

Dr.-Ing. André Stollenwerk

Contact



Group leader medical engineering

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gpg-key ID: [0x0A1C1267](#)

fingerprint: 3A96 900F 5EAC BAA7 34AF 5406 5870 67C2 0A1C 1267

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Office: room 2308 (building H)

Teaching

Semester	Course	Type
WS 12/13	Development of a Digital Fabricator	Lab Course
WS 11/12	Development of a Digital Fabricator	Lab Course
SS 10	Electrical Foundations of Computer Science	Lab Course
WS 09/10	Hardware Programming	Lab Course
SS 09	Electrical Foundations of Computer Science	Lab Course
WS 08/09	Hardware Programming	Lab Course
SS 08	Electrical Foundations of Computer Science	Lab Course
WS 07/08	Hardware Programming	Lab Course

supervised thesis

- [Implementierung von eingebetteter stereoskopischer Triangulation für einen 3D-Scanner](#)
- [Entwicklung eines Versuchsaufbaus zur optischen Desinfektionsvalidierung](#)
- [Entwicklung eines dezentral implementierten Sicherheitskonzeptes für intensivmedizinische](#)

Anwendungen

- Auslegung einer pulsatilen Ansteuerungsstrategie für eine Blutpumpe
- Rezirkulationsmessung bei extrakorporaler Lungenunterstützung
- Modellierung und Analyse von konkurrierenden Sicherheitszielen in einer intensivmedizinischen Anwendung
- RTOS with Matlab/Simulink for a Medical Application
- Entwicklung eines Zeitsynchronisationsverfahrens für ein intensivmedizinisches, verteiltes System
- Entwicklung und Spezifikation eines CAN Protokolls für sicherheitskritische medizintechnische Anwendungen
- Funktionale Erweiterung des VMware vSphere Systems
- Integration von Hardwareabstraktion und Hardwareansteuerung im eingebetteten Echtzeitbetriebssystem ChibiOS
- Integration modellbasierter Sicherheitsmechanismen für die extrakorporale Lungenunterstützung in ein eingebettetes RTOS
- Erarbeitung und Integration von modellbasierten Sicherheitsmaßnahmen für eine intensivmedizinische Anwendung
- Entwicklung mobiler Multiplattform-Clients für ein Buchungssystem
- Entwicklung einer Metrik zur Bewertung verschiedener Hardwareplattformen für medizintechnische Anwendungen
- Erarbeitung einer mikrowellengeregelten chemischen Reaktionsführung
- Modellbasierte Diagnose eines Oxygenators für die Extrakorporale Membranoxygenierung
- Portierung einer Diagonalpumpensteuerung auf ein eingebettetes Betriebssystem mit Unterstützung modell-basierter Sicherheitsmaßnahmen
- Modellierung und Regelung des Blutflusses einer Diagonalpumpe bei der extrakorporalen Oxygenierung
- Entwurf und Validierung einer auf den Wirkungsgrad optimierten Regelungsstrategie zur Ansteuerung einer piezoelektrisch betriebenen Pumpe für automobiler Anwendungen
- Thermodynamische Modellbildung eines Handdesinfektionsprozesses
- Tiefeninformationsabhängige Bildfusion in einer optischen Desinfektionsvalidierung
- Entwicklung und Umsetzung eines normgerechten Testkonzepts für die Bedienoberfläche eines Notfall-Beatmungsgeräts
- Erarbeitung einer Ansteuerungsautomatik für eine Unabhängige Energieversorgung

Publications

[BPB+22]

PDFBIB

Buglowski, M., Pfannschmidt, V., Becker, S., Braun, O., Hutten, M., Ophelders, D., Oprea, C., Pattai, S., Schoberer, M., and Stollenwerk, A., "Closed-Loop Control of Arterial CO₂ in Mechanical Ventilation of Neonates", in *Proc. 44th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC) / pre-conference workshops & social events: Monday, July 11, 2022, conference dates: Tuesday, July 12-Friday, July 15, 2022 / conference chair: Christopher James (University of Warwick), conference co-chair: James Patton (University of Chicago) ; programm chair: Ron Summers (Collegium Basilea), [Piscataway, NJ], 2022, IEEE, pp. 4991-4995.*

