Integrated formal methods : 14th International Conference, IFM 2018, Maynooth, Ireland,*



September 5-7, 2018 : proceedings / Carlo A. Furia, Kirsten Winter (eds.), Cham, 2018 in Lecture notes in computer science, Springer, pp. 367-376.

## Mode-Aware Concolic Testing for PLC Software

### Bibtex entry :

```
@inproceedings { SK18,
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  booktitle = { Integrated formal methods : 14th International
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2018-09-05 - 2018-09-07 },
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  url = { http://publications.rwth-aachen.de/record/752259 },
}
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[STK18]

[PDFBIB](#)

Simon, H., Triefenbach, L., and Kowalewski, S., "Structural Concolic Testing for Sequential Function Chart", *IFAC-PapersOnLine*, vol. 51, iss. 7, pp. 422-427, 2018

## Structural Concolic Testing for Sequential Function Chart

### Bibtex entry :

```
@article { STK18,
  author = { Simon, Hendrik and Triefenbach, Lucas and Kowalewski,
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  title = { Structural Concolic Testing for Sequential Function Chart
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issn = { 2405-8963 },
organization = { 14th IFAC Workshop on Discrete Event Systems,
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doi = { 10.1016/j.ifacol.2018.06.335 },
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url = { http://publications.rwth-aachen.de/record/752265 },
}
```

[Ter18]

[PDFBIB](#)

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## Real-world deployment and evaluation of synchronous programming in reactive embedded systems

### Bibtex entry :

```
@phdthesis { Ter18,
author = { Terber, Matthias },
othercontributors = { Kowalewski, Stefan and Rumpe, Bernhard },
title = { Real-world deployment and evaluation of synchronous
programming in reactive embedded systems },
publisher = { RWTH Aachen University, Department of Computer
Science },
school = { RWTH Aachen University },
pages = { 1 Online-Ressource (xvi, 134 Seiten) : Illustrationen },
series = { Aachener Informatik-Berichte },
year = { 2018 },
address = { Aachen },
doi = { 10.18154/RWTH-2018-230185 },
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reportid = { RWTH-2018-230185 },
cin = { 122810 / 120000 },
url = {
http://publications.rwth-aachen.de/record/749610/files/749610.pdf },
}
```

[TK18]

[PDFBIB](#)

Thönnessen, D. and Kowalewski, S., "Agiles Testen von cyber-physischen Produktionssystemen : Einsatz von SPS-Sprachen zur Testfallbeschreibung", *Atp-Edition : automatisierungstechnische Praxis*, vol. 60, iss. 3, pp. 46-55, 2018

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# Produktionssystemen : Einsatz von SPS-Sprachen zur Testfallbeschreibung

## Bibtex entry :

```
@article { TK18,
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  pages = { 46-55 },
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[TK18a]

[PDFBIB](#)

Thönnessen, D. and Kowalewski, S., "Using PLC Programming Languages for Test-Case Specification of Hardware-in-the-loop Tests", in *Proc. [Modellbasierte Entwicklung eingebetteter Systeme, MBEES 2018, 2018-04-16 - 2018-04-18, Hamburg, Germany]*, 2018, fortiss Technischer Bericht, pp. 41-50.

## Using PLC Programming Languages for Test-Case Specification of Hardware-in-the-loop Tests

### Bibtex entry :

```
@inproceedings { TK18a,
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[TRR+18]

[PDFBIB](#)

Thönnessen, D., Reinker, N., Rakel, S., and Kowalewski, S., "A concept for PLC hardware-in-the-loop testing using an extension of structured text", in *Proc. 2017 22nd IEEE International Conference on Emerging Technologies and Factory Automation : September 12-15, 2017, Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus*, [Piscataway, NJ], 2018 in IEEE International Conference on Emerging Technologies and Factory Automation-ETFA, IEEE, p. 8.

## A concept for PLC hardware-in-the-loop testing using an extension of structured text

### Bibtex entry :

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@inproceedings { TRR+18,
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}
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[TRR+18a]

[PDFBIB](#)

Thönnessen, D., Rakel, S., Reinker, N., and Kowalewski, S., "Matching Discrete Signals for

Hardware-in-the-Loop-Testing of PLCs", *IFAC-PapersOnLine*, vol. 51, iss. 10, pp. 229-234, 2018

## Matching Discrete Signals for Hardware-in-the-Loop-Testing of PLCs

### Bibtex entry :

```
@article { TRR+18a,  
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```

[TRR+18b]

[PDFBIB](#)

Thönnessen, D., Reinker, N., Rakel, S., Svetlakov, A., and Kowalewski, S., "Correctness Properties and Exemplified Applicability of a Signal Matching Algorithm with Multidimensional Tolerance Specifications", in *Proc. 2018 IEEE 14th International Conference on Automation Science and Engineering (CASE) : Munich, Germany, August 20-24, 2018*, Piscataway, NJ, 2018, IEEE, pp. 1197-1202.

## Correctness Properties and Exemplified Applicability of a Signal Matching Algorithm with Multidimensional Tolerance Specifications

### Bibtex entry :

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@inproceedings { TRR+18b,  
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```

[UVS+18]

[PDFBIB](#)

Ulewicz, S., Vogel-Heuser, B., Simon, H., Bohlender, D., Obster, M., and Kowalewski, S., "A priori test coverage estimation for automated production systems : Using generated behavior models for coverage calculation", in *Proc. 2017 22nd IEEE International Conference on Emerging Technologies and Factory Automation : September 12-15, 2017, Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus*, [Piscataway, NJ], 2018 in IEEE International Conference on Emerging Technologies and Factory Automation-ETFA, IEEE, p. 4.

## A priori test coverage estimation for automated production systems : Using generated behavior models for coverage calculation

### Bibtex entry :

```

@inproceedings { UVS+18,
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  author = { Walter, Marian and K{\u}hn, J. and Janisch, Thorsten
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  Petran, Jan and Kopp, R{\u}dger and Leonhardt, Steffen },
  title = { Cooperative automation of extracorporeal gas exchange and
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  author = { Woopen, Timo and Lampe, Bastian and B{"o}ddeker, Torben
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  Eckstein, Lutz and Kampmann, Alexandru and Alrifaae, Bassam
and Kowalewski, Stefan and Moormann, Dieter and Stolte,
Torben and Jatzkowski, Inga and Maurer, Markus and
M{"o}stl, Mischa and Ernst, Rolf and Ackermann, Stefan and
Amersbach, Christian and Winner, Hermann and P{"u}llen,
Dominik and Katzenbeisser, Stefan and Leinen, Stefan and
Becker, Matthias and Stiller, Christoph and Furmans, Kai and
Bengler, Klaus and Diermeyer, Frank and Lienkamp, Markus and
Keilhoff, Dan and Reuss, Hans-Christian and Buchholz,
Michael and Dietmayer, Klaus and Lategahn, Henning and
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scientific management: Univ.-Prof. Dr.-Ing. Lutz Eckstein,
Univ.-Prof. Dr.-Ing. Stefan Pischinger ; organizational
management: Benedikt Hammerm{"u}ller (M. Sc.), Dipl.-Ing.
Rainer Wolsfeld ; organized by: Institute for Automotive
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  author = { Winter, Alfred and St{"a"}ubert, Sebastian and Ammon,
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Gert and Gewehr, Jan E. and de Greiff, Armin and Haferkamp,
Silke Dorothee and Hahn, Udo and Henkel, Andreas and
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Oliver and Maschmann, Jens and Meister, Sven and
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[DWS+17a]

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[Ger17]

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pages = { 1 Online-Ressource (xv, 191 Seiten) : Diagramme },
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[HWK+17]

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and Kowalewski, Stefan and Rambow, Thomas and Busch, Rainer },
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Closed-Loop Automotive Software with Arttest },
  booktitle = { Informatik 2017 - B{\a}nde I-III : Tagung vom
25.-29.
September 2017 in Chemnitz / Maximilian Eibl, Martin Gaedke
(Hrsg.) },
  publisher = { Gesellschaft f{"u}r Informatik },
  pages = { 1537-1549 },
  series = { GI-Edition : lecture notes in informatics. Proceedings
},
  year = { 2017 },
  address = { Bonn },
  organization = { 47. Jahrestagung der Gesellschaft f{"u}r
Informatik e.V.
(GI), Chemnitz (Germany), 2017-09-25 - 2017-09-29 },
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cin = { 122810 / 120000 },  
url = { https://dl.gi.de/handle/20.500.12116/21 },  
}
```

[Kal17]

[PDFBIB](#)

Kalkov, I., "A real-time capable, open-source-based platform for off-the-shelf embedded devices", PhD Thesis, Aachen, 2017.

## **A real-time capable, open-source-based platform for off-the-shelf embedded devices**

### **Bibtex entry :**

```
@phdthesis { Kal17,  
  author = { Kalkov, Igor },  
  othercontributors = { Kowalewski, Stefan and A{\ss}mann, Uwe },  
  title = { A real-time capable, open-source-based platform for  
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  publisher = { RWTH Aachen University, Department of Computer  
Science },  
  school = { RWTH Aachen University },  
  pages = { 1 Online-Ressource (xx, 114 Seiten) : Illustrationen,  
    Diagramme },  
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  year = { 2017 },  
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http://publications.rwth-aachen.de/record/719343/files/719343.pdf },  
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```

[KBS+17]

[PDFBIB](#)

Kühn, J., Brendle, C., Stollenwerk, A., Schweigler, M., Kowalewski, S., Janisch, T., Rossaint, R., Leonhardt, S., Walter, M., and Kopp, R., "Decentralized safety concept for closed-loop controlled intensive care : Supervision of a blood pump during extracorporeal circulation", *Biomedizinische Technik*, vol. 62, iss. 2, pp. 213-224, 2017

## **Decentralized safety concept for closed-loop controlled intensive care : Supervision of a blood pump during extracorporeal circulation**

### **Bibtex entry :**

```
@article { KBS+17,
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author = { K{"u}hn, Jan and Brendle, Christian and Stollenwerk,
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Thorsten and Rossaint, Rolf and Leonhardt, Steffen and
Walter, Marian and Kopp, R{"u}dger },
title = { Decentralized safety concept for closed-loop controlled
intensive care : Supervision of a blood pump during
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journal = { Biomedizinische Technik },
publisher = { de Gruyter },
pages = { 213-224 },
volume = { 62 },
number = { 2 },
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}

```

[KGK17]

[PDFBIB](#)

Kalkov, I., Gurchian, A., and Kowalewski, S., "Explicit prioritization of parallel Intent broadcasts in real-time Android", in *Proc. Concurrency and computation*, Chichester, 2017, vol. 29, Wiley.

## Explicit prioritization of parallel Intent broadcasts in real-time Android

### Bibtex entry :

```

@inproceedings { KGK17,
author = { Kalkov, Igor and Gurchian, Alexandru and Kowalewski,
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booktitle = { Concurrency and computation },
publisher = { Wiley },
volume = { 29 },
number = { 22 },
year = { 2017 },
address = { Chichester },
issn = { 1532-0626 },
organization = { 12th International workshop on Java Technologies
for
Real-Time and Embedded systems, Niagara Falls, NY (USA),
2014-10-13 - 2014-10-14 },
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}

```

[KKR+17]

[PDFBIB](#)

Kugler, C., Kowalewski, S., Richenhagen, J. M., Maquet, R., and Schloßer, A., "Metrics-based strategies for quality assurance of automotive embedded software", in *Proc. 17. Internationales Stuttgarter Symposium : Automobil- und Motorentechnik / herausgegeben von Michael Bargende, Hans-Christian Reuss, Jochen Wiedemann*, Wiesbaden, 2017 in Proceedings, Springer Vieweg, pp. 711-730.

## Metrics-based strategies for quality assurance of automotive embedded software

### Bibtex entry :

```

@inproceedings { KKR+17,
  author = { Kugler, Christopher and Kowalewski, Stefan and Richenhagen, Johannes Martin and Maquet, Ralf and Schlo{\ss}er, Axel },
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  year = { 2017 },
  address = { Wiesbaden },
  organization = { 17. Internationales Stuttgarter Symposium Automobil- und Motorentechnik, Stuttgart (Germany), 2017-03-14 - 2017-03-15 },
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  cin = { 122810 / 120000 / 412310 },
  url = { http://publications.rwth-aachen.de/record/752278 },
}

```

[Leo17]

[PDFBIB](#)

Leonhardt, S., *Special Issue: Smart Life Support*, Berlin [u.a.]: de Gruyter, 2017, vol. 62.

## Special Issue: Smart Life Support

### Bibtex entry :

```
@book { Leo17,  
  author = { Leonhardt, Steffen },  
  title = { Special Issue: Smart Life Support },  
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2017.62.issue-2.xml },  
}
```

[NKM+17]

[PDFBIB](#)

Nowack, J., Kugler, C., Maquet, R., Richenhagen, J., and Remelhe, F., "Continuous process for the validation of transmission controls". 2017.

## Continuous process for the validation of transmission controls

### Bibtex entry :

```
@inproceedings { NKM+17,  
  author = { Nowack, Jan and Kugler, Christopher and Maquet, Ralf and  
    Richenhagen, Johannes and Remelhe, Filipe },  
  title = { Continuous process for the validation of transmission  
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  year = { 2017 },  
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https://drivetrain-symposium.world/cn/continuous-process-validation-tra  
nsmission-controls/ },  
}
```

[SAB+17]

[PDFBIB](#)

Schupp, S., Ábrahám, E., Ben Makhlof, I., and Kowalewski, S., "HyPro : A C++ Library of State

Set Representations for Hybrid Systems Reachability Analysis", in *Proc. NASA formal methods : 9th international symposium, NFM 2017, Moffett Field, CA, USA, May 16-18, 2017 : proceedings / Clark Barrett, Misty Davies, Temesghen Kahsai (eds.)*, Cham, 2017 in Lecture Notes in Computer Science, Springer, pp. 288-294.

## HyPro : A C++ Library of State Set Representations for Hybrid Systems Reachability Analysis

### Bibtex entry :

```
@inproceedings { SAB+17,
  author = { Schupp, Stefan and Ábrahám, Erika and Ben Makhlof,
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            Hybrid Systems Reachability Analysis },
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               Clark Barrett, Misty Davies, Temesghen Kahsai (eds.) },
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                  Field, CA
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}
```

[SKS+17]

[PDFBIB](#)

Stollenwerk, A., Kopp, R., Sehl, F., and Janisch, T., "Tauchcomputerunterstützung durch vernetzte Smart Wearables", *Caisson : Mitteilungen der GTÜM e.V.*, vol. 32, iss. 4, 2017

## Tauchcomputerunterstützung durch vernetzte Smart Wearables

### Bibtex entry :

```
@article { SKS+17,
  author = { Stollenwerk, André and Kopp, R{"u}dger and Sehl,
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```

[SPD+17]

[PDFBIB](#)

Schmidt, T., Philipsen, R., Dzafic, D., and Ziefle, M., "Watch Out! : User-Centered Feedback Design for a V2X-Smartphone App", in *Proc. Digital Human Modeling. Applications in Health, Safety, Ergonomics, and Risk Management: Health and Safety : 8th International Conference, DHM 2017, Held as Part of HCI International 2017, Vancouver, BC, Canada, July 9-14, 2017, Proceedings, Part II / edited by Vincent G. Duffy*, Cham, 2017 in *Lecture Notes in Computer Science*, Springer International Publishing, pp. 365-383.

