

Publications

[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,
    André
      and Kowalewski, Stefan and Walter, Marian and Leonhardt,
      Steffen and Petran, Jan and Kopp, R{"u}dger and Rossaint,
      Rolf and Janisch, Thorsten },
  title = { Fault Identification in a Blood Pump Using Neural
    Networks },
  booktitle = { 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 },
  publisher = { Springer Singapore },
  pages = { 27-32 },
  series = { IFMBE Proceedings },
  year = { 2019 },
  address = { Singapore },
  organization = { IUPESM World Congress on Medical Physics and
    Biomedical
      Engineering, Prague (Czech Republic), 2018-06-03 -
      2018-06-08 },
  doi = { 10.1007/978-981-10-9038-7_6 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2018-231048 },
  cin = { 533000-2 / 122810 / 120000 / 611010 },
  url = { http://publications.rwth-aachen.de/record/751048 },
}
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[KTF19]

PDFBIB

Khan, A., Thönnessen, D., and Fabian, M., "On-the-fly conformance testing of safety PLC code using QuickCheck". 2019.

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

Bibtex entry :

```
@inproceedings { KTF19,
  author = { Khan, Adnan and Th{"o"}nnessen, David and Fabian, Martin
},
  title = { On-the-fly conformance testing of safety PLC code using
  QuickCheck },
  year = { 2019 },
  organization = { 17th IEEE International Conference on Industrial
  Informatics, INDIN'19 Industrial Applications of
  Artificial Intelligence, Helsinki (Finland), 2019-07-22 -
  2019-07-25 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-2019-04271 },
  cin = { 122810 / 120000 },
}
```

[PAS+19]

PDFBIB

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 :

```
@article { PAS+19,
  author = { Pomprapa, Anake and Ahmed, Waqar and Stollenwerk, André
and
  Kowalewski, Stefan and Leonhardt, Steffen },
  title = { Deep Learning of Arrhythmia Analysis Based on
Convolutional
  Neural Network },
  journal = { International journal of bioelectromagnetism : IJBEM },
  publisher = { International Society for Bioelectromagnetism },
  pages = { 48-58 },
  volume = { 21 },
  number = { 1 },
  year = { 2019 },
  address = { Tampere },
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issn = { 1456-7857 },
typ = { PUB:(DE-HGF)16 },
reportid = { RWTH-2019-03336 },
cin = { 611010 / 122810 / 120000 },
url = { http://www.ijbem.org/volume21/number1/48-58.pdf },
}
```

[TSF+19]

PDFBIB

Thönnessen, D., Smallbone, N., Fabian, M., Claessen, K., and Kowalewski, S., "Testing Safety PLCs Using QuickCheck". 2019.

Testing Safety PLCs Using QuickCheck

Bibtex entry :

```
@inproceedings { TSF+19,
  author = { Th{"o}nnessen, David and Smallbone, Nick and Fabian,
    Martin
    and Claessen, Koen and Kowalewski, Stefan },
  title = { Testing Safety PLCs Using QuickCheck },
  year = { 2019 },
  organization = { IEEE 15th International Conference on Automation
    Science and
    Engineering, Vancouver (Canada), 2019-08-22 - 2019-08-26 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-2019-04632 },
  cin = { 122810 / 120000 },
}
```

[AM18]

PDFBIB

Alrifaae, B. and Maczijekowski, J., "Real-time Trajectory optimization for Autonomous Vehicle Racing using Sequential Linearization", in *Proc. 2018 IEEE Intelligent Vehicles Symposium (IV) : 26-30 June 2018 / [sponsored by the IEEE Intelligent Transportation Systems Society (ITSS)]*, Piscataway, NJ, 2018, IEEE.

