

# Alexander Kugler, M.Sc. RWTH

## Kontakt



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Büro: Raum 2309 (Gebäude H, 3. OG)

## Fachausschüsse

- [GMA Fachausschuss 7.25 - "Testen vernetzter Systeme in Industrie 4.0"](#) (seit 2015)

## Patente

- Method and Device for Testing a Software Program (EP000003306295A1, US020180101472A1, CN000107918585A)
- Method and Device for Assessing Signals (DE102017217835A1, US020180101503A1, CN000107918691A)

## Abschlussarbeiten

Bei Interesse bitte ich um Kontaktaufnahme per E-Mail oder persönlich bei mir im Büro.

## Laufend

- Automated Test Case Generation for Reactive Systems from a Controlled Natural Language
- Evaluation of the SysReq Controlled Natural Language for the Generation of Functional Test Cases

## Abgeschlossen

- Simulation-free Evaluation of Existing Data in Arttest
- Grafisch änderbare visuelle Testfallspezifikation in Arttest
- Entwicklung eines Plattformadapters zur Unterstützung zusätzlicher Simulationsumgebungen in Arttest
  - Entwicklung eines Frameworks zur performanten Visualisierung von Signalen und Akzeptanzbereich für Arttest
- Entwicklung einer Widget-basierten Oberfläche zur Steuerung von Simulink Modellen in Arttest

## Lehre

Semester	Titel	Art
Wintersemester 18/19	<a href="#">Einführung in die Technische Informatik</a>	V
	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Sommersemester 18	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Wintersemester 17/18	<a href="#">Einführung in die Technische Informatik</a>	V
	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Sommersemester 17	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Wintersemester 16/17	<a href="#">Einführung in die Technische Informatik</a>	V
	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Sommersemester 16	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S
Wintersemester 15/16	<a href="#">Einführung in die Technische Informatik</a>	V
	<a href="#">Modellbasiertes Testen &amp; Analyse eingebetteter Software</a>	S

## Sprechstunde

Nach Vereinbarung.

## Publikationen

[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.

## VDI Status Report Testing of Networked Systems for Industrie 4.0

**Bibtex entry :**

```
@techreport { BFH+18,
```

```

author = { Bordasch, Manuel and Facchi, Christian and Heidepriem,
  Sebastian and J{"a}hnert, J{"u}rger and Jung, Tobias and
  K{"o}llner, Christian and Kraas, Alexander and Krause, Jan
  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
  Industrie
  4.0 },
pages = { 1-20 },
year = { 2018 },
typ = { PUB:(DE-HGF)29 },
reportid = { RWTH-CONV-236295 },
cin = { 122810 / 120000 },
url = {
  https://www.vdi.de/ueber-uns/presse/publikationen/details?tx_vdipublica
  tions_publicationdetails%5Bpublication%5D=19&cHash=e6b4c230eafa31d95ceb
  75395274c78c },
}

```

[KRG+18]

[PDFBIB](#)

Kriebel, S., Richenhagen, J. M., Granrath, C., and Kugler, C., "Systems engineering with SysML : The path to the future?", *MTZ worldwide*, vol. 79, iss. 5, pp. 44-47, 2018

## Systems engineering with SysML : The path to the future?

### Bibtex entry :

```

@article { KRG+18,
  author = { Kriebel, Stefan and Richenhagen, Johannes Martin and
    Granrath, Christian and Kugler, Christopher },
  title = { Systems engineering with SysML : The path to the future?
},
  journal = { MTZ worldwide },
  publisher = { Springer Fachmedien },
  pages = { 44-47 },
  volume = { 79 },
  number = { 5 },
  year = { 2018 },
  address = { Wiesbaden },
  issn = { 2192-9114 },
  doi = { 10.1007/s38313-018-0030-8 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2018-227692 },
  cin = { 412310 / 121510 / 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/731737 },
}

```

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}
```

[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

## Systems Engineering mit SysML : Der Weg in die Zukunft?

**Bibtex entry :**