## Watch Out! : User-Centered Feedback Design for a V2X-Smartphone App

### Bibtex entry :

```

@inproceedings { SPD+17,
  author = { Schmidt, Teresa and Philipsen, Ralf and Dzafic, Dzenan
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V2X-Smartphone App },
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Safety,
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International Conference, DHM 2017, Held as Part of HCI
International 2017, Vancouver, BC, Canada, July 9-14, 2017,
Proceedings, Part II / edited by Vincent G. Duffy },
  publisher = { Springer International Publishing },
  pages = { 365-383 },
  series = { Lecture Notes in Computer Science },
  year = { 2017 },
  address = { Cham },
  organization = { 19th International Conference on Human-Computer
Interaction,
  Vancouver (Canada), 2017-07-09 - 2017-07-14 },
  doi = { 10.1007/978-3-319-58466-9_33 },
  typ = { PUB:(DE-HGF)7 },

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cin = { 792310 / 080013 / 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/720296 },
}

```

[SSK+17]

[PDFBIB](#)

Smieschek, M., Stollenwerk, A., Kowalewski, S., Orlikowsky, T., and Schoberer, M., "Unterstützte Handerkennung in Thermographiebildern zur Validierung der hygienischen Händedesinfektion", in *Proc. Bildverarbeitung für die Medizin 2017 : Algorithmen - Systeme - Anwendungen. Proceedings des Workshops vom 12. bis 14. März 2017 in Heidelberg / herausgegeben von Klaus Hermann Maier-Hein, geb. Fritzsche, Thomas Martin Deserno, geb. Lehmann, Heinz Handels, Thomas Tolxdorff*, Berlin, Heidelberg, 2017 in *Informatik aktuell*, Springer Berlin Heidelberg, pp. 147-152.

## Unterstützte Handerkennung in Thermographiebildern zur Validierung der hygienischen Händedesinfektion

### Bibtex entry :

```

@inproceedings { SSK+17,
  author = { Smieschek, Manfred and Stollenwerk, André and Kowalewski, Stefan and Orlikowsky, Thorsten and Schoberer, Mark },
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  booktitle = { Bildverarbeitung f{\u}r die Medizin 2017 : Algorithmen - Systeme - Anwendungen. Proceedings des Workshops vom 12. bis 14. M{\u}rz 2017 in Heidelberg / herausgegeben von Klaus Hermann Maier-Hein, geb. Fritzsche, Thomas Martin Deserno, geb. Lehmann, Heinz Handels, Thomas Tolxdorff },
  publisher = { Springer Berlin Heidelberg },
  pages = { 147-152 },
  series = { Informatik aktuell },
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```

[SSM+17]

**PDFBIB**

Stollenwerk, A., Sehl, F., Marx, G., Kowalewski, S., and Janisch, T., "Enrichment of a diving computer with body sensor network data", in *Proc. 2017 IEEE 14th International Conference on Wearable and Implantable Body Sensor Networks (BSN) : 9-12 May 2017 / sponsors: IEEE, EMB*, Piscataway, NJ, 2017, IEEE, pp. 169-172.

## Enrichment of a diving computer with body sensor network data

**Bibtex entry :**

```
@inproceedings { SSM+17,  
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and  
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sponsors: IEEE, EMB },  
  publisher = { IEEE },  
  pages = { 169-172 },  
  year = { 2017 },  
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  organization = { 2017 IEEE 14th International Conference on  
Wearable and  
  Implantable Body Sensor Networks, Eindhoven (Netherlands),  
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[WKK+17]

**PDFBIB**

Walter, M., Kunczik, J., Kühn, J., Janisch, T., Kopp, R., and Leonhardt, S., "Robust control of extracorporeal gas exchange", in *Proc. Abstract Book at EMBEC'17 & NBC'17 : the Joint conference of the European Medical and Biological Engineering Conference (EMBEC) and the Nordic-Baltic Conference on Biomedical Engineering and Medical Physics (NBC) : Tampere, Finland / Editors: Jennika Karvinen, Janne Koivisto, Sampo Tuukkanen, Jari Viik*, Finland, 2017, BioMediTech Institute and Faculty of Biomedical Sciences and Engineering Tampere University of Technology, p. 365, 150-150.

## Robust control of extracorporeal gas exchange

**Bibtex entry :**

```

@inproceedings { WKK+17,
  author = { Walter, Marian and Kunczik, Janosch and K{"u}hn, Jan
and
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  Steffen },
  title = { Robust control of extracorporeal gas exchange },
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conference of
  the European Medical and Biological Engineering Conference
  (EMBEC) and the Nordic-Baltic Conference on Biomedical
  Engineering and Medical Physics (NBC) : Tampere, Finland /
  Editors: Jennika Karvinen, Janne Koivisto, Sampo Tuukkanen,
  Jari Viik },
  publisher = { BioMediTech Institute and Faculty of Biomedical
Sciences and
  Engineering Tampere University of Technology },
  pages = { 365, 150-150 },
  year = { 2017 },
  address = { Finland },
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  Engineering Conference (EMBEC) and the Nordic-Baltic
  Conference on Biomedical Engineering and Medical Physics
  (NBC), Tampere (Finland), 2017-06-11 - 2017-06-15 },
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}

```

[WRB+17]

[PDFBIB](#)

Wiechowski, N., Rambow, T., Busch, R., Kugler, A., Hansen, N., and Kowalewski, S., "Arttest - a New Test Environment for Model-Based Software Development", *SAE technical paper*, vol. 2017-01-0004, 2017

## Arttest - a New Test Environment for Model-Based Software Development

**Bibtex entry :**

```

@article { WRB+17,
  author = { Wiechowski, Norbert and Rambow, Thomas and Busch, Rainer
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  journal = { SAE technical paper },

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publisher = { SAE International },
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year = { 2017 },
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(USA),
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doi = { 10.4271/2017-01-0004 },
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```

[Ben16]

[PDFBIB](#)

Ben Makhlouf, I., "Comparative evaluation and improvement of computational approaches to reachability analysis of linear hybrid systems", PhD Thesis, Aachen, 2016.

## Comparative evaluation and improvement of computational approaches to reachability analysis of linear hybrid systems

### Bibtex entry :

```
@phdthesis { Ben16,
  author = { Ben Makhlouf, Ibtissem },
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http://publications.rwth-aachen.de/record/571624/files/571624.pdf },
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[BHK+16]

[PDFBIB](#)

Brendle, C., Hackmack, K. -F., Kühn, J., Wardeh, M. N., Janisch, T., Kopp, R., Rossaint, R., Stollenwerk, A., Kowalewski, S., Misgeld, B. J. E., Leonhardt, S., and Walter, M., "Continuous gas transfer monitoring during extracorporeal membrane oxygenation", *Biomedical signal*

*processing and control*, vol. 31, pp. 321-330, 2016

## Continuous gas transfer monitoring during extracorporeal membrane oxygenation

### Bibtex entry :

```
@article { BHK+16,  
  author = { Brendle, Christian and Hackmack, K.-F. and K{"u}hn, Jan  
and  
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  publisher = { Elsevier },  
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```

[Bia16]

[PDFBIB](#)

Biallas, S., "Verification of programmable logic controller code using model checking and static analysis", PhD Thesis, Aachen, 2016.

## Verification of programmable logic controller code using model checking and static analysis

### Bibtex entry :

```
@phdthesis { Bia16,  
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  school = { RWTH Aachen University },  
  pages = { 1 Online-Ressource (x, 153 Seiten) : Illustrationen,  
  Diagramme },
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series = { Aachener Informatik Berichte },
year = { 2016 },
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http://publications.rwth-aachen.de/record/668156/files/668156.pdf },
}

```

[BK16]

PDFBIB

Banila, M. and Kowalewski, S., "Ein Ansatz zur automatisierten normgerechten Testplanung für sicherheitskritische eingebettete Software im Automobilbereich", in *Proc. Entwurf komplexer Automatisierungssysteme : Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen : EKA 2016 : 24.-25.05.2016, 14. Fachtagung mit Tutorium / Ulrich Jumar, Christian Diedrich (Hrsg.) ; eine Kooperation von ifak (Otto von Guericke Universität Magdeburg), Magdeburg, 2016, Institut für Automation und Kommunikation e.V. Magdeburg (An-Institut der Otto-von-Guericke-Universität Magdeburg)*, pp. 1-10.

## Ein Ansatz zur automatisierten normgerechten Testplanung für sicherheitskritische eingebettete Software im Automobilbereich

### Bibtex entry :

```

@inproceedings { BK16,
  author = { Banila, Madalina and Kowalewski, Stefan },
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f{"u}r sicherheitskritische eingebettete Software im
Automobilbereich },
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Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen :
EKA 2016 : 24.-25.05.2016, 14. Fachtagung mit Tutorium /
Ulrich Jumar, Christian Diedrich (Hrsg.) ; eine Kooperation
von ifak (Otto von Guericke Universit{"a}t Magdeburg) },
  publisher = { Institut f{"u}r Automation und Kommunikation e.V.
Magdeburg
(An-Institut der Otto-von-Guericke-Universit{"a}t
Magdeburg) },
  pages = { 1-10 },
  year = { 2016 },
  address = { Magdeburg },
  organization = { 14. Fachtagung Entwurf komplexer
Automatisierungssysteme,
Magdeburg (Germany), 2016-05-24 - 2016-05-25 },
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[BSF+16]

[PDFBIB](#)

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## Concolic test generation for PLC programs using coverage metrics

### Bibtex entry :

```
@inproceedings { BSF+16,
  author = { Bohlender, Dimitri and Simon, Hendrik and Friedrich,
Nico
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  title = { Concolic test generation for PLC programs using coverage
metrics },
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    (WODES) : May 30-June 1, 2016, Xi'an, China / edited by
Christos G. Cassandras, Alessandro Giua, Zhiwu Li ;
sponsored by IEEE - Control Systems Society },
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  url = { http://publications.rwth-aachen.de/record/679431 },
}
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[BSK+16]

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## Bibtex entry :

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@inproceedings { BSK+16,
  author = { Bohlender, Dimitri and Simon, Hendrik and Kowalewski,
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  url = { http://publications.rwth-aachen.de/record/680852 },
}
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[BSK16]

[PDFBIB](#)

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@inproceedings { BSK16,
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Schaltungen und Systemen" : Albert-Ludwigs-Universit{"a}t
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year = { 2016 },
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Beschreibungssprachen
zur Modellierung und Verifikation von Schaltungen und
Systemen", Freiburg im Breisgau (Germany), 2016-03-01 -
2016-03-02 },
doi = { 10.6094/UNIFR/10636 },
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url = {
http://publications.rwth-aachen.de/record/573821/files/573821.pdf },
}

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[Der16]

[PDFBIB](#)

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@inproceedings { Der16,
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  pages = { 441-446 },
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typ = { PUB:(DE-HGF)7 },
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[DHK16]

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  publisher = { Springer International Publishing },
  pages = { 25-38 },
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  address = { Cham },
  organization = { 21st International Workshop on Formal Methods for
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  doi = { 10.1007/978-3-319-45943-1_2 },
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@inproceedings { DHK16a,
  author = { Dernehl, Christian and Hansen, Norman and Kowalewski,
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  booktitle = { MoDeVVA 2016 : Model-Driven Engineering, Verification
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  Model-Driven Engineering, Verification and Validation
  co-located with ACM/IEEE 19th International Conference on
  Model Driven Engineering Languages and Systems (MODELS 2016)
  : Saint-Malo, France, October 3, 2016 / edited by Michalis
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[DKS+16]

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  Pierre and Franke, Dominik and Kowalewski, Stefan },
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  booktitle = { agit_2016 - open:spatial:interfaces / Herausgeber:
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  year = { 2016 },
  address = { Berlin },
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[DLS+16]

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### Bibtex entry :

```

@inproceedings { DLS+16,
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Prof. Dr.
    Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner,
    Prof. Dr. Thomas Blaschke },
  publisher = { Wichmann, eine Marke der VDE Verlag GmbH },
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  url = { http://publications.rwth-aachen.de/record/680872 },
}

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[GHD+16]

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### Bibtex entry :

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  author = { Gerlitz, Thomas and Hansen, Norman and Dernehl,
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  title = { artshop: A Continuous Integration and Quality Assessment
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  booktitle = { [12. Dagstuhl-Workshop Modelbasierte Entwicklung
    eingebetteter Systeme (MBEES) / Michaela Huhn (Ostfalia
    Hochschule – Wolfenb{"u}ttel, DE), Matthias Riebisch
    (Universit{"a}t Hamburg, DE), Bernhard Sch{"a}tz (fortiss
    GmbH – M{"u}nchen, DE)] },
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  year = { 2016 },
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[GK16]

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**Bibtex entry :**

```
@inproceedings { GK16,  
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[GK16a]

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**Bibtex entry :**

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@inproceedings { GK16a,  
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[GK16b]

[PDFBIB](#)

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### Bibtex entry :

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  booktitle = { WICSA 2016 : 2016 13th Working IEEE/IFIP Conference
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  Software Architecture : proceedings / Henry Muccini and K.
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}
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[GNK16]

[PDFBIB](#)

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[GTN+16]

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### Bibtex entry :

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author = { G{"o}be, Florian and Timmermanns, Thomas and Ney,
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booktitle = { 2016 13th International Workshop on Discrete Event
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pages = { 424-431 },
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reportid = { RWTH-2016-11199 },
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url = { http://publications.rwth-aachen.de/record/679437 },
}

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[KBS+16]

[PDFBIB](#)

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  author = { K{"u}hn, Jan and Stollenwerk, André and Brendle,
Christian
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and Leonhardt, Steffen and Kowalewski, Stefan and Kopp,
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[KVS+16]

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R{\u}dger and Janisch, Thorsten },
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  publisher = { Hochschule Wismar, Fakult{\a}t f{\u}r
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http://automed2016.hs-wismar.de/wp-content/uploads/2017/02/Kuehn_Inform
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[SK16]

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[SSJ+16]

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  author = { Smieschek, Manfred and Stollenwerk, André and
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[TSN+16]

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  https://worldwide.espacenet.com/patent/search?q=pn%3DUS20180081372A1 },
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[WBK+16]

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  author = { Walter, Marian and Brendle, Christian and K{"u}hn, Jan
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[ZAB+16]

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  url = { http://publications.rwth-aachen.de/record/573915 },
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[BFS+15]

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[BGK15]

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[BHK+15]

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[BK15]

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```

[CSB+15]

[PDFBIB](#)

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## A Benchmark Suite for Hybrid Systems Reachability Analysis

### Bibtex entry :

```

@inproceedings { CSB+15,
    author = { Chen, Xin and Schupp, Stefan and Ben Makhlof, Ibtissem
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[DHG+15]

[PDFBIB](#)

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## Static Value Range Analysis for Matlab/Simulink-Models