Real-time Trajectory optimization for Autonomous Vehicle Racing using Sequential Linearization

Bibtex entry :

```
@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
    June
    2018 / [sponsored by the IEEE Intelligent Transportation
    Systems Society (ITSS)] },
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publisher = { IEEE },
year = { 2018 },
address = { Piscataway, NJ },
organization = { 2018 IEEE Intelligent Vehicles Symposium, Changshu
(Peoples
  R China), 2018-06-26 - 2018-06-30 },
doi = { 10.1109/IVS.2018.8500634 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2018-229489 },
cin = { 122810 / 120000 },
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.

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://m.vdi.de/vdi-status-report-testing-of-networked-systems-for-industrie40/ },
}
```

[BHK18]

[PDFBIB](#)

Bohlender, D., Hamm, D., and Kowalewski, S., "Cycle-Bounded Model Checking of PLC Software

via Dynamic Large-Block Encoding", in *Proc. Applied computing 2018 : the 33rd Annual ACM Symposium on Applied Computing : Pau, France, April 9-13, 2018 / sponsored by: ACM Special Interest Group on Applied Computing ; conference chairs: Hisham M. Haddad (Kennesaw State University, USA), Roger L. Wainwright (University of Tulsa, USA), Richard Chbeir (University of Pau & Pays Adour, France)*, New York, NY, 2018, ACM, pp. 1891-1898.

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

Bibtex entry :

```
@inproceedings { BHK18,
  author = { Bohlander, Dimitri and Hamm, Daniel and Kowalewski, Stefan },
  title = { Cycle-Bounded Model Checking of PLC Software via Dynamic Large-Block Encoding },
  booktitle = { Applied computing 2018 : the 33rd Annual ACM Symposium on Applied Computing : Pau, France, April 9-13, 2018 / sponsored by: ACM Special Interest Group on Applied Computing ; conference chairs: Hisham M. Haddad (Kennesaw State University, USA), Roger L. Wainwright (University of Tulsa, USA), Richard Chbeir (University of Pau & Pays Adour, France) },
  publisher = { ACM },
  pages = { 1891-1898 },
  year = { 2018 },
  address = { New York, NY },
  organization = { 33rd ACM Symposium on Applied Computing, Pau (France), 2018-04-09 - 2018-04-13 },
  doi = { 10.1145/3167132.3167334 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2018-231950 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/752221 },
}
```

[BK18]

[PDFBIB](#)

Bohlander, D. and Kowalewski, S., "Compositional Verification of PLC Software using Horn Clauses and Mode Abstraction", *IFAC-PapersOnLine*, vol. 51, iss. 7, pp. 428-433, 2018

Compositional Verification of PLC Software using Horn Clauses and Mode Abstraction

Bibtex entry :

```
@article { BK18,
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```
author = { Bohlender, Dimitri and Kowalewski, Stefan },
title = { Compositional Verification of PLC Software using Horn
        Clauses and Mode Abstraction },
journal = { IFAC-PapersOnLine },
pages = { 428-433 },
volume = { 51 },
number = { 7 },
year = { 2018 },
address = { Laxenburg },
issn = { 2405-8963 },
organization = { 14th IFAC International Workshop on Discrete Event
Systems,
        Castellammare di Stabia (Italia), 2018-05-30 - 2018-06-01 },
doi = { 10.1016/j.ifacol.2018.06.336 },
typ = { PUB:(DE-HGF)16 },
reportid = { RWTH-2018-227071 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/730763 },
}
```

[BK18a]

[PDFBIB](#)

Bohlender, D. and Kowalewski, S., "Design and Verification of Restart-Robust Industrial Control Software", in *Proc. Integrated Formal Methods : 14th International Conference, IFM 2018, Maynooth, Ireland, September 5-7, 2018, Proceedings / edited by Carlo A. Furia, Kirsten Winter*, Cham, 2018 in Lecture Notes in Computer Science, Springer International Publishing, pp. 47-68.