Closed-Loop Control of Arterial CO₂ in Mechanical Ventilation of Neonates

Bibtex entry :

```
@inproceedings { BPB+22,
  author = { Buglowski, Mateusz and Pfannschmidt, Valerie and Becker,
    Sabine and Braun, Oliver and Hutten, Matthias and Ophelders,
    Daan and Oprea, Camelia and Pattai, Steffen and Schoberer,
    Mark and Stollenwerk, Andre },
  title = { Closed-Loop Control of Arterial CO2 in Mechanical
    Ventilation of Neonates },
  booktitle = { 44th Annual International Conference of the IEEE
    Engineering
      in Medicine and Biology Society (EMBC) / pre-conference
      workshops & social events: Monday, July 11, 2022, conference
      dates: Tuesday, July 12-Friday, July 15, 2022 / conference
      chair: Christopher James (University of Warwick), conference
      co-chair: James Patton (University of Chicago) ; programm
      chair: Ron Summers (Collegium Basilea) },
  publisher = { IEEE },
  pages = { 4991-4995 },
  year = { 2022 },
  address = { [Piscataway, NJ] },
  organization = { 44. Annual International Conference of the IEEE
    Engineering
      in Medicine & Biology Society, Glasgow (UK), 2022-07-11 -
      2022-07-15 },
  doi = { 10.1109/EMBC48229.2022.9871185 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2023-00482 },
  cin = { 122810 / 120000537500-5 },
  illkey = { BMBF-13GW0292C - Innovatives
    Neonatologiebeatmungsger{\a}t
      mit adaptiver Anwenderunterst{\u}tzung (NANNI) -
      Teilvorhaben: Erforschung neuer Modelle zur Diagnose von
      Fehlerzust{\a}nden (BMBF-13GW0292C) },
}
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[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 },
  reportid = { RWTH-2020-04222 },
  cin = { 122810533000-3 / 9210120 / 120000533000-2 },
  url = {
http://publications.rwth-aachen.de/record/787714/files/787714.pdf },
}
```

[WSE+22]

[PDFBIB](#)

Walter, M., Stollenwerk, A., Eckstein, L., Kowalewski, S., and Leonhardt, S., "PV1000 – Interdisziplinäre Entwicklung eines Pandemie-Beatmungsgerätes", in *Proc. MT-2022 Tagungsband*, 2022, p. 169.

PV1000 – Interdisziplinäre Entwicklung eines Pandemie-Beatmungsgerätes

Bibtex entry :

```
@inproceedings { WSE+22,
  author = { Walter, Marian and Stollenwerk, André and Eckstein, Lutz
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  title = { PV1000 – Interdisziplinäre Entwicklung eines
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  booktitle = { MT-2022 Tagungsband },
  pages = { 169 },
  year = { 2022 },
  organization = { Fachtagung MECHATRONIK 2022, Darmstadt (Germany),
    2022-03-23
    - 2022-03-24 },
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  cin = { 611010 / 122810 / 414110 / 120000 },
  url = {
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https://www.vdi-mechatroniktagung.de/images/programm/MT2022_Tagungsband.pdf },
}
```

[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,
      Stefan and Hensen, Raimund and Stollenwerk, André },
  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 = { 4. 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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[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 :

```
@article { LKL+21,  
  author = { Lamberti, Michael and Kopp, R{"u}diger and L{"u}bke,  
Cavan  
and Leonhardt, Steffen and Walter, Marian and Stollenwerk,  
André },  
  title = { Safety and Automation Concepts for Artificial Impantable  
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  publisher = { de Gruyter },  
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  year = { 2021 },  
  address = { Berlin [u.a.] },  
  issn = { 0013-5585 },  
  organization = { 55. 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 },  
  reportid = { RWTH-2022-00769 },  
  cin = { 611010 / 122810533000-3 / 120000 },  
  url = { https://doi.org/10.1515/bmt-2021-6028 },  
}
```

[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
    Ammon, Danny and Mueller, Susanne and Palm, Julia and Simon,
    Philipp and Jahn, Nora and Loeffler, Markus and Wendt,
    Thomas and Schuerholz, Tobias and Groeber, Petra and
    Schuppert, Andreas },
  title = { Algorithmic surveillance of ICU patients with acute
    respiratory distress syndrome (ASIC) : protocol for a
    multicentre stepped-wedge cluster randomised quality
    improvement strategy },
  journal = { BMJ open },
  publisher = { BMJ Publishing Group },
  pages = { 1-7 },
  volume = { 11 },
  number = { 4 },
  year = { 2021 },
  address = { London },
  issn = { 2044-6055 },
  doi = { 10.1136/bmjopen-2020-045589 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2021-03718 },
  cin = { 122810 / 120000533000-39600108-1530000-4530000-7533000-2 },
  url = {
http://publications.rwth-aachen.de/record/817136/files/817136.pdf },
  illkey = { SMITH - Medizininformatik-Konsortium (BMBF-01ZZ1803K) },
}