### Bibtex entry :

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author = { Dernehl, Christian and Hansen, Norman and Gerlitz,
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2015 in Cottbus / Douglas W. Cunningham ... (Hrsg.) },
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series = { GI-Edition : lecture notes in informatics },
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organization = { 45. Jahrestagung der Gesellschaft f{"u}r
Informatik,
Cottbus (Germany), 2015-09-28 - 2015-10-02 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/573834 },
}

```

[Dia15]

[PDFBIB](#)

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# Experimental validation and mathematical analysis of cooperative vehicles in a platoon

## Bibtex entry :

```
@phdthesis { Dial5,
  author = { Diab, Hilal },
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[DKF+15]

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@article { DKF+15,
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}

[dMK+15]

PDFBIB

de Brouwer, P., Mager, I., Kopp, R., Walter, M., Stollenwerk, A., Schmitz-Rode, T., Steinseifer, U., and Arens, J., "Dynamische Studie zum Einfluss von negativem Druck auf Hämolyse", *Kardiotechnik*, vol. 24, iss. 1, pp. 3-6, 2015

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[FKL15]

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  author = { Franke, Dominik and Kowalewski, Stefan and Lichter,
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[GSK15]

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### Bibtex entry :

```
@inproceedings { GSK15,
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[GTD15]

[PDFBIB](#)

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@inproceedings { GTD15,
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Languages and Systems (MODELS 2015) : Ottawa, Canada,
September 27, 2015 / edited by Michal Antkiewicz, Joanne
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```

[HBS+15]

[PDFBIB](#)

Hauck-Stattelmann, S., Biallas, S., Schlich, B., Kowalewski, S., and Jetley, R., "Analyzing the Restart Behavior of Industrial Control Applications", in *Proc. FM 2015: formal methods : 20th international symposium, Oslo, Norway, June 24 - 26, 2015 ; proceedings / Nikolaj Bjørner; Frank de Boer (eds.)*, Springer International Publishing, 2015 in *Lecture Notes in Computer Science*, Cham, pp. 585-588.

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@inproceedings { HBS+15,
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[JMR+15]

[PDFBIB](#)

Jawawi, D. N. A., Mamat, R., Ridzuan, F., Khatibsyarbini, M., Zulkifli, M., and Zaki, M. J., "Introducing computer programming to secondary school students using mobile robots", in *Proc. 2015 10th Asian Control Conference (ASCC 2015) : Kota Kinabalu, Malaysia, 31 May - 3 June 2015 ; proceedings / ed.: Azura Che Soh ...*, Piscataway, NJ, 2015, IEEE.

## Introducing computer programming to secondary school students using mobile robots

**Bibtex entry :**

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@inproceedings { JMR+15,
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  year = { 2015 },
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[KGK15]

[PDFBIB](#)

Kalkov, I., Gurchian, A., and Kowalewski, S., "Priority Inheritance during Remote Procedure Calls in Real-Time Android using Extended Binder Framework", in *Proc. Proceedings of the 13th International Workshop on Java Technologies for Real-time and Embedded Systems*, New York, NY, 2015 in ACM Other conferences, ACM, p. 5.

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### Bibtex entry :

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@inproceedings { KGK15,
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[KKO+15]

[PDFBIB](#)

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### Bibtex entry :

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@article { KK0+15,
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[KSB+15]

[PDFBIB](#)

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## Embedded Safety Measures for Extracorporeal Blood Circulation

### Bibtex entry :

```
@inproceedings { KSB+15,
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[KSK+15]

[PDFBIB](#)

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### Bibtex entry :

```
@article { KSK+15,
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}
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[KSM15]

[PDFBIB](#)

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## in Mobile Malware

### Bibtex entry :

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@inproceedings { KSM15,
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[KSS+15]

[PDFBIB](#)

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### Bibtex entry :

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Kowalewski, Stefan and Kopp, R{"u}dger },
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## Systems

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    Using an SMT-Solver },
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[KWS+15]

[PDFBIB](#)

Kühn, J., Wübbels, N., Stollenwerk, A., Kowalewski, S., Brendle, C., Walter, M., Leonhardt, S., Wardeh, M., Kopp, R., and Roissant, R., "Pulsatile Ansteuerung einer Diagonalblutpumpe", in *Proc. Automation 2015 : benefits of change - the future of automation ; 16. Branchentreff der Mess- und Automatisierungstechnik ; Kongresshaus Baden-Baden, 11. und 12. Juni 2015 / VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik . - Bd. 1*, Düsseldorf, 2015 in VDI-Berichte, VDI Verlag, pp. 325-339.

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### Bibtex entry :

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    12. Juni 2015 / VDI/VDE-Gesellschaft Mess- und
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[Pol15]

[PDFBIB](#)

Polzer, A., "Ansatz zur variantenreichen und modellbasierten Entwicklung von eingebetteten Systemen unter Berücksichtigung regelungs- und softwaretechnischer Anforderungen", PhD Thesis, Aachen, 2015.

## **Ansatz zur variantenreichen und modellbasierten Entwicklung von eingebetteten Systemen unter Berücksichtigung regelungs- und softwaretechnischer Anforderungen**

### **Bibtex entry :**

```

@phdthesis { Pol15,
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othercontributors = { Kowalewski, Stefan and Lichter, Horst },
title = { Ansatz zur variantenreichen und modellbasierten
Entwicklung
von eingebetteten Systemen unter Ber{"u}cksichtigung
regelungs- und softwaretechnischer Anforderungen },
publisher = { Fachgruppe Informatik, RWTH Aachen University },
school = { Zugl.: Aachen, Techn. Hochsch. },
series = { Aachener Informatik-Berichte },
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```

[SAC+15]

[PDFBIB](#)

Schupp, S., Ábrahám, E., Chen, X., Ben Makhlof, I., Frehse, G., Sankaranarayanan, S., and Kowalewski, S., "Current Challenges in the Verification of Hybrid Systems", in *Proc. Cyber physical systems : design, modeling, and evaluation ; 5th international workshop, CyPhy 2015, Amsterdam, The Netherlands, October 8, 2015 ; proceedings / Christian Berger ... (eds.)*, Cham, 2015 in Lecture Notes in Computer Science, Springer International Publishing, pp. 8-24.

## Current Challenges in the Verification of Hybrid Systems

### Bibtex entry :

```
@inproceedings { SAC+15,
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  title = { Current Challenges in the Verification of Hybrid Systems
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}
```

[SFB+15]

[PDFBIB](#)

Simon, H., Friedrich, N., Biallas, S., Hauck-Stattelmann, S., Schlich, B., and Kowalewski, S., "Automatic test case generation for PLC programs using coverage metrics", in *Proc. 2015 IEEE 20th Conference on Emerging Technologies Factory Automation (ETFA) : 8 - 11 Sept. 2015, City of Luxembourg, Luxembourg / co-sponsored by IEEE ...*, Piscataway, NJ, 2015, IEEE, p. 4.

## Automatic test case generation for PLC programs using coverage metrics

### Bibtex entry :

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@inproceedings { SFB+15,
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author = { Simon, Hendrik and Friedrich, Nico and Biallas,
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title = { Automatic test case generation for PLC programs using
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```

[SKW+15]

[PDFBIB](#)

Stollenwerk, A., Kühn, J., Walter, M., Brendle, C., Wardeh, M. N., Rossaint, R., Leonhardt, S., Kowalewski, S., and Kopp, R., "Software-based Prediction of Cannula Occlusion during Extracorporeal Blood Circulation through Networked Medical Data", in *Proc. SE-WS 2015, software engineering workshops 2015 : gemeinsamer Tagungsband der Workshops der Tagung Software Engineering 2015, Dresden, 17. - 18. März 2015 / hrsg. von Wolg Zimmermann ...*, Aachen, Germany, 2015 in CEUR workshop proceedings, RWTH Aachen, pp. 1-6.

## Software-based Prediction of Cannula Occlusion during Extracorporeal Blood Circulation through Networked Medical Data

### Bibtex entry :

```

@inproceedings { SKW+15,
author = { Stollenwerk, André and K{"u}hn, Jan and Walter, Marian
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R{"u}dger },
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[SLR+15]

[PDFBIB](#)

Stollenwerk, A., Leonhardt, S., Rossaint, R., and Kowalewski, S., "Advancing Intensive Care by Networked Medical Systems", in *Proc. [Proceedings of the 11th German-Russian-Conference on Biomedical Engineering, GRC, 17.06.2015-19.06.2015, Aachen, Germany]*, 2015, pp. 211-213.

## Advancing Intensive Care by Networked Medical Systems

### Bibtex entry :

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@inproceedings { SLR+15,
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[AFK+14]

[PDFBIB](#)

Armoush, A., Franke, D., Kalkov, I., and Kowalewski, S., "An Approach for Using Mobile Devices In Industrial Safety-Critical Embedded Systems", in *Proc. Mobile Computing, Applications, and Services : 5th International Conference, MobiCase 2013, Paris, France, November 7-8, 2013, Revised Selected Papers*, Cham, 2014 in Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, Springer, pp. 294-297.

## An Approach for Using Mobile Devices In Industrial Safety-Critical Embedded Systems

### Bibtex entry :

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@inproceedings { AFK+14,
  author = { Armoush, Ashraf and Franke, Dominik and Kalkov, Igor and
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[BK14]

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## Networked Cooperative Platoon of Vehicles for Testing Methods and Verification Tools

### Bibtex entry :

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@inproceedings { BK14,
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2014-04-14-2014-04-17 },
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cin = { 120000 / 122810 },
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}

```

[BKS+14]

[PDFBIB](#)

Biallas, S., Kowalewski, S., Stattelmann, S., and Schlich, B., "Efficient Handling of States in Abstract Interpretation of Industrial Programmable Logic Controller Code", in *Proc. Discrete Event Systems : [Proc. Proceedings of the 12th International Workshop on Discrete Event Systems, Cachan, France, 2014] / Conference Editor: Lesage, Jean-Jacques, Faure, Jean-Marc, Cury, Jose E. R., Lennartson, Bengt*, Cachan, France, 2014, IFAC, pp. 400-405.

## Efficient Handling of States in Abstract Interpretation of Industrial Programmable Logic Controller Code

### Bibtex entry :

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@inproceedings { BKS+14,
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}

[DBB+14]

[PDFBIB](#)

Dzafic, D., Bitsch, &. J.ó., Baumeister, D., Kowalewski, S., and Wehrle, K., "Towards an Indoor Traffic Report - Requirements for Dynamic Route Planning for Wheelchair Users", in *Proc. International Conference on Indoor Positioning and Indoor Navigation (IPIN), 2012 : 13 - 15 Nov. 2012, Sydney, Australia ; conference proceedings / organized by UNSW Australia, the University of New South Wales, Australia. Ed. by Chris Rizos ...*, Piscataway, NJ, 2014, IEEE.

## Towards an Indoor Traffic Report - Requirements for Dynamic Route Planning for Wheelchair Users

### Bibtex entry :

```
@inproceedings { DBB+14,
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    Australia, the University of New South Wales, Australia. Ed.
    by Chris Rizos ... },
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  url = { http://publications.rwth-aachen.de/record/462817 },
}
```

[DF14]

[PDFBIB](#)

Dzafic, D. and Franke, D., "Integration von Informationen über die Bodenbeschaffenheit in das eNav-System : [Zusammenfassung der ] Masterarbeit", in *Proc. Informatiktage 2014 / Fachwissenschaftlicher Informatik-Kongress, 27. und 28. März 2014, Hasso-Plattner-Institut der Universität Potsdam ...*, Bonn, 2014 in GI-Edition : lecture notes in informatics / Seminars, Ges. für Informatik, pp. 123-126.



## Integration von Informationen über die Bodenbeschaffenheit in das eNav-System : [Zusammenfassung der ] Masterarbeit

### Bibtex entry :

```
@inproceedings { DF14,
  author = { Dzafic, Dzenan and Franke, Dominik },
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```

[DFB+14]

[PDFBIB](#)

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## Integration von Bodenbelagsinformationen zum energieeffizienten Routen von Elektrorollstühlen

### Bibtex entry :

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@inproceedings { DFB+14,
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    AGIT-Symposium Salzburg / Strobl/ Blaschke/Griesebner/Zagl
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cin = { 120000 / 122810 },
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[FAK+14]

[PDFBIB](#)

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### Bibtex entry :

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@techreport { FAK+14,
  author = { F{"o}rster, Marc and Auerswald, Marko and Keldenich, Phillip and Kowalewski, Stefan },
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  url = { http://publications.rwth-aachen.de/record/752291 },
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```

[FK14]

[PDFBIB](#)

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## for Software-Related Seminar Papers

### Bibtex entry :

```
@inproceedings { FK14,
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  education, innovation, and sustainability : SEFM 2012
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  Thessaloniki, Greece, October 1 - 2, 2012 ; revised selected
  papers / Antonio Cerone; Donatella Persico; Sara Fernandes;
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applications for
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[For14]

[PDFBIB](#)

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## Evaluating Embedded-Software Specifications -- Quantitative and Structured Assessment of Declarative Interface Descriptions

### Bibtex entry :

```
@inproceedings { For14,
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[Guc14]

[PDFBIB](#)

Gückel, D., "Synthesis of state space generators for model checking microcontroller code", PhD Thesis, Aachen, 2014.

## Synthesis of state space generators for model checking microcontroller code

### Bibtex entry :

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@phdthesis { Guc14,
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Department
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http://publications.rwth-aachen.de/record/464374/files/5296.pdf },
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[JGN14]

[PDFBIB](#)

Jansen, C., Göbe, F., and Noll, T., "Generating Inductive Predicates for Symbolic Execution of Pointer-Manipulating Programs", in *Proc. Graph transformation : 7th international conference, ICGT 2014, held as part of STAF 2014, York, UK, July 22 - 24, 2014 ; proceedings / Holger Giese ... (eds.)*, Cham [u.a.], 2014 in *Lecture notes in computer science*, Springer, pp. 65-80.

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### Bibtex entry :

```
@inproceedings { JGN14,
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  url = { http://publications.rwth-aachen.de/record/444215 },
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[KGK14]

[PDFBIB](#)

Kalkov, I., Gurchian, A., and Kowalewski, S., "Predictable Broadcasting of Parallel Intents in Real-Time Android", in *Proc. Proceedings of the 12th International Workshop on Java Technologies for Real-time and Embedded Systems : JTRES 2014 : Niagara Falls, NY, USA, October 13th-14th, 2014*, New York, New York, 2014 in *ACM international conference proceedings series*, ACM, pp. 57-66.