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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  booktitle = { Integrated Formal Methods : 14th International
Conference,
        IFM 2018, Maynooth, Ireland, September 5-7, 2018,
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  pages = { 47-68 },
  series = { Lecture Notes in Computer Science },
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Methods },
  doi = { 10.1007/978-3-319-98938-9_4 },
  typ = { PUB:(DE-HGF)7 },
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reportid = { RWTH-2018-231948 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/752219 },
}

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[CMW+18]

[PDFBIB](#)

Chomicz, P., Müller-Lerwe, A., Wegner, G., Busch, R., and Kowalewski, S., "Controlled Natural Languages for Hazard Analysis and Risk Assessment", in *Proc. Controlled Natural Language : Proceedings of the Sixth International Workshop, CNL 2018, Maynooth, Co. Kildare, Ireland, August 27-28, 2018 / edited by Brian Davis (Maynooth University, Ireland), C. Maria Keet (University of Cape Town, South Africa) and Adam Wyner (Swansea University, United Kingdom)*, Amsterdam, 2018 in *Frontiers in artificial intelligence and applications*, IOS Press, pp. 41-51.

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
    Assessment },
  booktitle = { Controlled Natural Language : Proceedings of the
    Sixth
    International Workshop, CNL 2018, Maynooth, Co. Kildare,
    Ireland, August 27-28, 2018 / edited by Brian Davis
    (Maynooth University, Ireland), C. Maria Keet (University of
    Cape Town, South Africa) and Adam Wyner (Swansea University,
    United Kingdom) },
  publisher = { IOS Press },
  pages = { 41-51 },
  series = { Frontiers in artificial intelligence and applications },
  year = { 2018 },
  address = { Amsterdam },
  organization = { 6th International Workshop on Controlled Natural
    Language,
    Kildare (Ireland), 2018-08-27 - 2018-08-28 },
  doi = { 10.3233/978-1-61499-904-1-41 },
  typ = { PUB:(DE-HGF)7 },
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    http://publications.rwth-aachen.de/record/752264/files/752264.pdf },
}

```

[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.

Applicability of supervisory control theory for the supervision of PLC programs

Bibtex entry :

```
@inproceedings { GAK18,
  author = { Göbe, Florian and Aydin, Selin and Kowalewski, Stefan },
  title = { Applicability of supervisory control theory for the supervision of PLC programs },
  booktitle = { 2017 22nd IEEE International Conference on Emerging Technologies and Factory Automation : September 12-15, 2017, Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus },
  publisher = { IEEE },
  pages = { 8 Seiten },
  series = { IEEE International Conference on Emerging Technologies and
    Factory Automation-ETFA },
  year = { 2018 },
  address = { [Piscataway, NJ] },
  organization = { 22nd IEEE International Conference on Emerging Technologies
    and Factory Automation, Limassol (Cyprus), 2017-09-12 - 2017-09-15 },
  doi = { 10.1109/ETFA.2017.8247575 },
  typ = { PUB:(DE-HGF)7 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/722221 },
}
```

[GSA+18]

[PDFBIB](#)

Grochowski, M., Schweigler, M., Alrifaaee, B., and Kowalewski, S., "A GPS-aided Inertial Navigation System for Vehicular Navigation using a Smartphone", *IFAC-PapersOnLine*, vol. 51, iss. 10, pp. 121-126, 2018

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

Bibtex entry :

```
@article { GSA+18,
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author = { Grochowski, Marco and Schweigler, Martin and Alrifae,
           Bassam and Kowalewski, Stefan },
title = { A GPS-aided Inertial Navigation System for Vehicular
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journal = { IFAC-PapersOnLine },
pages = { 121-126 },
volume = { 51 },
number = { 10 },
year = { 2018 },
address = { Laxenburg },
issn = { 2405-8963 },
organization = { 3rd IFAC Conference on Embedded Systems,
Computational
                 Intelligence and Telematics in Control, Farod (Portugal),
                 2018-06-06 - 2018-06-08 },
doi = { 10.1016/j.ifacol.2018.06.247 },
typ = { PUB:(DE-HGF)16 },
reportid = { RWTH-2018-227583 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/731577 },
}