```
@article { KRG+18a,  
  author = { Kriebel, Stefan and Richenhagen, Johannes Martin and  
            Granrath, Christian and Kugler, Christopher },  
  title = { Systems Engineering mit SysML : Der Weg in die Zukunft? },  
  journal = { Motortechnische Zeitschrift : MTZ },  
  publisher = { Springer Fachmedien },  
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  doi = { 10.1007/s35146-018-0025-7 },  
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  url = { http://publications.rwth-aachen.de/record/731745 },  
}
```

[HWK+17]

[PDFBIB](#)

Hansen, N., Wiechowski, N., Kugler, A., Kowalewski, S., Rambow, T., and Busch, R., "Model-in-the-Loop and Software-in-the-Loop Testing of Closed-Loop Automotive Software with Arttest", in *Proc. Informatik 2017 - Bände I-III : Tagung vom 25.-29. September 2017 in Chemnitz / Maximilian Eibl, Martin Gaedke (Hrsg.)*, Bonn, 2017 in GI-Edition : lecture notes in informatics. Proceedings, Gesellschaft für Informatik, pp. 1537-1549.

## Model-in-the-Loop and Software-in-the-Loop Testing of Closed-Loop Automotive Software with Arttest

**Bibtex entry :**

```
@inproceedings { HWK+17,  
  author = { Hansen, Norman and Wiechowski, Norbert and Kugler,  
            Alexander  
            and Kowalewski, Stefan and Rambow, Thomas and Busch, Rainer },
```

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title = { Model-in-the-Loop and Software-in-the-Loop Testing of
          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 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-236306 },
cin = { 122810 / 120000 },
url = { https://dl.gi.de/handle/20.500.12116/21 },
}

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[KKR+17]

[PDFBIB](#)

Kugler, C., Kowalewski, S., Richenhagen, J., 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 and Maquet, Ralf and Schlo{\ss}er, Axel },
  title = { Metrics-based strategies for quality assurance of
automotive
            embedded software },
  booktitle = { 17. Internationales Stuttgarter Symposium :
Automobil- und
            Motorentechnik / herausgegeben von Michael Bargende,
            Hans-Christian Reuss, Jochen Wiedemann },
  publisher = { Springer Vieweg },
  pages = { 711-730 },
  series = { Proceedings },
  year = { 2017 },
  address = { Wiesbaden },
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organization = { 17. Internationales Stuttgarter Symposium  
Automobil- und  
Motorentechnik, Stuttgart (Germany), 2017-03-14 - 2017-03-15 },  
doi = { 10.1007/978-3-658-16988-6_56 },  
typ = { PUB:(DE-HGF)7 },  
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cin = { 122810 / 120000 / 412310 },  
url = { http://publications.rwth-aachen.de/record/752278 },  
}
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[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  
controls },  
year = { 2017 },  
organization = { 16. CTI Symposium },  
typ = { PUB:(DE-HGF)1 },  
reportid = { RWTH-CONV-236303 },  
cin = { 122810 / 120000 },  
url = {  
https://drivetrain-symposium.world/cn/continuous-process-validation-transmission-controls/ },  
}
```

[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", in *Proc. [WCX 17: SAE World Congress Experience] : [April 4-6, 2017, Detroit, Michigan, USA, Cobo Center] / SAE International*, [Warrendale, PA], 2017 in SAE technical paper, SAE International, p. 11.

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

### Bibtex entry :

```
@inproceedings { WRB+17,  
author = { Wiechowski, Norbert and Rambow, Thomas and Busch, Rainer
```

```
and
    Kugler, Alexander and Hansen, Norman and Kowalewski, Stefan },
    title = { Arttest - a New Test Environment for Model-Based Software
        Development },
    booktitle = { [WCX 17: SAE World Congress Experience] : [April 4-6,
2017,
        Detroit, Michigan, USA, Cobo Center] / SAE International },
    publisher = { SAE International },
    pages = { 11 Seiten },
    series = { SAE technical paper },
    year = { 2017 },
    address = { [Warrendale, PA] },
    organization = { SAE World Congress Experience, Detroit, Mich.
(USA),
        2017-04-04 - 2017-04-06 },
    doi = { 10.4271/2017-01-0004 },
    typ = { PUB:(DE-HGF)7 },
    reportid = { RWTH-CONV-236304 },
    cin = { 122810 / 120000 },
    url = { http://publications.rwth-aachen.de/record/752280 },
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Anmerkung: [KKR+17] und [NKM+17] sind keine Veröffentlichungen von mir. Diese Einträge werden leider angezeigt, weil es mittels des Bibtex Plugin von DokuWiki nicht möglich ist, gleichzeitig nach Vor- und Nachnamen zu filtern.

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