## Predictable Broadcasting of Parallel Intents in Real-Time Android

### Bibtex entry :

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@inproceedings { KGK14,
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[KRR14]

[PDFBIB](#)

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## Editorial for the Software Engineering 2013 Conference

### Bibtex entry :

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@article { KRR14,
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[Mer14]

[PDFBIB](#)

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# Integration und Analyse von Artefakten in der modellbasierten Entwicklung eingebetteter Software

## Bibtex entry :

```
@phdthesis { Mer14,
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[OKK14]

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  author = { Obster, Mathias and Kalkov, Igor and Kowalewski, Stefan },
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    Politècnica de Catalunya - Barcelona Tech (UPC); IEEE
    Industrial Electronics Society] },
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url = { http://publications.rwth-aachen.de/record/444615 },
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  author = { Palczynski, Jacob },
  othercontributors = { Kowalewski, Stefan },
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  publisher = { Fachgruppe Informatik, RWTH Aachen University },
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http://publications.rwth-aachen.de/record/229310/files/4941.pdf },
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  author = { Reinbacher, Thomas and Brauer, J{"o}rg and Horauer,
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    and Steininger, Andreas and Kowalewski, Stefan },
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    volume = { 80 },
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  author = { Reinbacher, Thomas and Fuegger, Matthias and Brauer,
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  pages = { 203-239 },
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  booktitle = { 2014 IEEE [International Conference on] Emerging Technologies and Factory Automation (ETFA 2014) : Barcelona, Spain, 16 - 19 September 2014 / [co-sponsored by Universitat Politècnica de Catalunya - Barcelona Tech (UPC); IEEE Industrial Electronics Society] },
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[SKB+14]

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  Federation of Automatic Control, Cape Town, South Africa,
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  author = { Vogel-Heuser, Birgit and Diedrich, Christian and Fay,
    Alexander and Jeschke, Sabina and Kowalewski, Stefan and
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url = { http://publications.rwth-aachen.de/record/225788 },
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    url = { http://publications.rwth-aachen.de/record/226951 },
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  author = { Ben Makhlouf, Ibtissem and H{"a}nsch, Paul and  
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  author = { Brauer, J{"o}rg and Kowalewski, Stefan },  
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  number = { AIB 2013 14 },  
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  author = { Biallas, Sebastian and Kamin, Volker and Kowalewski,
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26. Juni 2013 / VDI/VDE-Gesellschaft Mess- und
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  publisher = { VDI-Verl. },
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  url = { http://publications.rwth-aachen.de/record/226206 },
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  author = { Brauer, J{"o}rg and King, Andy and Kowalewski, Stefan
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  publisher = { Elsevier },
  pages = { 862-883 },
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  doi = { 10.1016/j.scico.2012.06.001 },
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  author = { Dzafic, Dzenan and Franke, Dominik and Baumeister, Danni
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pages = { 120-121 },
year = { 2013 },
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doi = { 10.1109/ICSTW.2013.72 },
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```

[For13]

[PDFBIB](#)

Förster, M., "Conditional software specification & assurance : A practical assessment of contract-based approaches", in *Proc. 2013 IEEE International Symposium on Software Reliability Engineering workshops (ISSREW 2013) : Pasadena, California, USA, 4 - 7 November 2013*, Piscataway, NJ, 2013, IEEE, pp. 36-36.

## Conditional software specification & assurance : A practical assessment of contract-based approaches

### Bibtex entry :

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@inproceedings { For13,
author = { F{"o}rster, Marc },
title = { Conditional software specification & assurance : A
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booktitle = { 2013 IEEE International Symposium on Software
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[GKS+13]

[PDFBIB](#)

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### Bibtex entry :

```
@inproceedings { GKS+13,
  author = { Gerlitz, Thomas and Kalkov, Igor and Schommer, John F.
and
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```

[HDB+13]

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@article { HDB+13,
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[HF13]

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Hansen, N. and Franke, D., "Reverse Engineering des Windows Phone Process Execution Models", in *Proc. Informatiktage 2013 : smart life - dank Informatik ; fachwissenschaftlicher Informatik-Kongress 22. und 23. März 2013 B-IT Bonn-Aachen International Center for Information Technology, Bonn / Gesellschaft für Informatik (Hrsg.). [Red.: Ludger Porada]*, Bonn, 2013 in GI-Edition : lecture notes in informatics, Gesellschaft für Informatik e.V., pp. 83-86.

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@inproceedings { HF13,
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[KPB13]

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@article { KPB13,  
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  url = { http://publications.rwth-aachen.de/record/752289 },  
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pages = { 379 S. : Ill., graph. Darst. },
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Merschen, D., Gleis, R., Pott, J., and Kowalewski, S., "Analysis of Simulink Models Using Databases and Model Transformations", in *Proc. Model-Based Methodologies for Pervasive and Embedded Software : 8th International Workshop, MOMPES 2012, Essen, Germany, September 4, 2012. Revised Papers / edited by Ricardo J. Machado, Rita Suzana P. Maciel, Julia Rubin, Goetz Botterweck*, Berlin, Heidelberg, 2013 in Lecture Notes in Computer Science, Springer, pp. 69-84.

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@inproceedings { MGP+13,
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    Software : 8th International Workshop, MOMPES 2012, Essen,
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  url = { http://publications.rwth-aachen.de/record/752299 },
}

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[NHM13]

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Neugebauer, J., Hanrath, M., and Mitric, R., "Theoretische Chemie 2012", *Nachrichten aus der Chemie*, vol. 61, iss. 3, pp. 320-329, 2013

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@article { NHM13,
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Roland },
  title = { Theoretische Chemie 2012 },
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  pages = { 320-329 },
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}
```

[PMS+13]

[PDFBIB](#)

Pomprapa, A., Misgeld, B., Sorgato, V., Stollenwerk, A., Walter, M., and Leonhardt, S., "Robust Control of End-Tidal CO<sub>2</sub> using the H<sup>∞</sup> Loop-Shaping Approach", *Acta polytechnica = Journal of advanced engineering*, vol. 53, pp. 895-900, 2013

## Robust Control of End-Tidal CO<sub>2</sub> using the H<sup>∞</sup> Loop-Shaping Approach

### Bibtex entry :

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@article { PMS+13,
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cin = { 120000 / 122810 },
url = {
http://publications.rwth-aachen.de/record/231825/files/231825.pdf },
}
```

[Rek13]

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@phdthesis { Rek13,
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series = { Aachener Informatik-Berichte },
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cin = { 120000 / 122810 },
url = {
http://publications.rwth-aachen.de/record/211920/files/4545.pdf },
}
```

[SGK13]

[PDFBIB](#)

Schommer, J. F., Gerlitz, T., and Kowalewski, S., "Load and Quality Cooperation for Distributed Embedded Systems Using Different Modes of Operation", in *Proc. Proceedings of the 7th Junior Researcher Workshop on Real-Time Computing : JRWRTC 2013 ; Sophia Antipolis, France, October 16-18, 2013*, Sophia Antipolis, France, 2013, pp. 45-48.

# Load and Quality Cooperation for Distributed Embedded Systems Using Different Modes of Operation

## Bibtex entry :

```
@inproceedings { SGK13,
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  url = { http://jrwrtc.science.uva.nl/JRWRTC13_proceedings.pdf },
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[Sto13]

[PDFBIB](#)

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## Bibtex entry :

```
@phdthesis { Sto13,
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}

[VK13]

[PDFBIB](#)

Vogel-Heuser, B. and Kowalewski, S., "Cyber-physical Systems", *Automatisierungstechnik : at*, vol. 61, iss. 10, pp. 667-668, 2013

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### Bibtex entry :

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@article { VK13,
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[WBS+13]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { WBS+13,
  author = { Walter, Marian and Brendle, Christian and Stollenwerk,
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[WGM+13]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { WGM+13,
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```

[WSB+13]

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@article { WSB+13,
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  author = { Biallas, Sebastian and Brauer, J{"o}rg and King, Andy
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pages = { 214-230 },
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[BBK12]

[PDFBIB](#)

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author = { Beckschulze, Eva and Biallas, Sebastian and Kowalewski,
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[BBK12a]

[PDFBIB](#)

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@article { BBK12a,  
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[PDFBIB](#)

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}

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[BDK12]

[PDFBIB](#)

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author = { Ben Makhlof, Ibtissem and Diab, Hilal and Kowalewski,
Stefan },
title = { Safety Verification of a Controlled Cooperative Platoon
Under Loss of Communication Using Zonotopes },
booktitle = { Inproceeding of the 4th IFAC Conference on Analysis
and
Design of Hybrid Systems (ADHS 12), Eindhoven, NL },
pages = { 333-338 },
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Hybrid
Systems, Eindhoven (Netherlands) },
doi = { 10.3182/20120606-3-NL-3011.00053 },
typ = { PUB:(DE-HGF)8 },
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}

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  author = { Brauer, Jörg and Hansen, Rene Rydhof and Kowalewski,
    Stefan and Larsen, Kim G. and Olesen, Mads Chr. },
  title = { Adaptable Value-Set Analysis for Low-Level Code },
  booktitle = { 6th International Workshop on Systems Software
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Brauer ; Marco Roveri ; Hendrik Tews },
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},
  pages = { 32-43 },
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@inproceedings { BK12,
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workshops] / IEEE },
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  year = { 2012 },
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  Telecommunications and Control Systems, St. Petersburg
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typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-200920 },
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url = { http://publications.rwth-aachen.de/record/207475 },
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@article { BK12a,
  author = { Brauer, J{o}rg and King, Andy },
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elimination },
  journal = { Logical methods in computer science : LMCS },
  publisher = { Department of Theoretical Computer Science, TU [u.a.]
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  volume = { 8 },
  number = { 3 },
  year = { 2012 },
  address = { Braunschweig },
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  url = {
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Automatisierungstechnik },
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pages = { 79-83 },
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organization = { 13. Branchentreff der Mess- und
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Baden-Baden (Germany), 2011-06-13 - 2011-06-14 },
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cin = { 122810 / 120000 },
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pages = { 68-74 },
volume = { 54 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/133988 },
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  cin = { 122810 / 120000 },  
  url = { http://publications.rwth-aachen.de/record/752302 },  
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  author = { Brauer, J{"o}rg and Simon, Axel },  
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  booktitle = { NASA formal methods : 4th international symposium,  
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url = { http://publications.rwth-aachen.de/record/123648 },
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  journal = { Electronic notes in theoretical computer science :
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  year = { 2012 },
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  issn = { 1571-0661 },
  organization = { Fourth International Workshop on Numerical and
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Abstract Domains (France), 10-09-2010 },
  doi = { 10.1016/j.entcs.2009.09.059 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/132534 },
}

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  booktitle = { 2012 15th International IEEE Conference on
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    Transportation Systems, Anchorage (USA), 16-09-2012 -
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  reportid = { RWTH-CONV-199932 },
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}
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  author = { Franke, Dominik and Dzafic, Dzenan and Baumeister, Danni
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pages = { 65-68 },
year = { 2012 },
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url = { http://publications.rwth-aachen.de/record/752300 },
}

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  author = { Franke, Dominik and Elsemann, Corinna and Kowalewski, Stefan },
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  doi = { 10.1109/DEXA.2012.40 },
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  author = { Franke, Dominik and Kowalewski, Stefan and Weise, C. and
    Prakobkosol, N. },
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    [proceedings ; including workshop papers] / [IEEE Computer
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cin = { 122810 / 120000 },
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}

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},
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  pages = { 28-33 },
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  url = { http://publications.rwth-aachen.de/record/752304 },
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Workshop, Bordeaux
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}
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[KFS+12]

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@inproceedings { KFS+12,
  author = { Kalkov, Igor and Franke, Dominik and Schommer, John F.
and
  Kowalewski, Stefan },
  title = { A Real-time Extension to the Android Platform },
  booktitle = { JTRES 2012 : proceedings of the 10th International
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  on Java Technologies for Real-time and Embedded Systems,
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[KRS12]

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  author = { Kowalewski, Stefan and Rumpe, Bernhard and Stollenwerk,
    André },
  title = { Cyber-Physical Systems - eine Herausforderung an die
    Automatisierungstechnik? },
  booktitle = { Automation 2012 : der 13. Branchentreff der Mess- und
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    (Baden-Baden) ; 2011.06.13-14Branchentreff der Mess- und
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  url = { http://publications.rwth-aachen.de/record/123658 },
}
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[MDH+12]

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## Bibtex entry :

```
@inproceedings { MDH+12,
  author = { Merschen, Daniel and Duhr, Yves and Hedenetz, Bernd and
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    3. bis 7. Dezember 2012, Sindelfingen },
publisher = { Elektronikpraxis, Vogel Business Media GmbH & Co. KG
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    M{"u"}nchen \: MicroConsult Microelectronics Consulting &
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pages = { 65-71 },
year = { 2012 },
address = { W{"u"}rzburg },
typ = { PUB:(DE-HGF)7 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/752298 },
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[MDR+12]

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    author = { Merschen, Daniel and Duhr, Yves and Ringler, Thomas and
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        Fachtagung des
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            Axel [Hrsg.] ; Albayrak, Sahin [Hrsg.] },
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[MEJ+12]

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  author = { Murillo, Luis Gabriel and Eusse, Juan Fernando and
    Jovic,
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  title = { Synchronization for Hybrid MPSoC Full-System Simulation
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  2012) : San Francisco, California, USA, 3 - 7 June 2012. -
  Vol. 1 },
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  year = { 2012 },
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  organization = { 49th ACM/EDAC/IEEE Design Automation Conference,
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  Francisco (USA), 2012-06-03 - 2012-06-07 },
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}
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[MHL+12]

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author = { Murillo, Luis Gabriel and Harnath, Julian and Leupers,
           Rainer and Ascheid, Gerd },
title = { Scalable and Retargetable Debugger Architecture for
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reportid = { RWTH-CONV-200673 },
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url = {
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[Mic12]

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  author = { Michailidis, Alexander A. },
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  series = { Berichte aus der Informatik },
  year = { 2012 },
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  url = { http://publications.rwth-aachen.de/record/64327 },
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  url = { http://publications.rwth-aachen.de/record/210819 },
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[MPK12]

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  booktitle = { IEEE 36th Annual Computer Software and Applications
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year = { 2012 },
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organization = { IEEE 36th Annual Computer Software and
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/752306 },
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    author = { Pleuss, Andreas and Botterweck, G{"o}tz and Dhungana,
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    url = { http://publications.rwth-aachen.de/record/211937 },
}

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[RDK+12]

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  author = { Reuter, Sebastian and Diab, Hilal and Kowalewski, Stefan  
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  booktitle = { 2012 IEEE International Conference on Robotics and  
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December 2012 / [sponsored by IEEE Robotics and Automation  
Society (RAS) ...] },  
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[SFL+12]

[PDFBIB](#)

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Kowalewski, Stefan },  
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    url = { http://publications.rwth-aachen.de/record/227070 },
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### Bibtex entry :

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    url = { http://publications.rwth-aachen.de/record/197739 },
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[SWS+12]

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  booktitle = { IEEE 6th International Symposium on Embedded
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  pages = { 51-58 },
  year = { 2012 },
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[WBB+12]

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  author = { Walter, Marian and Brendle, Christian and Bensberg, Ralf
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    booktitle = { 5th European Conference of the International
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    Medical and Biological Engineering : 14 - 18 September 2011,
    Budapest, Hungary ; [EMBEC] / Ákos Jobbágy (ed.) },
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[WBS+12]

[PDFBIB](#)

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    author = { Walter, Marian and Brendle, Christian and Stollenwerk,
    André and Kopp, R{"u}dger and Arens, Jutta and Bensberg,
    Ralf and Leonhardt, Steffen },
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    booktitle = { 11th International Conference on Complexity in Acute
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    pages = { 51-51 },
    year = { 2012 },
    organization = { 11th International Conference on Complexity in
Acute

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  url = {
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  author = { Barakat, Kamal },
  title = { Introducing Timers to Pi-Calculus },
  pages = { 31 },
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  reportid = { RWTH-CONV-236331 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/752307 },
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[BBD+11]

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  author = { Beckschulze, Eva and Boymanns, David and D{"u}lks,
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    and Gatterdam, Thomas and Kowalewski, Stefan and Lang, M.
    and Salewski, Falk and Siegbert, Thomas },
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}
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  year = { 2011 },
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[BBK11]

[PDFBIB](#)

Biallas, S., Brauer, J., and Kowalewski, S., "SAT-Based Abstraction Refinement for Programmable Logic Controllers", in *Proc. 3rd International Workshop on Dependable Control of Discrete Systems 2011, DCDS 2011, Saarbrücken, Germany, 15th-17th June 2011*, Piscataway, NJ, 2011, IEEE, pp. 96-101.