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[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 },  
  typ = { PUB:(DE-HGF)23 },  
  reportid = { RWTH-2022-07169 },  
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    https://worldwide.espacenet.com/patent/search/family/066998405/publicat  
ion/DE102018120081B4?q=DE102018120081 },  
}
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[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 },  
  organization = { Automation in Medical Engineering, L{"u"}beck  
(Germany),  
    2020-03-02 - 2020-03-03 },  
  doi = { 10.18154/RWTH-2020-02624 },  
  typ = { PUB:(DE-HGF)16 },  
  reportid = { RWTH-2020-02624 },  
  cin = { 122810 / 120000533000-3 / 9210105 },  
  url = { https://doi.org/10.18416/AUTOMED.2020 },
```

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    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) },
}

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[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

Apparat zur automatisierten Justage optischer Systeme

Bibtex entry :

```

@article { KGE+20,
  author = { K{"o"}nig, Georg and Grochowski, Marco and Eckert,
Marvin
    and Jakobczak, F. and Stollenwerk, Jochen and Kowalewski, S.
    and Loosen, Peter },
  title = { Apparat zur automatisierten Justage optischer Systeme },
  journal = { DGaO-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 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2020-08983 },
  cin = { 418910 / 080067 / 122810 / 120000 },
  url = { http://www.dgao-proceedings.de },
  illkey = { WS-C.II - Enablers and Tools (X080067-WS-C.II) },
}

```

[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,
    David and Derks, Andreas and Stollenwerk, André and
    Kowalewski, Stefan },
  title = { A Remote Test Environment for a Large-Scale
    Microcontroller
    Laboratory Course },
  booktitle = { 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.) },
  publisher = { Springer },
  pages = { 231-246 },
  series = { Lecture Notes in Computer Science },
  year = { 2020 },
  address = { Cham },
  organization = { Workshop on Embedded Systems and Cyber-Physical
    Systems
    Education, New York (USA), 2019-10-17 - 2019-10-18 },
  doi = { 10.1007/978-3-030-41131-2_11 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2020-02344 },
  cin = { 122810 / 120000 },
  url = {
    http://publications.rwth-aachen.de/record/783169/files/Remote%20Pool%20
    Final.pdf },
}
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[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.

Eingabe und Übertragung von Instandhaltungsinformationen für das Condition Monitoring - Digitalisierung von Offline-Informationen

Bibtex entry :

```
@techreport { SS20,
  author = { Stollenwerk, André and Smieschek, Manfred },
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    title = { Eingabe und {\U}bertragung von
Instandhaltungsinformationen
    f{\u}r das Condition Monitoring - Digitalisierung von
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    number = { VDI/VDE 3711 },
    series = { VDI-Richtlinien },
    year = { 2020 },
    address = { D{\u}sseldorf / Berlin },
    typ = { PUB:(DE-HGF)29 },
    reportid = { RWTH-2020-09299 },
    cin = { 122810 / 120000 },
    url = {
https://www.vdi.de/richtlinien/details/vdivde-3711-eingabe-und-uebertra
gung-von-instandhaltungsinformationen-fuer-das-condition-monitoring-
digitalisierung-von-offline-informationen },
    illkey = { BMWi-03TNF001B - Industrie-4.0-Testbeds - Umsetzung von
    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 / Roger Chamberlain, Martin Edin Grimheden, Walid Taha (eds.)*, Cham, 2020 in *Lecture Notes in Computer Science*, Springer, pp. 247-263.

An Embedded Graduate Lab Course with Spirit

Bibtex entry :

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@inproceedings { Sto20,
    author = { Stollenwerk, André },
    title = { An Embedded Graduate Lab Course with Spirit },
    booktitle = { 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.) },
    publisher = { Springer },
    pages = { 247-263 },
    series = { Lecture Notes in Computer Science },
    year = { 2020 },
    address = { Cham },
    organization = { Workshop on Embedded Systems and Cyber-Physical
Systems

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Education, New York (USA), 2019-10-17 - 2019-10-18 },
doi = { 10.1007/978-3-030-41131-2_12 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2020-02343 },
cin = { 122810 / 120000 },
url = {
http://publications.rwth-aachen.de/record/783168/files/783168.pdf },
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[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,
  author = { Fabry, Gregor and Doorschodt, Benedict M. and Grzanna, Tim
            and Boor, Peter and Elliott, Aaron Rainer and Stollenwerk, André and Tolba, René H. and Rossaint, Rolf and Bleilevens, Christian },
  title = { Cold Preflush of Porcine Kidney Grafts Prior to Normothermic Machine Perfusion Aggravates Ischemia Reperfusion Injury },
  journal = { Scientific reports },
  publisher = { Macmillan Publishers Limited, part of Springer Nature },
  pages = { 9 Seiten },
  volume = { 9 },
  year = { 2019 },
  address = { [London] },
  issn = { 2045-2322 },
  doi = { 10.18154/RWTH-2019-08778 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2019-08778 },
  cin = { 122810 / 120000531020-3533000-3533000-2533540-2 / 9770208 / 9790209527000-2 },
  url = {
http://publications.rwth-aachen.de/record/767376/files/767376.pdf },
  illkey = { BMBF-031L0134B - Alternativmethoden - Verbund: AutoMock
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Entwicklung eines vollautomatisierten in vitro Teststands (Mock Loop) - Ein künstlicher Kreislauf als
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Ersatzmethode zur Biokompatibilit{"a}tstestung von
Membranoxygenatoren und zur Transplantationssimulation
(BMBF-031L0134B) },
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[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 :