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[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
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  title = { Systems Engineering mit SysML : Der Weg in die Zukunft?
},
  journal = { Motortechnische Zeitschrift : MTZ },
  publisher = { Springer Fachmedien },
  pages = { 48-53 },
  volume = { 79 },
  number = { 5 },
  year = { 2018 },
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  doi = { 10.1007/s35146-018-0025-7 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2018-227695 },
  cin = { 412310 / 122810 / 120000 / 121510 },
  url = { http://publications.rwth-aachen.de/record/731745 },
}
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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 :

```
@inproceedings { KSK+18,
  author = { K{"u}hn, Jan and Stollenwerk, André and Kowalewski,
    Stefan
    and Fabry, Gregor and Grzanna, Tim and Doorschodt, Benedict
    and Tolba, René H. and Rossaint, Rolf and Bleilevens,
    Christian },
  title = { A long-term setup for kidney perfusion },
  year = { 2018 },
  organization = { 52nd Annual Conference of the German Society for
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Biomedical
  Engineering, Aachen (Germany), 2018-09-26 - 2018-09-28 },
  typ = { PUB:(DE-HGF)6 },
  reportid = { RWTH-CONV-236288 },
  cin = { 122810 / 120000527000-2 / 9210105 },
  url = { http://publications.rwth-aachen.de/record/752261 },
}
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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

Efficient Realization of Householder Transform Through Algorithm-Architecture Co-Design for Acceleration of QR Factorization

Bibtex entry :

```
@article { MVC+18,
  author = { Merchant, Farhad and Vatwani, Tarun and Chattopadhyay,
    Anupam and Raha, Soumyendu and Nandy, S. K. and Narayan,
    Ranjani },
  title = { Efficient Realization of Householder Transform Through
    Algorithm-Architecture Co-Design for Acceleration of QR
    Factorization },
  journal = { IEEE transactions on parallel and distributed systems
},
  publisher = { IEEE },
  pages = { 1707-1720 },
  volume = { 29 },
  number = { 8 },
  year = { 2018 },
  address = { New York, NY },
  issn = { 1045-9219 },
  doi = { 10.1109/TPDS.2018.2803820 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2018-227400 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/731326 },
}
```

[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 },  
  title = { A live static code analysis architecture for PLC software  
},  
  booktitle = { 2017 22nd IEEE International Conference on Emerging  
Technologies and Factory Automation : September 12-15, 2017,  
Limassol, Cyprus / ABB, IEEE, IES, University of Cyprus },  
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  pages = { 4 Seiten },  
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and  
Factory Automation-ETFA },  
  year = { 2018 },  
  address = { [Piscataway, NJ] },  
  organization = { 22nd IEEE International Conference on Emerging  
Technologies  
and Factory Automation, Limassol (Cyprus), 2017-09-12 -  
2017-09-15 },  
  doi = { 10.1109/ETFA.2017.8247707 },  
  typ = { PUB:(DE-HGF)7 },  
  reportid = { RWTH-2018-223453 },  
  cin = { 122810 / 120000 },  
  url = { http://publications.rwth-aachen.de/record/722219 },  
}
```

[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", *International journal of bioelectromagnetism : IJBEM*, vol. 20, iss. 1, pp. 47-50, 2018