## SAT-Based Abstraction Refinement for Programmable Logic Controllers

### Bibtex entry :

```
@inproceedings { BBK11,
  author = { Biallas, Sebastian and Brauer, J{"o}rg and Kowalewski,
            Stefan },
  title = { SAT-Based Abstraction Refinement for Programmable Logic
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    Controllers },
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http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=05970325 },
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```

[BBS+11]

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## Analyzing Embedded Systems Code for Mixed-Critical Systems Using Hybrid Memory Representations

### Bibtex entry :

```

@inproceedings { BBS+11,
    author = { Beckschulze, Eva and Brauer, Jörg and Stollenwerk,
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    booktitle = { 2011 14th IEEE International Symposium on
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    year = { 2011 },
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    doi = { 10.1109/ISORCW.2011.40 },
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url = { http://publications.rwth-aachen.de/record/124002 },
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```

[BBS+11a]

[PDFBIB](#)

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@inproceedings { BBS+11a,
  author = { Brendle, Christian and Bensberg, Ralf and Stollenwerk,
    André and Arens, Jutta and Walter, Marian },
  title = { Patient Orientated Automation of the Therapy with the
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  booktitle = { 45. Jahrestagung der Deutschen Gesellschaft f{"u}r
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  publisher = { DGBMT },
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  cin = { 122810 / 120000 / 611010 },
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}
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[BK11]

[PDFBIB](#)

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## Approximate Quantifier Elimination for Propositional Boolean Formulae

### Bibtex entry :

```
@inproceedings { BK11,
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NFM

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    2011, Pasadena, CA, USA, April 18-20, 2011 ; proceedings /
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```

[BK11a]

[PDFBIB](#)

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## Transfer Function Synthesis without Quantifier Elimination

### Bibtex entry :

```

@inproceedings { BK11a,
  author = { Brauer, J{o}rg and King, Andy },
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Elimination },
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    European Conference on Theory and Practice of Software,
    ETAPS 2011, Saarbr{u}cken, Germany, March 26-April 3, 2011
    ; proceedings / Gilles Barthe (ed.) },
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}

```

[BKK11]

[PDFBIB](#)

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## Existential Quantification as Incremental SAT

### Bibtex entry :

```
@inproceedings { BKK11,
  author = { Brauer, J{\o}rg and King, Andy and Kriener, Jael },
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}
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[BKS11]

[PDFBIB](#)

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@inproceedings { BKS11,
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    SPS-Programmen mittels Model-Checking und statischer Analyse },
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    ; Kongress Baden-Baden, 28. und 29. Juni 2011 /
    VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik.
    [Kongressleiter: Peter Adolphs ...] },
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}

```

[BMH+11]

[PDFBIB](#)

Ben Makhlof, I., Maschuw, J. P., Hänsch, P., Diab, H., Kowalewski, S., and Abel, D., "Safety Verification of a Cooperative Vehicle Platoon with Uncertain Inputs Using Zonotopes", in *Proc. Proceedings of the 18th IFAC World Congress, 2011 : August 28 - September 2, 2011, Università Cattolica del Sacro Cuore, Milano Italy / Ed.: Sergio Bittanti ...*, Milano, Italy, 2011 in IFAC-PapersOnLine, Curran, pp. 9769-9774.

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### Bibtex entry :

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@inproceedings { BMH+11,
  author = { Ben Makhlof, Ibtissem and Maschuw, Jan P. and
H{"a}nsch,
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url = { http://publications.rwth-aachen.de/record/100991 },  
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[BRT11]

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### Bibtex entry :

```
@techreport { BRT11,  
  author = { Brauer, J{\\"o}rg and Roveri, Marco and Tews, Hendrik },  
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}
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[DFD+11]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { DFD+11,  
  author = { Dernehl, Christian and Franke, Dominik and Diab, Hilal  
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}

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[FDW+11]

[PDFBIB](#)

Franke, D., Dzafic, D., Weise, C., and Kowalewski, S., "Entwicklung eines mobilen Navigationssystems für Elektrofahrzeuge auf Basis von OpenStreetMap-Daten", in *Proc. Anwenderkonferenz für Freie und Open Source Software für Geoinformationssysteme : FOSSGIS 2011 ; Heidelberg, 5. - 7. April, 2011*, Heidelberg, 2011, pp. 92-99.

## Entwicklung eines mobilen Navigationssystems für Elektrofahrzeuge auf Basis von OpenStreetMap-Daten

### Bibtex entry :

```

@inproceedings { FDW+11,
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http://www.mapmedia.de/jthomsen/FOSSGIS_Tagungsband/2011_FOSSGIS_Tagung
sband.pdf },
}

```

[FDW+11a]

[PDFBIB](#)

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```
@inproceedings { FDW+11a,
  author = { Franke, Dominik and Dzafic, Dzenan and Weise, Carsten
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  AGIT-Symposium (AGIT) },
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  },
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```

[FEW+11]

[PDFBIB](#)

Franke, D., Elsemann, C., Weise, C., and Kowalewski, S., "Reverse Engineering of Mobile Application Lifecycles", in *Proc. 2011 18th Working Conference on Reverse Engineering (WCRE 2011) : Limerick, Ireland, 17 - 20 October 2011 ; [proceedings] / [Technically co-sponsored by IEEE Computer Society. Sponsored by Reengineering Forum; IEEE-CS Technical Council on Software Engineering]. Ed.: Martin Pinzger, Piscataway, NJ, 2011, IEEE, pp. 283-292.*

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## Bibtex entry :

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@inproceedings { FEW+11,
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  booktitle = { 2011 18th Working Conference on Reverse Engineering
(WCRE
  2011) : Limerick, Ireland, 17 - 20 October 2011 ;
  [proceedings] / [Technically co-sponsored by IEEE Computer
  Society. Sponsored by Reengineering Forum; IEEE-CS Technical
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  publisher = { IEEE },
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pages = { 283-292 },
year = { 2011 },
address = { Piscataway, NJ },
organization = { 18th Working Conference on Reverse Engineering,
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(Ireland), 2011-10-17 - 2011-10-20 },
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[FW11]

[PDFBIB](#)

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### Bibtex entry :

```

@inproceedings { FW11,
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Germany, 21-25 March 2011 / Spons. by IEEE Computer
Society. Ed. by Lisa O'Conner },
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year = { 2011 },
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url = { http://publications.rwth-aachen.de/record/126463 },
}

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[GK11]

[PDFBIB](#)

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*Fakultät Informatik. Jörg Brauer ... (ed.)*, Dresden, 2011, TU, Fak. Informatik, pp. 18-32.

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@inproceedings { GK11,
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Systems
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  Fakult{\a}t Informatik. J{\o}rg Brauer ... (ed.) },
  publisher = { TU, Fak. Informatik },
  pages = { 18-32 },
  year = { 2011 },
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}
```

[GKK+11]

[PDFBIB](#)

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## Using Timed Automata in Requirements Analysis for Engine Control Units

### Bibtex entry :

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@inproceedings { GKK+11,
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  Cuore, Milano Italy / Ed.: Sergio Bittanti ... },
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pages = { 12503-12508 },
series = { IFAC-PapersOnLine },
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cin = { 122810 / 120000 },
url = { http://dx.doi.org/10.3182/20110828-6-IT-1002.03679 },
}

```

[HSK11]

[PDFBIB](#)

Hänsch, P., Schommer, J. F., and Kowalewski, S., "Self-balancing Controllable Robots in Education: A Practical Course for Bachelor Students", in *Proc. Intelligent robotics and applications : 4th international conference, ICIRA 2011, Aachen, Germany, December 6 - 8, 2011 ; proceedings / Sabina Jeschke; Honghai Liu; Daniel Schilberg (eds.)*, Berlin, Heidelberg, 2011 in Lecture notes in computer science : Lecture notes in artificial intelligence, Springer Verlag, pp. 297-306.

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### Bibtex entry :

```

@inproceedings { HSK11,
  author = { H{"a"}nsch, Paul and Schommer, John F. and Kowalewski,
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    conference, ICIRA 2011, Aachen, Germany, December 6 - 8,
    2011 ; proceedings / Sabina Jeschke; Honghai Liu; Daniel
    Schilberg (eds.) },
  publisher = { Springer Verlag },
  pages = { 297-306 },
  series = { Lecture notes in computer science : Lecture notes in
    artificial intelligence },
  year = { 2011 },
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  typ = { PUB:(DE-HGF)8 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/117482 },
}

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[KBW+11]

[PDFBIB](#)

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### Bibtex entry :

```
@inproceedings { KBW+11,
  author = { Kopp, R{"u}dger and Bensberg, Ralf and Walter, Marian
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  Arens, Jutta and Rossaint, Rolf and Stollenwerk, Andr{e} },
  title = { Automation of extracorporeal membrane oxygenation using a
combined safety and control concept },
  booktitle = { Intensive care medicine },
  publisher = { Springer },
  pages = { 230-230 },
  volume = { 37 },
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  year = { 2011 },
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[KRS+11]

[PDFBIB](#)

Kopp, R., Rossaint, R., Schmitz-Rode, T., Steinseifer, U., Arens, J., Bensberg, R., and Henzler, D., "A Miniaturized Extracorporeal Membrane Oxygenator with Integrated Rotary Blood Pump: Preclinical In Vivo Testing", *ASAIO journal*, vol. 57, iss. 3, pp. 158-163, 2011

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### Bibtex entry :

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@article { KRS+11,
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url = { http://publications.rwth-aachen.de/record/142316 },
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[KS11]

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```
@conference { KS11,
  author = { Kowalewski, Stefan and Stollenwerk, André },
  title = { Supporting Evolving Requirements in CPS by Abstraction
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[MDA+11]

[PDFBIB](#)

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### Bibtex entry :

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@article { MDA+11,
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    Kowalewski, Stefan },
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[MPB+11]

[PDFBIB](#)

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@inproceedings { MPB+11,
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```

[MWB+11]

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### Bibtex entry :

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@inproceedings { MWB+11,  
  author = { Mitsching, Ralf and Weise, Carsten and Bohnenkamp,  
    Henrik  
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[MWF+11]

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@inproceedings { MWF+11,
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Integration and Reliability Improvement – Companion :
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@inproceedings { OBY11,
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}
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[PMB+11]

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@article { PMB+11,
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}
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[PWK+11]

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## Based Conformance Check

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@inproceedings { PWK+11,
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[PWM+11]

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http://www.in.tu-clausthal.de/fileadmin/homes/GI/Documents/MBEES2011_Ge
samt_final_web.pdf },
}
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}
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[RBH+11]

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@inproceedings { RBH+11,
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  year = { 2011 },
  address = { Heidelberg [u.a.] },
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[RBS+11]

[PDFBIB](#)

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@inproceedings { RBS+11,
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[RGH+11]

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@inproceedings { RGH+11,
  author = { Reinbacher, Thomas and G{"u}ckel, Dominique and
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    Informatik e.V. (GI) 4.-7.10.2011 in Berlin / Hans-Ulrich
    Hei{"ss"}, Peter Pepper, Holger Schlingloff, J{"o"}rg
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[RHS+11]

[PDFBIB](#)

Reinbacher, T., Horauer, M., Schlich, B., Brauer, J., and Scheuer, F., "Model checking embedded software of an industrial knitting machine", *International journal of information technology*,

*communications and convergence*, vol. 1, iss. 2, pp. 186-205, 2011

## Model checking embedded software of an industrial knitting machine

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@article { RHS+11,
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[RSM+11]

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### Bibtex entry :

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@inproceedings { RSM+11,
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M{"u}ller,
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Engineering Conference - 2011 : presented at ASME 2011
International Design Engineering Technical Conferences and
Computers and Information in Engineering Conference, August
28 - 31, 2011, Washington, D.C. / sponsored by the Design
Engineering Division, ASME; the Computers and Information in
Engineering Division, ASME. - Vol. 3: ASME/IEEE
International Conference on Mechatronic and Embedded Systems
and Applications, Pt. A },
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[SA11]

[PDFBIB](#)

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/ IEEE },
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[SBK11]

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}
```

[SGA+11]

[PDFBIB](#)

Stollenwerk, A., Gathmann, F., Arens, J., Bensberg, R., Walter, M., Kopp, R., and Kowalewski, S., "Safety Aware Pump-Control for a Rotary ECMO Blood Pump", in *Proc. The international journal of artificial organs*, Milano [u.a.], 2011, vol. 34, Wichtig, pp. 617-617.