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@inproceedings { KBS+19,
  author = { K{"u}hn, Jan and Buglowski, Mateusz and Stollenwerk,
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      Entwicklung eines vollautomatisierten in vitro Teststands
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Ersatzmethode zur Biokompatibilit{"a"}tstestung von  
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[PAS+19]

[PDF](#)[BIB](#)

Pomprapa, A., Ahmed, W., Stollenwerk, A., Kowalewski, S., and Leonhardt, S., "Deep Learning of Arrhythmia Analysis Based on Convolutional Neural Network", *International journal of bioelectromagnetism : IJBEM*, vol. 21, iss. 1, pp. 48-58, 2019

Deep Learning of Arrhythmia Analysis Based on Convolutional Neural Network

Bibtex entry :

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@article { PAS+19,  
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[SKS+19]

[PDF](#)[BIB](#)

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 :

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@inproceedings { SKS+19,
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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.

A long-term setup for kidney perfusion

Bibtex entry :

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@inproceedings { KSK+18,
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Entwicklung eines vollautomatisierten in vitro Teststands (Mock Loop) - Ein künstlicher Kreislauf als Ersatzmethode zur Biokompatibilitätstestung von Membranoxygenatoren und zur Transplantationssimulation (BMBF-031L0134B) },

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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.

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Bibtex entry :

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@inproceedings { PAS+18,
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Malmivuo, Technische Universität Berlin, Germany, Dr.
Marian Walter, RWTH Aachen University, Germany, Benjamin
Hentze, RWTH Aachen University, Germany Markus Lükken,
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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 :

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@article { PAS+18a,
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journal = { American journal of respiratory and critical care
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https://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2018.197.
1_MeetingAbstracts.A7449 },
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[PAS+18b]

[PDFBIB](#)

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Bibtex entry :

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@article { PAS+18b,
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[PSA+18]

[PDFBIB](#)

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Apnea Detection in a Contactless Multisensor System using Deep Learning Algorithm

Bibtex entry :

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@inproceedings { PSA+18,
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[SBK18]

PDFBIB

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

Mock loop for bubble generation in a centrifugal blood pump for fault simulation

Bibtex entry :

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@article { SBK18,
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http://publications.rwth-aachen.de/record/752262/files/752262.pdf },
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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 :

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@inproceedings { SHS+18,
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[WSA+18]

[PDFBIB](#)

Winter, A., Stäubert, S., Ammon, D., Aiche, S., Beyan, O. D., Bischoff, V., Daumke, P., Decker, S. J., Funkat, G., Gewehr, J. E., de Greiff, A., Haferkamp, S. D., Hahn, U., Henkel, A., Kirsten, T.,

Klöss, T., Lippert, J., Löbe, M., Lowitsch, V., Maassen, O., Maschmann, J., Meister, S., Mikolajczyk, R., Nüchter, M., Pletz, M. W., Rahm, E., Riedel, M., Saleh, K., Schuppert, A., Smers, S., Stollenwerk, A., Uhlig, S., Wendt, T., Zenker, S., Fleig, W., Marx, G., Scherag, A., and Löffler, M., "Smart Medical Information Technology for Healthcare (SMITH) : Data Integration based on Interoperability Standards", *Methods of information in medicine*, vol. 57, iss. S 01, p. e92-e105, 2018

Smart Medical Information Technology for Healthcare (SMITH) : Data Integration based on Interoperability Standards