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

Bibtex entry :

```
@article { PAS+18,  
  author = { Pomprapa, Anake and Ahmed, Waqar and Stollenwerk, André  
and  
Kowalewski, Stefan and Uguz, Durmus Umutcan and Leonhardt,  
Steffen },  
  title = { Arrhythmia Analysis in a Non-contact cECG Chair using  
Convolutional Neural Network },  
  journal = { International journal of bioelectromagnetism : IJBEM },
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publisher = { International Society for Bioelectromagnetism },
pages = { 47-50 },
volume = { 20 },
number = { 1 },
year = { 2018 },
address = { Tampere },
issn = { 1456-7865 },
organization = { 11th International Conference on
Bioelectromagnetism, Aachen
(Germany), 2018-05-23 - 2018-05-25 },
doi = { 10.18154/RWTH-CONV-224903 },
typ = { PUB:(DE-HGF)16 },
reportid = { RWTH-CONV-224903 },
cin = { 611010 / 122810 / 120000 },
url = {
http://publications.rwth-aachen.de/record/723536/files/723536.pdf },
}

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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,
author = { Pomprapa, Anake and Ahmed, W. and Sayani, M. S. and
Stollenwerk, André and Kowalewski, Stefan and Leonhardt,
Steffen },
title = { Classification of Obstructive Sleep Apnea Using Machine
Learning },
journal = { American journal of respiratory and critical care
medicine },
publisher = { American Thoracic Society },
pages = { 1 Seite },
volume = { 197 },
number = { Abstract Issue },
year = { 2018 },
address = { New York, NY },
issn = { 0003-0805 },
organization = { International Conference of the American-Thoracic-
Society,
San Diego, CA (USA), 2018-05-18 - 2018-05-23 },
typ = { PUB:(DE-HGF)1 },
reportid = { RWTH-2018-231113 },
cin = { 611010 / 122810 / 120000 },
}

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url = {  
https://www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2018.197.  
1_MeetingAbstracts.A7449 },  
}
```

[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 :

```
@article { SBK18,  
  author = { Stollenwerk, André and Buglowski, Mateusz and K{"u}hn,  
Jan },  
  title = { Mock loop for bubble generation in a centrifugal blood  
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  journal = { Current Directions in Biomedical Engineering },  
  publisher = { de Gruyter },  
  pages = { 33-36 },  
  volume = { 4 },  
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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 :

```
@inproceedings { SGT+18,
  author = { Schweigler, Martin and Grochowski, Marco and Tamrakar,
    Sujan
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  booktitle = { 8th International Conference on Pattern Recognition
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  year = { 2018 },
  address = { [Stevenage] },
  organization = { 8th International Conference of Pattern
    Recognition Systems,
    Madrid (Spain), 2017-07-11 - 2017-07-13 },
  doi = { 10.1049/cp.2017.0166 },
  typ = { PUB:(DE-HGF)7 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/752258 },
}
```

[SHS+18]

[PDFBIB](#)

Smieschek, M. T., 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) : Munich, Germany, August 20-24, 2018*, 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 Thomas and Hinrichs, Timo and
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  title = { A New Condition Indicator for Slow-Rotating Roller Chains
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  booktitle = { 2018 IEEE 14th International Conference on Automation
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year = { 2018 },
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Engineering, Munich (Germany), 2018-08-20 - 2018-08-24 },
doi = { 10.1109/COASE.2018.8560542 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-236282 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/752188 },
}
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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,
author = { Simon, Hendrik and Kowalewski, Stefan },
title = { Mode-Aware Concolic Testing for PLC Software },
booktitle = { Integrated formal methods : 14th International
Conference,
IFM 2018, Maynooth, Ireland, September 5-7, 2018 :
proceedings / Carlo A. Furia, Kirsten Winter (eds.) },
publisher = { Springer },
pages = { 367-376 },
series = { Lecture notes in computer science },
year = { 2018 },
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organization = { 14th International Conference, Maynooth (Ireland),
2018-09-05 - 2018-09-07 },
typ = { PUB:(DE-HGF)7 },
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cin = { 122810 / 120000 },
url = { https://doi.org/10.1007/978-3-319-98938-9 },
}
```

[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,
Stefan },
  title = { Structural Concolic Testing for Sequential Function Chart
},
  journal = { IFAC-PapersOnLine },
  publisher = { Elsevier },
  pages = { 422-427 },
  volume = { 51 },
  number = { 7 },
  year = { 2018 },
  address = { Frankfurt ; M{"u"}nchen [u.a.] },
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  organization = { 14th IFAC Workshop on Discrete Event Systems,
Castellammare
di Stabia (Italy), 2018-05-30 - 2018-06-01 },
  doi = { 10.1016/j.ifacol.2018.06.335 },
  typ = { PUB:(DE-HGF)16 },
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  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/752265 },
}
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[Ter18]

[PDFBIB](#)

Terber, M., "Real-world deployment and evaluation of synchronous programming in reactive embedded systems", PhD Thesis, Aachen, 2018.