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# Pump

## Bibtex entry :

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@inproceedings { SGA+11,
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[SGB+11]

[PDFBIB](#)

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### Bibtex entry :

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@article { SGB+11,
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[SGW+11]

[PDFBIB](#)

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  author = { Stollenwerk, André and Göbe, F. and Walter, Marian
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  url = {
http://www.seas.upenn.edu/~rahulm/Shared/HCMDSS/hcmdss11_aachen.pdf },
}

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[SNB+11]

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International Haifa Verification Conference, HCV 2009,  
Haifa, Israel, October 19-22, 2009 : revised selected papers  
/ Kedar Namjoshi ... (eds.) },  
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  url = { http://publications.rwth-aachen.de/record/116214 },  
}
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[SSK+11]

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### Bibtex entry :

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  author = { Sasnauskas, Raimondas and Soria Dustmann, Oscar and  
Kaminski, Benjamin Lucien and Wehrle, Klaus and Weise,  
Carsten and Kowalewski, Stefan },  
  title = { Scalable symbolic execution of distributed systems },  
  booktitle = { 2011 31st International Conference on Distributed  
Computing  
Systems, (ICDCS 2011) : Minneapolis, Minnesota, USA, 20 - 24  
June 2011 / IEEE. [Sponsored by IEEE Computer Society
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    Technical Committee on Distributed Processing. David
    Hung-Chang Du, general chair] },
publisher = { IEEE },
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typ = { PUB:(DE-HGF)8 },
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url = { http://publications.rwth-aachen.de/record/126707 },
}

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[WBA+11]

[PDFBIB](#)

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@inproceedings { WBA+11,
  author = { Walter, Marian and Brendle, Christian and Arens, Jutta
and
  Stollenwerk, André and Kopp, R{"u}dger and Bensberg, Ralf
and Leonhardt, Steffen },
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[AdM+10]

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  url = { http://publications.rwth-aachen.de/record/165220 },  
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[Arm10]

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  author = { Armoush, Ashraf },  
  othercontributors = { Kowalewski, Stefan },  
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  publisher = { Publikationsserver der RWTH Aachen University },  
  pages = { XIV, 181 S. : graph. Darst. },  
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http://publications.rwth-aachen.de/record/51773/files/3273.pdf },
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[BBG+10]

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  author = { Biallas, Sebastian and Brauer, J{"o}rg and G{"u}ckel,
    Dominique and Kowalewski, Stefan },
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  booktitle = { 4th International Workshop on Harnessing Theories for
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Support in Software : TTSS'10 ; East China Normal
University, Shanghai, China, November 15, 2010 ; Preliminary
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http://i.unu.edu/unu/u/publication/000/001/286/report444.pdf },
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booktitle = { 5th International Workshop on Systems Software
Verification
(SSV 2010), Vancouver, Canada },
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http://www.embedded.rwth-aachen.de/lib/exe/fetch.php?media=bib:bbk10.pdf
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}

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[BFK+10]

[PDFBIB](#)

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  author = { Biallas, Sebastian and Frey, Georg and Kowalewski,
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Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen ;
11. Fachtagung mit Tutorium, 25. bis 27. Mai 2010 in
Magdeburg, Denkfabrik im Wissenschaftshafen / ifak, Institut
f{"u}r Automation und Kommunikation e.V., Magdeburg;
Otto-von-Guericke-Universit{"a}t Magdeburg, Institut
f{"u}r Automatisierungstechnik. [Hrsg.: Ulrich Jumar,
Eckehard Schnieder, Christian Diedrich] },
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  editor = { Bollue, Kai and G{"u}ckel, Dominique and Loup, Ulrich
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  url = { http://publications.rwth-aachen.de/record/752313 },
}
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[BK10]

[PDFBIB](#)

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@inproceedings { BK10,
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Formulae },
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  year = { 2010 },
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  url = { http://publications.rwth-aachen.de/record/119140 },
}

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[BKK+10]

[PDFBIB](#)

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### Bibtex entry :

```

@inproceedings { BKK+10,
  author = { Brauer, J{\o}rg and Kamin, Volker and Kowalewski,
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}

```

[BKK10]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { BKK10,
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  url = { http://publications.rwth-aachen.de/record/119141 },
}
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[BNS10]

[PDFBIB](#)

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### Bibtex entry :

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  author = { Brauer, J{"o}rg and Noll, Thomas and Schlich, Bastian
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  Germany - June 29-30, 2010 },
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url = { http://publications.rwth-aachen.de/record/120063 },
}
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[BPD+10]

[PDFBIB](#)

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},
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}
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[BPK10]

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    Development of Embedded Systems (MBEES 2010) ; 03.02.2010
    - 05.02.2010 / Holger Giese ... [Hrsg.] },
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https://www.tu-braunschweig.de/Medien-DB/isf/mbees2010\_tagungsband.pdf
  },
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```

[CBD+10]

[PDFBIB](#)

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  author = { Chávez Grunewald, Martin Guillermo and Ben Makhlof,
    Ibtissem and Diab, Hilal and Abel, Dirk and Kowalewski,
    Stefan },
  title = { On the Effects of Network Delays on an Energy-based
    Controller },
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typ = { PUB:(DE-HGF)8 },
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}

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[CBD+10a]

[PDFBIB](#)

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### Bibtex entry :

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  author = { Chávez Grunewald, Martin Guillermo and Ben Makhlof, Ibtissem and Diab, Hilal and Mut, Vicente and Kowalewski, Stefan and Abel, Dirk },
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  url = { http://publications.rwth-aachen.de/record/133927 },
}

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[DCB+10]

[PDFBIB](#)

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  author = { Diab, Hilal and Chávez Grunewald, Martin Guillermo and Ben
Makhlouf, Ibtissem and Abel, Dirk and Kowalewski, Stefan },
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  year = { 2010 },
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[FK10]

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  author = { Franke, Dominik and Kowalewski, Stefan },
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Einsatz in zeitkritischen Systemen },
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  author = { G{"u"}ckel, Dominique and Brauer, J{"o"}rg and
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  title = { A System for Synthesizing Abstraction-Enabled Simulators
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  booktitle = { 2010 International Symposium on Industrial Embedded
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volume = { 6371 },
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doi = { 10.1007/978-3-642-15898-8 },
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url = { http://publications.rwth-aachen.de/record/752312 },
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    Bernd and Kowalewski, Stefan },
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Computer Society; IEEE TCSC ...] },
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pages = { 2433-2440 },
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  author = { Stollenwerk, André and Derks, Andreas and Kowalewski,
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      Peter Marwedel ... },
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[SJA+10]

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booktitle = { The international journal of artificial organs },
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volume = { 33 },
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[SJW+10]

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  author = { Stollenwerk, André and J{"o}rgens, J{"o}rg and Walter,
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    f{"u}r Biomedizinische Technik (DGBMT) im VDE },
  publisher = { de Gruyter },
  pages = { 174-177 },
  volume = { 55 },
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  url = { http://publications.rwth-aachen.de/record/169679 },
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[SLA+10]

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  author = { Sasnauskas, Raimondas and Landsiedel, Olaf and Alizai,
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[SLW+10]

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booktitle = { Entwurf komplexer Automatisierungssysteme : EKA 2010
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publisher = { ifak },
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[WLK+10]

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[WLK+10a]

[PDFBIB](#)

Walter, M., Leonhardt, S., Kopp, R., Arens, J., Weyer, S., and Stollenwerk, A., "A physiological model for extracorporeal oxygenation controller design", *Annual international conference of the IEEE Engineering in Medicine and Biology Society*, vol. 2010, pp. 434-437, 2010

## A physiological model for extracorporeal oxygenation controller design

### Bibtex entry :

```

@article { WLK+10a,
  author = { Walter, Marian and Leonhardt, Steffen and Kopp,
R{"u}dger
and Arens, Jutta and Weyer, S{"o}ren and Stollenwerk,
André },
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controller design },
  journal = { Annual international conference of the IEEE Engineering
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Medicine and Biology Society },
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  volume = { 2010 },
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}

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[ABK09]

[PDFBIB](#)

Armoush, A., Beckschulze, E., and Kowalewski, S., "Safety assessment of design patterns for safety-critical embedded systems", in *Proc. 35th Euromicro Conference on Software Engineering and Advanced Applications : SEAA 2009 ; August 27-29, 2009 in Patras, Greece, Piscataway, NJ, 2009, IEEE*, pp. 523-527.

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## Bibtex entry :

```
@inproceedings { ABK09,
  author = { Armoush, Ashraf and Beckschulze, Eva and Kowalewski,
Stefan },
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[AK09]

[PDFBIB](#)

Armoush, A. and Kowalewski, S., "Safety recommendations for safety-critical design patterns", in *Proc. Proceedings of the International Workshop on the Design of Dependable Critical Systems 'Hardware, Software, and Human Factors in Dependable System Design': DDCS 2009 : September 15, 2009, Hamburg, Germany ; in the framework of The 28th International Conference on Computer Safety, Reliability and Security SAFECOMP 2009 / Ed. by Achim Wagner, Automation Laboratory, Institute of Computer Engineering, University of Heidelberg ...*, Heidelberg, 2009, Universität, pp. 9-16.

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## Bibtex entry :

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@inproceedings { AK09,
  author = { Armoush, Ashraf and Kowalewski, Stefan },
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  booktitle = { Proceedings of the International Workshop on the
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Factors in Dependable System Design': DDCS 2009 : September
15, 2009, Hamburg, Germany ; in the framework of The 28th
International Conference on Computer Safety, Reliability and
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Security SAFECOMP 2009 / Ed. by Achim Wagner, Automation
Laboratory, Institute of Computer Engineering, University of
Heidelberg ... },
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pages = { 9-16 },
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typ = { PUB:(DE-HGF)8 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/99563 },
}

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[ASK09]

[PDFBIB](#)

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### Bibtex entry :

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@article { ASK09,
  author = { Armoush, Ashraf and Salewski, Falk and Kowalewski,
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  journal = { Journal of software engineering and applications : JSEA
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  url = { http://www.scirp.org/journal/jsea },
}

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[BHS09]

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## Interprocedural pointer analysis in Goanna

### Bibtex entry :

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@article { BHS09,
  author = { Brauer, Jörg and Huuck, Ralf and Schlich, Bastian },
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  journal = { Electronic notes in theoretical computer science :
ENTCS },
  publisher = { Elsevier Science },
  pages = { 65-83 },
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}
```

[BKC+09]

[PDFBIB](#)

Ben Makhlouf, I., Kowalewski, S., Chávez Grunewald, M. G., and Abel, D., "Safety assessment of networked vehicle platoon controllers : practical experiences with available tools", in *Proc. ADHS'09: 3rd IFAC Conference on Analysis and Design of Hybrid : September 16, 17 - 18, University of Zaragoza, Spain / Aragón Institute for Engineering Research, Zaragoza, Spain, 2009, University of Zaragoza.*

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### Bibtex entry :

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@inproceedings { BKC+09,
  author = { Ben Makhlouf, Ibtissem and Kowalewski, Stefan and Chávez
Grunewald, Martin Guillermo and Abel, Dirk },
  title = { Safety assessment of networked vehicle platoon
controllers :
  practical experiences with available tools },
  booktitle = { ADHS'09: 3rd IFAC Conference on Analysis and Design
of
  Hybrid : September 16, 17 - 18, University of Zaragoza,
  Spain / Aragón Institute for Engineering Research },
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```

[BPK09]

[PDFBIB](#)

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## Using higher-order transformations to derive variability mechanism

### Bibtex entry :

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@inproceedings { BPK09,
  author = { Botterweck, G{\"}tz and Polzer, Andreas and Kowalewski,
    Stefan },
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  booktitle = { ACES-MB 2009 : Model Based Architecting and
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    Embedded Systems ; held as part of the 2009 International
    Conference on Model Driven Engineering Languages and Systems
    (MoDELS'09) ; Denver, Colorado, USA, October 6, 2009 / Ed.
    by: Stefan Van Baelen ... },
  publisher = { RWTH Aachen },
  pages = { 107-121 },
  series = { CEUR Workshop Proceedings },
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http://nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:0074-507-1 },
}

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[BPK09a]

[PDFBIB](#)

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  author = { Botterweck, G{"o}tz and Polzer, Andreas and Kowalewski,
            Stefan },
  title = { Interactive configuration of embedded systems product
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            Product Line
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  year = { 2009 },
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}
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[BPK09b]

[PDFBIB](#)

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## Bibtex entry :

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  author = { Botterweck, G{"o}tz and Polzer, Andreas and Kowalewski,
            Stefan },
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            and revised selected papers / Sudipto Ghosh (ed.) },
  publisher = { Springer },
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series = { Lecture notes in computer science },
year = { 2009 },
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cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/129006 },
}
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[BPP+09]

[PDFBIB](#)

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## Towards Feature-driven Planning of Product-Line Evolution

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@inproceedings { BPP+09,
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}
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[BSK09]

[PDFBIB](#)

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## Bibtex entry :

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@inproceedings { BSK09,  
  author = { Beckschulze, Eva and Salewski, Falk and Kowalewski,  
Stefan },  
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  booktitle = { Safety-critical systems, 2009 : [held during the SAE  
2009  
world congress, held April 20 - 23, 2009 in Detroit,  
Michigan, USA] / SAE International },  
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}
```

[BSR+09]

[PDFBIB](#)

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## Stack bounds analysis of microcontroller assembly code

## Bibtex entry :

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@inproceedings { BSR+09,  
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EMSOFT'09 ; Proceedings of the 2009 international  
conference on Compilers, architecture, and synthesis for  
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2009 },  
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doi = { 10.1145/1631716.1631721 },
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url = { http://publications.rwth-aachen.de/record/100433 },
}
```

[DBK+09]

[PDFBIB](#)

Diab, H., Ben Makhoulf, I., Kowalewski, S., Chávez, M., and Abel, D., "Control and Safety Analysis of a Platoon under Communication Constraints", in *Proc. NE\{S/T\}COC, Sept. 28/29, Stuttgart, Priority Program 1305 Posters S.5*, 2009, pp. 70-71.

## Control and Safety Analysis of a Platoon under Communication Constraints

### Bibtex entry :

```
@inproceedings { DBK+09,
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[DSK09]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { DSK09,
  author = { Duelks, Ramona and Salewski, Falk and Kowalewski, Stefan
```

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},
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  booktitle = { Proceedings / 2009 Testing: Academic and Industrial
                Conference Practice and Research Techniques : TAIC PART 2009
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                Kingdom },
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  pages = { 197-204 },
  year = { 2009 },
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  url = { http://publications.rwth-aachen.de/record/126992 },
}

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[FHS+09]

[PDFBIB](#)

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### Bibtex entry :

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  author = { Fehnker, Ansgar and Huuck, Ralf and Schlich, Bastian and
            Tapp, Michael },
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            static program analysis },
  booktitle = { SOFSEM 2009: theory and practice of computer science
                : 35th
                Conference on Current Trends in Theory and Practice of
                Computer Science, Špindler°uv Mlýn, Czech Republic,
                January 24 - 30, 2009 ; proceedings / Mogens Nielsen ...
                (eds.) },
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  pages = { 267-278 },
  volume = { 5404 },
  series = { Lecture notes in computer science },
  year = { 2009 },
  address = { Berlin [u.a.] },
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}

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[Guc09]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { Guc09,
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(DS
  SSV'09) : Real Software, Real Problems, Real Solutions ;
  proceedings ; held during the 4th International Workshop on
  Systems Software Verication (SSV'09) in Aachen, Germany,
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  Schlich (eds.) },
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  pages = { 7-9 },
  series = { Aachener Informatik Berichte : AIB },
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http://sunsite.informatik.rwth-aachen.de/Publications/AIB/2009/2009-14.
pdf },
}
```

[HKK+09]

[PDFBIB](#)

Hutchison, D., Kanade, T., Kittler, J., Kleinberg, J. M., Mattern, F., Mitchell, J. C., Naor, M., Nierstrasz, O., Rangan, P. C., Steffen, B., Sudan, M., Terzopoulos, D., Tygar, D., Vardi, M. Y., Weikum, G., Kowalewski, S., and Philippou, A., Eds., *Tools and Algorithms for the Construction and Analysis of Systems : 15th International Conference, TACAS 2009, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2009, York, UK, March 22-29, 2009. Proceedings*, Berlin, Heidelberg: Springer Berlin Heidelberg, 2009.