Bibtex entry :

```
@article { WSA+18,
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PDFBIB

Brendle, C., Hackmack, K. -F., Kühn, J., Wardeh, M. N., Janisch, T., Kopp, R., Rossaint, R., Stollenwerk, A., Kowalewski, S., Leonhardt, S., Walter, M., and Misgeld, B. J. E., "Closed-loop control of extracorporeal oxygen and carbon dioxide gas transfer", *Control engineering practice*, vol. 59, pp. 173-182, 2017

Closed-loop control of extracorporeal oxygen and carbon dioxide gas transfer

Bibtex entry :

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@article { BHK+17,
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[BMK+17]

PDFBIB

Brendle, C., Mülders, T., Kühn, J., Janisch, T., Kopp, R., Rossaint, R., Stollenwerk, A., Kowalewski, S., Misgeld, B. J. E., Leonhardt, S., and Walter, M., "Physiological closed-loop control of mechanical ventilation and extracorporeal membrane oxygenation", *Biomedical engineering = Biomedizinische Technik*, vol. 62, iss. 2, pp. 199-212, 2017

Physiological closed-loop control of mechanical ventilation and extracorporeal membrane oxygenation

Bibtex entry :

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@article { BMK+17,
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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", *Biomedical engineering = 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 :

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@article { KBS+17,
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[SKS+17]

[PDFBIB](#)

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Bibtex entry :

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@article { SKS+17,
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[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 / Klaus Hermann Maier-Hein, Thomas M. Deserno, Heinz Handels, Thomas Tolxdorff (Herausgeber)*, Berlin, Heidelberg,

2017 in Informatik aktuell, Springer Berlin Heidelberg, pp. 147-152.

Unterstützte Handerkennung in Thermographiebildern zur Validierung der hygienischen Händedesinfektion

Bibtex entry :

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Algorithmen -
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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 :

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@inproceedings { SSM+17,
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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

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Bibtex entry :

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@article { BHK+16,
author = { Brendle, Christian and Hackmack, K.-F. and K{"u}hn, Jan
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title = { Continuous gas transfer monitoring during extracorporeal
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[KBS+16]

[PDFBIB](#)

Kopp, R., Bensberg, R., Stollenwerk, A., Arens, J., Grottke, O., Walter, M., and Rossaint, R., "Automatic Control of Veno-Venous Extracorporeal Lung Assist : Presented in part at the 13th Congress of DIVI held December 4-6, 2013 in Leipzig, Germany", *Artificial organs*, vol. 40, iss. 10, pp. 992-998, 2016

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Bibtex entry :

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@article { KBS+16,
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[KSB+16]

[PDFBIB](#)

K\u00fch\u00f1, J., Stollenwerk, A., Brendle, C., Janisch, T., Walter, M., Rossaint, R., Leonhardt, S., Kowalewski, S., and Kopp, R., "Sensor Supervision and Control Value Limitations in Networked Intensive Care", in *Proc. [Gemeinsamer Tagungsband der Workshops der Tagung Software*

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Sensor Supervision and Control Value Limitations in Networked Intensive Care

Bibtex entry :

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@inproceedings { KSB+16,
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Christian
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[KVS+16]

[PDFBIB](#)

Kühn, J., Vaitl, L., Stollenwerk, A., Brendle, C., Walter, M., Leonhardt, S., Kowalewski, S., Rossaint, R., Kopp, R., and Janisch, T., "Eingebettete Rezirkulationsmessung für eine ECLA-

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Bibtex entry :

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@inproceedings { KVS+16,
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DGBMT - Deutsche Gesellschaft f{"u}r Biomedizinische
Technik im VDE ; Editoren: Prof. Dr.-Ing. habil. Olaf
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[SSJ+16]

PDFBIB

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Andreas Krall, Dieter Landes, Horst Lichter, Dirk Riehle,
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[SSS16]

[PDFBIB](#)

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FS-MCPS: 2nd Workshop on Fail Safety in Medical Cyber-

Physical Systems

Bibtex entry :

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@inproceedings { SSS16,  
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[SSS16a]

[PDFBIB](#)

Schlaefer, A., Schupp, S., and Stollenwerk, A., "2nd Workshop on Fail Safety in Medical Cyber-Physical Systems (FS-MCPS)", in *Proc. Gemeinsamer Tagungsband der Workshops der Tagung Software Engineering 2016 (SE-WS 2016), Wien, 23.-26. Februar 2016 / Edited by: Wolf Zimmermann, Lukas Alperowitz, Bernd Brügge, Jörn Fahsel, Andrea Herrmann, Anne Hoffmann, Andreas Krall, Dieter Landes, Horst Lichter, Dirk Riehle, Ina Schaefer, Constantin Scheuermann, Alexander Schlaefer, Sibylle Schupp, Andreas Seitz, Andreas Steffens, André Stollenwerk, Rüdiger Weißbach*, Aachen, Germany, 2016 in CEUR Workshop Proceedings, RWTH Aachen, pp. 172-173.

2nd Workshop on Fail Safety in Medical Cyber-Physical Systems (FS-MCPS)

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@inproceedings { SSS16a,  
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Engineering 2016 (SE-WS 2016), Wien, 23.-26. Februar 2016 /
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[WBK+16]

[PDFBIB](#)

Walter, M., Brendle, C., K hn, J., Janisch, T., Kopp, R., Stollenwerk, A., and Leonhardt, S., "Assistive Control of Extracorporeal Oxygenation Systems", in *Proc. Proceedings of the 12th Russian-German Conference on Biomedical Engineering : 04-07 Jul 2016, Suzdal, Russia*, Suzdal, 2016, Vladimir state univ. named after Alexandr and Nikolay Stoletovs, pp. 222-226.

Assistive Control of Extracorporeal Oxygenation Systems

Bibtex entry :

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@inproceedings { WBK+16,
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[ZAB+16]

[PDFBIB](#)

Zimmermann, W., Alperowitz, L., Brügge, B., Fahsel, J., Herrmann, A., Hoffmann, A., Krall, A., Landes, D., Lichter, H., Riehle, D., Schaefer, I., Scheuermann, C., Schlaefer, A., Schupp, S., Seitz, A., Steffens, A., Stollenwerk, A., and Weißbach, R., Eds., *Gemeinsamer Tagungsband der Workshops der Tagung Software Engineering 2016 (SE-WS 2016)*, Wien, 23.-26. Februar 2016, Aachen, Germany: RWTH Aachen, 2016.

Gemeinsamer Tagungsband der Workshops der Tagung Software Engineering 2016 (SE-WS 2016), Wien, 23.-26. Februar 2016

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[BHK+15]

PDFBIB

Brendle, C., Hackmack, K., Kühn, J., Wardeh, M. N., Kopp, R., Rossaint, R., Stollenwerk, A., Kowalewski, S., Misgeld, B. J. E., Leonhardt, S., and Walter, M., "In silico evaluation of gas transfer estimation during extracorporeal membrane oxygenation", *IFAC-PapersOnLine*, vol. 48, iss. 20, pp. 499-504, 2015

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Bibtex entry :

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@article { BHK+15,
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[dMK+15]

PDFBIB

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Bibtex entry :

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

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Bibtex entry :

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

[PDFBIB](#)

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Bibtex entry :

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@article { KSK+15,
  author = { K{"u}hn, Jan and Stollenwerk, André and Kowalewski,
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[KSS+15]

[PDFBIB](#)

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[KWS+15]

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[SKW+15]

[PDFBIB](#)

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[SLR+15]

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[SKB+14]

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Bibtex entry :

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@inproceedings { SKB+14,
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[PMS+13]

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http://publications.rwth-aachen.de/record/231825/files/231825.pdf },
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@phdthesis { Sto13,
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[WBS+13]

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Walter, M., Brendle, C., Stollenwerk, A., Kopp, R., Arens, J., Bensberg, R., and Leonhardt, S., "Patient oriented closed loop control of extracorporeal lung assist", in *Proc. Journal of critical care*, New York, NY, 2013, vol. 28, Elsevier, p. e8-e9.

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Bibtex entry :

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[WSB+13]

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[WBS+12]

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[KS11]

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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.

Safety Aware Pump-Control for a Rotary ECMO Blood Pump

Bibtex entry :

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

[PDFBIB](#)

Stollenwerk, A., Gathmann, F., Bensberg, R., Walter, M., Arens, J., Kopp, R., and Kowalewski, S., "A model-based safety concept for a rotary blood pump", *Biomedizinische Technik = Biomedical engineering*, vol. 56, iss. S1, 2011

A model-based safety concept for a rotary blood pump

Bibtex entry :

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

[PDFBIB](#)

Stollenwerk, A., Göbe, F., Walter, M., Arens, J., Kopp, R., and Kowalewski, S., "Smart Data Provisioning for Model-Based Generated Code in an Intensive Care Application", in *Proc. 3rd Joint Workshop On High Confidence Medical Devices, Software, and Systems & Medical Device Plug-and-Play Interoperability : HCMDSS/MDPnP 2011 ; in conjunction with CPSweek 2011 ; April 11, 2011 Chicago, USA*, Chicago, 2011, HCMDSS/MDPnP 2011 ; in conjunction with CPSweek 2011 ; April 11, 2011 Chicago, USA, p. 8.

Smart Data Provisioning for Model-Based Generated Code in an Intensive Care Application

Bibtex entry :

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@inproceedings { SGW+11,
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[WBA+11]

[PDF](#)BIB

Walter, M., Brendle, C., Arens, J., Stollenwerk, A., Kopp, R., Bensberg, R., and Leonhardt, S.,
"Physiological target control in long term extracorporeal oxygenation", in *Proc. The international
journal of artificial organs*, Milano [u.a.], 2011, vol. 34 in 2011, Wichtig, pp. 625-625.

Physiological target control in long term extracorporeal oxygenation

Bibtex entry :

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@inproceedings { WBA+11,  
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and  
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[AdM+10]

[PDFBIB](#)

Arens, J., de Brouwer, P., Mager, I., Kopp, R., Walter, M., Stollenwerk, A., Schmitz-Rode, T., and Steinseifer, U., "A dynamic study on the hemolytic effect of negative pressure on blood", in *Proc. ASAIO journal*, Hagerstown, Md., 2010, vol. 56, Lippincott, pp. 96-96.

A dynamic study on the hemolytic effect of negative pressure on blood

Bibtex entry :