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  editor = { Hutchison, David and Kanade, Takeo and Kittler, Josef  
and  
  Kleinberg, Jon M. and Mattern, Friedemann and Mitchell, John  
C. and Naor, Moni and Nierstrasz, Oscar and Rangan, C. Pandu  
and Steffen, Bernhard and Sudan, Madhu and Terzopoulos,  
Demetri and Tygar, Doug and Vardi, Moshe Y. and Weikum,  
Gerhard and Kowalewski, Stefan and Philippou, Anna },  
  title = { Tools and Algorithms for the Construction and Analysis of  
Systems : 15th International Conference, TACAS 2009, Held as  
Part of the Joint European Conferences on Theory and  
Practice of Software, ETAPS 2009, York, UK, March 22-29,  
2009. Proceedings },  
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  year = { 2009 },  
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2009-03-22 - 2009-03-29 },  
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}
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[KGG+09]

[PDFBIB](#)

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## Bibtex entry :

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  author = { Kowalewski, Stefan and Garavello, Mauro and Guéguen,  
Hervé
```



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and Herberich, Gerlind and Langerak, Rom and Piccoli,
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title = { Hybrid automata },
booktitle = { Handbook of hybrid systems control : theory, tools,
applications / edited by Jan Lunze, Françoise
Lamnabhi-Lagarigue },
publisher = { Cambridge University Press [2009] },
pages = { 57-86 },
year = { 2009 },
address = { Cambridge },
doi = { 10.1017/CB09780511807930.004 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-236342 },
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url = { http://publications.rwth-aachen.de/record/752315 },
}
```

[KHS09]

[PDFBIB](#)

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## Operating System Verification

### Bibtex entry :

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author = { Klein, Gerwin and Huuck, Ralf and Schlich, Bastian },
title = { Operating System Verification },
journal = { Journal of automated reasoning },
publisher = { Springer },
pages = { 123-124 },
volume = { 42 },
number = { 2/4 },
year = { 2009 },
address = { Dordrecht [u.a.] },
issn = { 0168-7433 },
doi = { 10.1007/s10817-009-9126-9 },
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reportid = { RWTH-CONV-065212 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/188901 },
}
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[KLK09]

[PDFBIB](#)

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@article { KLK09,  
  author = { Kopp, R{"u}dger and Leonhardt, Steffen and Kowalewski,  
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  title = { Extracorporeal Membrane Oxygenation for Cardiac and  
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  publisher = { Springer },  
  pages = { 341-349 },  
  volume = { 2009 },  
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  url = { http://publications.rwth-aachen.de/record/83542 },  
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[Klu09]

[PDFBIB](#)

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## Bibtex entry :

```
@phdthesis { Klu09,  
  author = { Kl{"u}nder, Daniel },  
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  title = { Entwurf eingebetteter Software mit abstrakten  
            Zustandsmaschinen und business object notation },  
  publisher = { RWTH Aachen, Department of Computer Science },  
  pages = { X, 131 S. : graph. Darst. },  
  series = { Aachener Informatik-Berichte },  
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http://publications.rwth-aachen.de/record/51797/files/Kluender_Daniel.p
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[KP09]

[PDFBIB](#)

Kowalewski, S. and Philippou, A., Eds., *Tools and algorithms for the construction and analysis of systems : 15th international conference, TACAS 2009, held as part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2009, York, UK, March 22-29, 2009 ; proceedings / Stefan Kowalewski; Anna Philippou (eds.)*, Berlin [u.a.]: Springer, 2009.

**Tools and algorithms for the construction and analysis of systems : 15th international conference, TACAS 2009, held as part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2009, York, UK, March 22-29, 2009 ; proceedings / Stefan Kowalewski; Anna Philippou (eds.)**

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```
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    part of the Joint European Conferences on Theory and  
    Practice of Software, ETAPS 2009, York, UK, March 22-29,  
    2009 ; proceedings / Stefan Kowalewski; Anna Philippou  
    (eds.) },  
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  pages = { XVI, 456 S. : graph. Darst. },  
  volume = { 5505 },  
  series = { Lecture notes in computer science : Theoretical computer  
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  url = {  
http://www.springer.com/computer/theoretical+computer+science/book/978-  
3-540-41865-8 },  
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```

[KWA+09]

[PDFBIB](#)

Kopp, R., Walter, M., Arens, J., Stollenwerk, A., Leonhardt, S., Schmitz-Rode, T., Kowalewski, S., and Rossaint, R., "Regelungs- und Sicherheitskonzepte für extrakorporale zur Lungenunterstützung", *Biomedizinische Technik = Biomedical engineering*, vol. 54, iss. 5, pp. 289-297, 2009

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@article { KWA+09,
  author = { Kopp, R{"u}dger and Walter, Marian and Arens, Jutta and
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  title = { Regelungs- und Sicherheitskonzepte f{"u}r extrakorporale
    zur Lungenunterst{"u}tzung },
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  year = { 2009 },
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  url = { http://publications.rwth-aachen.de/record/132651 },
}
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[LWW+09]

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  booktitle = { Automation 2009 : der Automatisierungskongress in
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    VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik. -
    2067 },
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    url = { http://publications.rwth-aachen.de/record/99564 },
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  author = { Mitsching, Ralf },
  title = { Testing in the Industrial Development Process for
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  Systems },
  booktitle = { Doctoral Symposium on Systems Software Verification
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  SSV'09) Real Software, Real Problems, Real Solutions ;
  Proceedings },
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@inproceedings { MWK+09,
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Verification
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@inproceedings { PBW+09,
  author = { Polzer, Andreas and Botterweck, G{"o}tz and Wagnerin,
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Jahrestagung der Gesellschaft f{"u}r Informatik e.V. (GI),
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  author = { Palczynski, Jacob and Kowalewski, Stefan },
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... },
  publisher = { IEEE },
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[PKB09]

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  author = { Polzer, Andreas and Kowalewski, Stefan and Botterweck,
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[RBH+09]

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  author = { Reinbacher, Thomas and Brauer, J{"o"}rg and Horauer,
    Martin
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    2009 / [sponsored by: IEEE Industrial Electronics Society
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    (IES))] },
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    url = { http://publications.rwth-aachen.de/record/99425 },
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[RHS+09]

[PDFBIB](#)

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### Bibtex entry :

```

@inproceedings { RHS+09,
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[RHS09]

[PDFBIB](#)

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### Bibtex entry :

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15-17, 2009, Liberec, Czech Republic / M. Renovell; IEEE
Computer Society ... },
  publisher = { IEEE },
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  year = { 2009 },
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```

[SBW+09]

PDFBIB

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### Bibtex entry :

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@inproceedings { SBW+09,
  author = { Schlich, Bastian and Brauer, J{"o}rg and Wernerus,
J{"o}rg
and Kowalewski, Stefan },
  title = { Direct Model Checking of {PLC} Programs in {IL} },
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Bari,
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url = { http://publications.rwth-aachen.de/record/752318 },
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```

[SFK+09]

[PDFBIB](#)

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  author = { Schommer, John F. and Franke, Dominik and Kowalewski, Stefan
    and Weise, Carsten },
  title = { Evaluation of the real-time Java runtime environment for
    deployment in time-critical systems },
  booktitle = { 7th International Workshop on Java Technologies for
    Real-Time and Embedded Systems : JTRES 09 ; Universidad
    Complutense de Madrid, Facultad de Informatica, 23-25
    September 2009, Madrid, Spain / Workshop Chair: M. Teresa
    Higuera-Toledano ... },
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  pages = { 51-60 },
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[SJK09]

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@inproceedings { SJK09,  
  author = { Stollenwerk, André and Jongdee, Chate and Kowalewski,  
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  url = { http://publications.rwth-aachen.de/record/100434 },  
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[SK09]

[PDFBIB](#)

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  author = { Schlich, Bastian and Kowalewski, Stefan },  
  title = { Model checking C source code for embedded systems },  
  journal = { International journal on software tools for technology  
transfer : STTT },  
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}

[SKW09]

[PDFBIB](#)

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    [10. Branchentreff der Mess- und Automatisierungstechnik] /
    VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik. -
    2067 },
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  author = { Stollenwerk, André and Lang, Martin },
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Concept },
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}

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[SWW+09]

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ticle=B21049FA-B9E6-4AF6-96BC-F3AAEB904F59 },
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[SZR+09]

[PDFBIB](#)

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  author = { Schmitz, Dominik and Zhang, Ming and Rose, Thomas and Jarke, Matthias and Polzer, Andreas and Palczynski, Jacob and Kowalewski, Stefan and Reke, Michael },
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[TBG+09]

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@article { TBG+09,
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    reactive and discrete-continuous systems (AlgoSyn)' },
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520000 },
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[WLK+09]

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### Bibtex entry :

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  author = { Walter, Marian and Leonhardt, Steffen and Kopp,
R{"u}dger
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  title = { Automation of long term extracorporeal oxygenation
systems },
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Conference 2009
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Hungary / General Chair: László Keviczky ... },
  publisher = { EUCA },
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}

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[WWS+09]

[PDFBIB](#)



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### Bibtex entry :

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@inproceedings { WWS+09,
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}
```

[WWS+09a]

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title = { In Vivo Validation of an Automatic Controlled
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    Wolfgang C. Schlegel (eds.). - 7. Diagnostic and therapeutic
    instrumentation, clinical engineering },
publisher = { Springer },
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series = { IFMBE proceedings },
year = { 2009 },
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[AM08]

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    author = { Afzal, Waqas and Mahmood, Adnan },
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        Hotel, Knowloon, Hong Kong / Eds.: S. I. Ao ... },
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    year = { 2008 },
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  author = { Armoush, Ashraf and Salewski, Falk and Kowalewski,  
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  booktitle = { Proceedings of the 5th International Conference on  
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[ASK08b]

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[PDFBIB](#)

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  author = { Beckers, J{"o}rg and Kl{"u}nder, Daniel and
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  title = { Direct support for model checking abstract state machines
    by
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  booktitle = { Abstract state machines, B and Z : first
    international
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      proceedings / Egon B{"o}rger ... (eds.) },
  publisher = { Springer },
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[BSS+08]

[PDFBIB](#)

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Tiziana Margaria ... (ed.) },
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[DHH+08]

[PDFBIB](#)

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booktitle = { Steuerung und Regelung von Fahrzeugen und Motoren :
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    2008 ; 4. Fachtagung Baden-Baden, 12. und 13. Februar 2008 /
    VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik },
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[DHS+08]

[PDFBIB](#)

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        Dieselmotor unter Ber{"u}cksichtigung nichtfunktionaler
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        - technische Innovationen und Entwicklungstrends ; [28.
        Tagung 'Elektronik im Kraftfahrzeug' vom Haus der Technik
        Essen e.V. in M{"u}nchen (i.e. Dresden!)] / Bernard
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[HFS+08]

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  author = { Huuck, Ralf and Fehnker, Ansgar and Seefried, Sean and
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  booktitle = { Automated technology for verification and analysis :
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  Choi; Moonzoo Kim; Insup Lee; Mahesh Viswanathan (eds.) },
  publisher = { Springer },
  pages = { 216-221 },
  series = { Lecture notes in computer science },
  year = { 2008 },
  address = { Berlin [u.a.] },
  organization = { 6th International Symposium on Automated
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  2008-10-23 },
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  reportid = { RWTH-CONV-095469 },
}
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[HSW+08]

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**Bibtex entry :**

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  author = { Herberich, Gerlind and Schlich, Bastian and Weise,
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[KKK08]

[PDFBIB](#)

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  author = { Kl{"u}nder, Daniel and Kameni, Dimitri and Kowalewski,
    Stefan },
  title = { Nahtloser Entwurf sicherheitskritischer, eingebetteter
    Softwaresysteme mit abstrakten Zustandsmaschinen und
    Business Object Notation },
  booktitle = { Entwurf komplexer Automatisierungssysteme, EKA 2008 :
    Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen ;
    10. Fachtagung, 15. bis 16. April 2008 Tutorium, 16. bis 17.
    April 2008 Fachtagung, Magdeburg, Denkfabrik im
    Wissenschaftshafen / Ifak, Institut f{"u}r Automation und
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    Kommunikation e.V., Magdeburg ... Hrsg.: Ulrich Jumar;
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  year = { 2008 },
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}

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[KLK08]

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  author = { Kl{"u}nder, Daniel and Li, J. and Kowalewski, Stefan },
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  url = { http://publications.rwth-aachen.de/record/752319 },
}

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[Klu08]

[PDFBIB](#)

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  author = { Kl{"u}nder, Daniel },
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```

[MHR+08]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { MHR+08,
    author = { Michailidis, Alexander A. and Hedenetz, Bernd and Ringler, Thomas and Kowalewski, Stefan },
    title = { Virtuelle Integration von vernetzten Funktionen in fr{"u}hen Entwicklungsphasen },
    booktitle = { Moderne Elektronik im Kraftfahrzeug III : Systeme von morgen
- technische Innovationen und Entwicklungstrends ; [28. Tagung 'Elektronik im Kraftfahrzeug' vom Haus der Technik Essen e.V. in M{"u}nchen (i.e. Dresden!)] / Bernard B{"a}ker (Hrsg.) u. 46 Mitautoren },
    publisher = { Expert-Verl. },
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}

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}

[NS08]

[PDFBIB](#)

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@inbook { NS08,
  author = { Noll, Thomas and Schlich, Bastian },
  title = { Delayed nondeterminism in model checking embedded systems
    assembly code },
  booktitle = { Hardware and software: verification and testing :
third
  International Haifa Verification Conference, HVC 2007,
  Haifa, Israel, October 23 - 25, 2007 ; proceedings / Karen
  Yorav (ed.) },
  publisher = { Springer },
  pages = { 185-201 },
  volume = { 4899 },
  series = { Lecture notes in computer science },
  year = { 2008 },
  address = { Berlin [u.a.] },
  doi = { 10.1007/978-3-540-77966-7_16 },
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  url = { http://publications.rwth-aachen.de/record/83461 },
}
```

[RKH+08]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { RKH+08,
  author = { Reinbacher, Thomas and Kramer, Michael and Horauer,
Martin
  and Schlich, Bastian },
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title = { Motivating model checking for embedded systems software
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12 - 15 October 2008 },
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pages = { 546-551 },
year = { 2008 },
address = { Piscataway, NJ },
doi = { 10.1109/MESA.2008.4735653 },
typ = { PUB:(DE-HGF)8 },
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}
```

[RKH+08a]

[PDFBIB](#)

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@inproceedings { RKH+08a,
author = { Reinbacher, Thomas and Kramer, Michael and Horauer,
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title = { Challenges in embedded model checking : a simulator for
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[mc]square model checker },
booktitle = { 2008 International Symposium on Industrial Embedded
Systems
: [SIES'2008] ; La Grande Motte, France, 11 - 13 June 2008 /
IEEE },
publisher = { IEEE },
pages = { 245-248 },
year = { 2008 },
address = { Piscataway, NJ },
doi = { 10.1109/SIES.2008.4577709 },
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reportid = { RWTH-CONV-172528 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/99569 },
}
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[Sal08]

[PDFBIB](#)

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  author = { Salewski, Falk },
  othercontributors = { Kowalewski, Stefan },
  title = { Empirical evaluations of safety critical embedded systems
},
  publisher = { Publikationsserver der RWTH Aachen University },
  pages = { X, 175 S. : graph. Darst. },
  series = { Aachener Informatik-Berichte },
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http://publications.rwth-aachen.de/record/459474/files/Salewski\_Falk.pdf
},
}
```

[Sch08]

[PDFBIB](#)

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@phdthesis { Sch08,
  author = { Schlich, Bastian },
  othercontributors = { Kowalewski, Stefan },
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  publisher = { RWTH Aachen, Department of Computer Science },
  pages = { IV, 159 S. : graph. Darst. },
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http://publications.rwth-aachen.de/record/63747/files/Schlich\_Bastian.p
}
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df },
}
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[SDH+08]

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Schmitz, D., Drews, P., Heßeler, F., Jarke, M., Kowalewski, S., Palczynski, J., Polzer, A., Reke, M., and Rose, T., "Modellbasierte Anforderungserfassung für softwarebasierte Regelungen", in *Proc. Software Engineering 2008 : Fachtagung des GI-Fachbereichs Softwaretechnik*, 18. - 22.02.2008 in München / Gesellschaft für Informatik (GI). Korbinian Herrmann; Bernd Bruegge (Hrsg.), Bonn, 2008 in GI-Edition : Proceedings, Ges. für Informatik, pp. 257-271.