```
@inproceedings { AdM+10,
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```

[SDK10]

[PDFBIB](#)

Stollenwerk, A., Derks, A., and Kowalewski, S., "A Modular, Robust and Open Source Microcontroller Platform", in *Proc. Proceedings / 2010 Workshop on Embedded Systems Education : WESE 2010 ; Scottsdale, AZ, USA, October 28th, 2010 / Eds.: Peter Marwedel ...*, New York, NY, 2010, ACM, pp. 48-54.

A Modular, Robust and Open Source Microcontroller

Platform

Bibtex entry :

```
@inproceedings { SDK10,
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[SJA+10]

[PDFBIB](#)

Stollenwerk, A., Jörgens, J., Arens, J., Walter, M., Kopp, R., and Kowalewski, S., "Model Based Diagnosis for Extracorporeal Membrane Oxygenation", in *Proc. The international journal of artificial organs*, Milano [u.a.], 2010, vol. 33, Wichtig Ed., pp. 447-447.

Model Based Diagnosis for Extracorporeal Membrane Oxygenation

Bibtex entry :

```
@inproceedings { SJA+10,
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[SJW+10]

[PDFBIB](#)

Stollenwerk, A., Jörgens, J., Walter, M., Arens, J., Kopp, R., and Kowalewski, S., "Modellbasierte Fehlerdiagnose eines Membranoxygenators", *Proceedings : Jahrestagung der Deutschen Gesellschaft für Biomedizinische Technik (DGBMT) im VDE*, vol. 55, iss. S 1, pp. 174-177, 2010

Modellbasierte Fehlerdiagnose eines Membranoxygenators

Bibtex entry :

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@article { SJW+10,
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[SLW+10]

[PDFBIB](#)

Stollenwerk, A., Lang, M., Walter, M., Arens, J., Kopp, R., and Kowalewski, S., "Sicherheitskonzept für eine intensivmedizinische Anwendung am Beispiel der EMCO", in *Proc. Entwurf komplexer Automatisierungssysteme : EKA 2010 ; Beschreibungsmittel, Methoden, Werkzeuge und Anwendungen ; 11. Fachtagung mit Tutorium, 25. bis 27. Mai 2010 in Magdeburg, Denkfabrik im Wissenschaftshafen / ifak, Institut für Automation und Kommunikation e.V., Magdeburg; Otto-von-Guericke-Universität Magdeburg, Institut für Automatisierungstechnik. [Hrsg.: Ulrich Jumar, Eckehard Schnieder, Christian Diedrich],*

Magdeburg, 2010, ifak, pp. 65-74.

Sicherheitskonzept für eine intensivmedizinische Anwendung am Beispiel der EMCO

Bibtex entry :

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@inproceedings { SLW+10,  
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11. Fachtagung mit Tutorium, 25. bis 27. Mai 2010 in  
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[WLK+10]

[PDFBIB](#)

Walter, M., Leonhardt, S., Kopp, R., Wartzek, T., Arens, J., and Stollenwerk, A., "Automatisierung und Fehlerdiagnose bei der extrakorporalen Membranoxygenierung", *Automatisierungstechnik : at*, vol. 58, iss. 5, pp. 277-285, 2010

Automatisierung und Fehlerdiagnose bei der extrakorporalen Membranoxygenierung

Bibtex entry :

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@article { 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", *Conference proceedings of the ... 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 :

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@article { WLK+10a,
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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

Regelungs- und Sicherheitskonzepte für extrakorporale zur Lungenunterstützung

Bibtex entry :

```
@article { KWA+09,
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[LWW+09]

PDFBIB

Leonhardt, S., Walter, M., Wartzek, T., Kashefi, A., Stollenwerk, A., and Kopp, R., "Regelung des Gasaustauschs für die extrakorporale Oxygenierung", in *Proc. Automation 2009 : der Automatisierungskongress in Deutschland ; Kongress Baden-Baden, 16. und 17. Juni 2009 ; [10. Branchentreff der Mess- und Automatisierungstechnik] / VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik. - 2067, Düsseldorf, 2009 in VDI-Berichte, VDI-Verl., pp. 281-285.*

Regelung des Gasaustauschs für die extrakorporale Oxygenierung

Bibtex entry :

```
@inproceedings { LWW+09,  
  author = { Leonhardt, Steffen and Walter, Marian and Wartzek,  
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[10. Branchentreff der Mess- und Automatisierungstechnik] /  
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[SJK09]

[PDFBIB](#)

Stollenwerk, A., Jongdee, C., and Kowalewski, S., "An undergraduate embedded software laboratory for the masses", in *Proc. Workshop on Embedded Systems Education (WESE09), Grenoble, France, Grenoble, France, 2009*, ACM, pp. 34-41.

An undergraduate embedded software laboratory for the masses

Bibtex entry :

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@inproceedings { SJK09,  
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[SL09]

[PDFBIB](#)

Stollenwerk, A. and Lang, M., "Embedded Contributions to an Intensive Care Safety Concept", in *Proc. ArtistDesign Workshop on Embedded Systems in Healthcare, Eindhoven - The Netherlands*, 2009.

Embedded Contributions to an Intensive Care Safety Concept

Bibtex entry :

```
@conference { SL09,
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[SWW+09]

[PDFBIB](#)

Stollenwerk, A., Walter, M., Wartzek, T., Kopp, R., Arens, J., and Kowalewski, S., "A safety and control concept for extracorporeal membrane oxygenation", *The international journal of artificial organs*, vol. 32, iss. 7, pp. 428-428, 2009

A safety and control concept for extracorporeal membrane oxygenation

Bibtex entry :

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@article { SWW+09,
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[WLK+09]

[PDFBIB](#)

Walter, M., Leonhardt, S., Kopp, R., Kashefi, A., Wartzek, T., and Stollenwerk, A., "Automation of long term extracorporeal oxygenation systems", in *Proc. ECC 09 : Proceedings of the European Control Conference 2009 ; the 10th in the EUCA Series ; 23-26 August 2009, Budapest, Hungary / General Chair: László Keviczky ...*, Budapest, 2009, EUCA.

Automation of long term extracorporeal oxygenation systems

Bibtex entry :

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@inproceedings { WLK+09,
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EUCA

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[WWS+09]

PDFBIB

Wartzek, T., Walter, M., Stollenwerk, A., Kopp, R., Kashefi, A., and Leonhardt, S.,
"Automatisierung der extrakorporalen Membranoxygenierung", in *Proc. Automatisierungstechnische Verfahren für die Medizin : 8. Workshop ; Tagungsband / Thomas Schauer ... (eds.)*, Düsseldorf, 2009 in Fortschritt-Berichte VDI : Reihe 17, Biotechnik/Medizintechnik, VDI-Verlag, pp. 25-26.

Automatisierung der extrakorporalen Membranoxygenierung

Bibtex entry :

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@inproceedings { WWS+09,
  author = { Wartzek, Tobias and Walter, Marian and Stollenwerk,
    André
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},
  booktitle = { Automatisierungstechnische Verfahren f{"u}r die
Medizin :
      8. Workshop ; Tagungsband / Thomas Schauer ... (eds.) },
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  year = { 2009 },
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  url = { http://publications.rwth-aachen.de/record/99429 },
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[SSG+09]

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Stache, N. C., Stollenwerk, A., Gedicke, J., Olowinsky, A., Knepper, A., and Aach, T., "Automatic Calibration of a Scanner-Based Laser Welding System", *Journal of Laser Applications*, vol. 21, iss. 1, pp. 10-15, 2009, invited paper

Automatic Calibration of a Scanner-Based Laser Welding System

Bibtex entry :

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@article { SSG+09,  
  author = { Stache, Nicolaj C and Stollenwerk, Andr{'e} and  
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  title = { Automatic Calibration of a Scanner-Based Laser Welding  
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  journal = { Journal of Laser Applications },  
  year = { 2009 },  
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[SSG+07]

[PDFBIB](#)

Stache, N. C., Stollenwerk, A., Gedicke, J., Olowinsky, A., Knepper, A., and Aach, T., "Automatic Calibration of a Scanner-Based Laser Welding System", in *Proc. International Congress on the Applications of Lasers and Electro-Optics (ICALEO)*, Orlando, Florida, USA, 2007, Laser Institute of America, pp. 223-229, best paper award.

Automatic Calibration of a Scanner-Based Laser Welding System

Bibtex entry :

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@inproceedings { SSG+07,  
  author = { Stache, Nicolaj C and Stollenwerk, Andr{'e} and  
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organization = { Laser Institute of America },
publisher = { Laser Institute of America },
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url = {
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