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@inproceedings { SDH+08,
  author = { Schmitz, Dominik and Drews, Peter and He{\ss}eler,
    Frank-Josef and Jarke, Matthias and Kowalewski, Stefan and
    Palczynski, Jacob and Polzer, Andreas and Reke, Michael and
    Rose, Thomas },
  title = { Modellbasierte Anforderungserfassung f{"u}r
    softwarebasierte Regelungen },
  booktitle = { Software Engineering 2008 : Fachtagung des GI-
    Fachbereichs
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    Gesellschaft f{"u}r Informatik (GI). Korbinian Herrmann;
    Bernd Bruegge (Hrsg.) },
  publisher = { Ges. f{"u}r Informatik },
  pages = { 257-271 },
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}
```

[SGK08]

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  author = { Schlich, Bastian and G{"u}ckel, Dominique and
  Kowalewski,
    Stefan },
  title = { Modeling the environment of microcontrollers to tackle
  the
    state-explosion problem in model checking },
  booktitle = { Formal methods for automation and safety in railway
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    2008, Budapest, Hungary, October 9 - 10, 2008 / Géza Tarnai
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  url = { http://publications.rwth-aachen.de/record/98749 },
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[SK08]

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## The effect of real-time software reuse in FPGAs and microcontrollers with respect to software faults

### Bibtex entry :

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@inproceedings { SK08,
  author = { Salewski, Falk and Kowalewski, Stefan },
  title = { The effect of real-time software reuse in FPGAs and
  microcontrollers with respect to software faults },
  booktitle = { 2008 International Symposium on Industrial Embedded
  Systems
    : [SIES'2008] ; La Grande Motte, France, 11 - 13 June 2008 /
    IEEE },
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typ = { PUB:(DE-HGF)8 },
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url = { http://publications.rwth-aachen.de/record/98747 },
}
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[SK08a]

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### Bibtex entry :

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  author = { Salewski, Falk and Kowalewski, Stefan },
  title = { Hardware/software design considerations for automotive
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  journal = { IEEE transactions on industrial informatics },
  publisher = { IEEE },
  pages = { 156-163 },
  volume = { 4 },
  number = { 3 },
  year = { 2008 },
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  url = { http://publications.rwth-aachen.de/record/131366 },
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[SLK08]

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  author = { Schlich, Bastian and L{"o"}ll, Jann and Kowalewski,
    Stefan },
  title = { Application of static analyses for state space reduction
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    microcontroller assembly code },
booktitle = { Formal methods for industrial critical systems : 12th
    international workshop, FMICS 2007, Berlin, Germany, July 1
    - 2, 2007 ; revised selected papers / Stefan Leue; Pedro
    Merino (eds.) },
publisher = { Springer },
pages = { 21-37 },
volume = { 4916 },
series = { Lecture notes in computer science },
year = { 2008 },
address = { Berlin [u.a.] },
doi = { 10.1007/978-3-540-79707-4_4 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-095398 },
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url = { http://publications.rwth-aachen.de/record/83462 },
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[ST08]

[PDFBIB](#)

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### Bibtex entry :

```
@inproceedings { ST08,
    author = { Salewski, Falk and Taylor, Adam },
    title = { Systematic considerations for the application of FPGAs in
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    booktitle = { 2008 IEEE International Symposium on Industrial
    Electronics
    : [ISIE 2008] ; Cambridge, United Kingdom, 30 June - 2 July
    2008. - Vol. 4 },
    publisher = { IEEE },
    pages = { 2009-2015 },
    year = { 2008 },
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    url = { http://publications.rwth-aachen.de/record/98745 },
}
```

[Wil08]

[PDFBIB](#)

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### Bibtex entry :

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@phdthesis { Wil08,
  author = { Wilking, Dirk },
  othercontributors = { Kowalewski, Stefan },
  title = { Empirical studies for the application of agile methods to
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  publisher = { Fachgruppe Informatik, RWTH Aachen },
  pages = { XIV, 157 S. : graph. Darst. },
  series = { Aachener Informatik-Berichte },
  year = { 2008 },
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    http://publications.rwth-aachen.de/record/52375/files/Wilking_Dirk.pdf
  },
}
```

[WSK08]

[PDFBIB](#)

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  author = { Wilking, Dirk and Schilli, David and Kowalewski, Stefan
  },
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  booktitle = { Balancing agility and formalism in software
    engineering :
      Second IFIP TC 2 Central and East European Conference on
      Software Engineering Techniques, CEE-SET 2007, Poznań,
      Poland, October 10-12, 2007 ; revised selected papers /
      Bertrand Meyer; Jerzy R. Nawrocki; Bartosz Walter (eds.) },
```

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publisher = { Springer },
pages = { 157-168 },
series = { Lecture notes in computer science },
year = { 2008 },
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reportid = { RWTH-CONV-197274 },
cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/127027 },
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[BKK07]

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  author = { Bettenhausen, Kurt D. and Kowalewski, Stefan and Kugi,
    Andreas },
  title = { Significance of the automation engineering },
  journal = { Automatisierungstechnik : at },
  publisher = { Oldenbourg },
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  url = { http://publications.rwth-aachen.de/record/195234 },
}
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[CSK+07]

[PDFBIB](#)

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  author = { Chen, Xi and Salewski, Falk and Kowalewski, Stefan and
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  title = { Concept and prototyping of a fault management framework
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  booktitle = { Moderne Elektronik im Kraftfahrzeug II : Systeme von
morgen
    - technische Innovationen und Entwicklungstrends ; und 19
    Tabellen / Hrsg.: Bernard B{"a}ker },
  publisher = { expert Verl. },
  volume = { 82 },
  series = { Haus der Technik - Fachbuchreihe },
  year = { 2007 },
  address = { Renningen },
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  url = { http://publications.rwth-aachen.de/record/89875 },
}
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[KK07]

[PDFBIB](#)

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  author = { Kl{"u}nder, Daniel and Kowalewski, Stefan },
  title = { Scenario-based evaluation of abstract state machines },
  booktitle = { The 14th International ASM Workshop (ASM'07) / (Ed.)
Prinz,
    Andreas },
  year = { 2007 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-188521 },
  cin = { 122810 / 120000 },
  url = {
http://ikt.hia.no/asm07/Proceedings/Papers/Klunder_Kowalewski.pdf },
}
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[SK07]

[PDFBIB](#)

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  author = { Salewski, Falk and Kowalewski, Stefan },
  title = { Achieving highly reliable embedded software : an
empirical
  evaluation of different approaches },
  booktitle = { Computer safety, reliability, and security : 26th
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Norbert Oster (Eds.) },
  publisher = { Springer },
  pages = { 270-275 },
  volume = { 4680 },
  series = { Lecture notes in computer science },
  year = { 2007 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/90177 },
}
```

[SK07a]

[PDFBIB](#)

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  author = { Salewski, Falk and Kowalewski, Stefan },
  title = { Testing Issues in Empirical Reliability Evaluation of
Embedded Real-Time Systems },
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Time
and Embedded Technology and Applications Symposium : 3-6
April, 2007, Bellevue, Washington / ed. by Chenyang Lu },
  pages = { 48-51 },
  series = { Technical Report WUCSE },
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year = { 2007 },
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url = { http://publications.rwth-aachen.de/record/117072 },
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[SK07b]

[PDFBIB](#)

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### Bibtex entry :

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  author = { Salewski, Falk and Kowalewski, Stefan },
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Systems
: Costa da Caparica, [Lisbon], Portugal, 4 - 6 July 2007 ;
[SIES'2007] / IEEE / IEEE Computer Society Press },
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  pages = { 78-85 },
  year = { 2007 },
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  url = { http://publications.rwth-aachen.de/record/117075 },
}

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[SK07c]

[PDFBIB](#)

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## systems : a systematic teaching approach

### Bibtex entry :

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  author = { Salewski, Falk and Kowalewski, Stefan },  
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  cin = { 122810 / 120000 },  
  url = { http://publications.rwth-aachen.de/record/160044 },  
}
```

[SK07d]

[PDFBIB](#)

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### Bibtex entry :

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@inproceedings { SK07d,  
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for  
  automation and safety in railway and automotive systems ;  
  proceedings of Symposium FORMS/FORMAT 2007, Braunschweig,  
  Germany, 25th and 26th January, 2007 / Ekehard Schnieder;  
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  publisher = { GZVB },  
  pages = { 202-212 },  
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[SSK07]

[PDFBIB](#)

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  booktitle = { 2007 International Symposium on Industrial Embedded
Systems
: Costa da Caparica, [Lisbon], Portugal, 4 - 6 July 2007 ;
[SIES'2007] / IEEE / IEEE Computer Society Press },
  publisher = { IEEE },
  pages = { 209-216 },
  year = { 2007 },
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[ST07]

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  author = { Salewski, Falk and Taylor, Adam },
  title = { Fault handling in FPGAs and microcontrollers in
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  booktitle = { Proceedings / 10th Euromicro Conference on Digital
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  31 August 2007, L{"u}beck, Germany / European Organisation
  for Information Technology and Microelectronics. ed. by Hana
  Kubátová },
  publisher = { IEEE Computer Soc. },
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[WK07]

[PDFBIB](#)

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  author = { Wilking, Dirk and Kowalewski, Stefan },
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  [proceedings of the sixth SoMeT 07] / ed. by Hamido Fujita
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  series = { Frontiers in artificial intelligence and applications },
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[WKK07]

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  author = { Wilking, Dirk and Khan, Umar Farooq and Kowalewski,
Stefan },
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[BK06]

[PDFBIB](#)

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pages = { 377-382 },
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http://www.ifac-papersonline.net/cgi-bin/links/page.cgi?g=Detailed/3019
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[Klu06]

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@inproceedings { Klu06,
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  author = { Kl{\u}nder, Daniel },
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[Klu06b]

[PDFBIB](#)

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http://www.ubka.uni-karlsruhe.de/cgi-bin/psview?document=ira/2006/10 },
}

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cin = { 122810 / 120000 },
url = { http://www.ist-hycon.org/deliverables/HYCON-D4c42.pdf },
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[SK06]

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  url = { http://publications.rwth-aachen.de/record/113553 },
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[SK06a]

[PDFBIB](#)

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[SRW+06]

[PDFBIB](#)

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  author = { Schlich, Bastian and Rohrbach, Michael and Weber,  
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[SWK06]

[PDFBIB](#)

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[BCK+05]

[PDFBIB](#)

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  author = { Bollig, Alexander and Chevalier, Wolf and Kowalewski, Stefan
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  title = { Architekturen für die Funktionsintegration },
  booktitle = { 25 Jahre Elektronik-Systeme im Kraftfahrzeug :
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[BKC+05]

[PDFBIB](#)

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: 04. -
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```

[LKT05]

[PDFBIB](#)

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@article { LKT05,
  author = { Lyons, Michael J. and Klünder, Daniel and Tetsutani,
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  journal = { Educational technology & society },
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[SK05]

[PDFBIB](#)

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}
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[SK05a]

[PDFBIB](#)

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@article { SK05a,
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http://pi.informatik.uni-siegen.de/stt/25_4/01_Fachgruppenberichte/Ada/
03_Salewski_Kowalewski.pdf },
}

```

[SK05b]

[PDFBIB](#)

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```

@techreport { SK05b,
author = { Schlich, Bastian and Kowalewski, Stefan },
title = { Model checking C source code for embedded systems },
booktitle = { IEEE/NASA Workshop on Leveraging Applications of
Formal
Methods, Verification, and Validation : IEEE/NASA ISoLA 2005
; proceedings of a workshop held at the Loyola College
Graduate Center, Columbia, Maryland, USA, 23 - 24 September
2005 ; with a special track on the theme of formal methods
in human and robotic space exploration / National
Aeronautics and Space Administration, Goddard Space Flight
Center. Ed.: Tiziana Margaria ... },
pages = { 65-77 },
number = { NASA/CP-2005-212788 },
year = { 2005 },
address = { [S.l.] },
typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-009447 },
cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/111740 },
}

```

[SWK05]

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Salewski, F., Wilking, D., and Kowalewski, S., "Diverse hardware platforms in embedded systems lab courses: A way to teach the differences", *ACM SIGBED review*, vol. 2, iss. 4, pp. 70-74, 2005

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```
@article { SWK05,
  author = { Salewski, Falk and Wilking, Dirk and Kowalewski, Stefan
},
  title = { Diverse hardware platforms in embedded systems lab
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  journal = { ACM SIGBED review },
  publisher = { Association for Computing Machinery },
  pages = { 70-74 },
  volume = { 2 },
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}
```

[WK05]

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@inbook { WK05,
  author = { Wilking, Dirk and Kowalewski, Stefan },
  title = { Agile methods for embedded systems },
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engineering : 6th international conference, XP 2005,
  Sheffield, UK, June 18 - 23, 2005 ; proceedings / Hubert
Baumeister ... (ed.) },
  publisher = { Springer },
  pages = { 319-320 },
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```
volume = { 3556 },
series = { Lecture notes in computer science },
year = { 2005 },
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typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-099898 },
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url = { http://publications.rwth-aachen.de/record/88301 },
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```

[WR05]

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  booktitle = { RoboCup 2004: Robot Soccer World Cup VIII / Daniele Nardi ... (ed.) },
  publisher = { Springer },
  pages = { 556-563 },
  series = { Lecture notes in computer science : Lecture notes in artificial intelligence },
  year = { 2005 },
  address = { Heidelberg [u.a.] },
  doi = { 10.1007/978-3-540-32256-6_52 },
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  url = { http://publications.rwth-aachen.de/record/127542 },
}
```

[SK04]

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```
@techreport { SK04,  
  author = { Schlich, Bastian and Kowalewski, Stefan },  
  title = { C Model Checker: Eine {\\"U}bersicht },  
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  url = { http://publications.rwth-aachen.de/record/90178 },  
}
```

[SG94]

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**Stability aspects for hollow section columns, beams and beam-columns****Bibtex entry :**

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@inproceedings { SG94,  
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  booktitle = { Tubular structures VI : proceedings sixth  
International  
Symposium on Tubular Structures, Melbourne, Australia, 14 -  
16 December 1994 / ed. by Paul Grundy ... },  
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  pages = { 151-158 },  
  year = { 1994 },  
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