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 Dieter
},
  title = { Real-world deployment and evaluation of synchronous
programming in reactive embedded systems },
  publisher = { RWTH Aachen University, Department of Computer
Science },
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  pages = { 1 Online-Ressource (xvi, 134 Seiten) : Illustrationen },
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year = { 2018 },
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doi = { 10.18154/RWTH-2018-230185 },
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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

Agiles Testen von cyber-physischen Produktionssystemen : Einsatz von SPS-Sprachen zur Testfallbeschreibung

Bibtex entry :

```
@article { TK18,
author = { Th{"o}nnessen, David and Kowalewski, Stefan },
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Einsatz von SPS-Sprachen zur Testfallbeschreibung },
journal = { Atp-Edition : automatisierungstechnische Praxis },
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pages = { 46-55 },
volume = { 60 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/727012 },
}
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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,
  author = { Th{\"}nnessen, David and Kowalewski, Stefan },
  title = { Using PLC Programming Languages for Test-Case
Specification
of Hardware-in-the-loop Tests },
  booktitle = { [Modellbasierte Entwicklung eingebetteter Systeme,
MBEES
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  publisher = { fortiss Technischer Bericht },
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Hamburg
(Germany), 2018-04-16 - 2018-04-18 },
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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 :

```
@inproceedings { TRR+18,
  author = { Th{\"}nnessen, David and Reinker, Niklas and Rakel,
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typ = { PUB:(DE-HGF)7 },
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url = { http://publications.rwth-aachen.de/record/722218 },
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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 :

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@article { TRR+18a,
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Computational
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  url = { http://publications.rwth-aachen.de/record/731576 },
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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,
  author = { Th{"o}nnessen, David and Reinker, Niklas and Rakel,
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Signal Matching Algorithm with Multidimensional Tolerance
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  pages = { 1197-1202 },
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http://publications.rwth-aachen.de/record/752982/files/752982.pdf },
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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,  
  author = { Ulewicz, Sebastian and Vogel-Heuser, Birgit and Simon,  
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[WKJ+18]

[PDFBIB](#)

Walter, M., Kühn, J., Janisch, T., Petran, J., Kopp, R., and Leonhardt, S., "Cooperative automation of extracorporeal gas exchange and artificial ventilation", in *Proc. World Congress on Medical Physics & Biomedical Engineering : June 3-8, 2018, Prague, Czech Republic : IUPESM Page 2018 : Book of Abstracts*, 2018, pp. 663-664.

Cooperative automation of extracorporeal gas exchange and artificial ventilation

Bibtex entry :

```
@inproceedings { WKJ+18,  
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and
    Petran, Jan and Kopp, R{"u}dger and Leonhardt, Steffen },
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},
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[WLB+18]

PDFBIB

Woopen, T., Lampe, B., Böddeker, T., Eckstein, L., Kampmann, A., Alrifaae, B., Kowalewski, S., Moormann, D., Stolte, T., Jatzkowski, I., Maurer, M., Möstl, M., Ernst, R., Ackermann, S., Amersbach, C., Winner, H., Püllen, D., Katzenbeisser, S., Leinen, S., Becker, M., Stiller, C., Furmans, K., Bengler, K., Diermeyer, F., Lienkamp, M., Keilhoff, D., Reuss, H., Buchholz, M., Dietmayer, K., Lategahn, H., Siepenkötter, N., Elbs, M., v. Hinüber, E., Dupuis, M., and Hecker, C., "UNICARagil - Disruptive Modular Architectures for Agile, Automated Vehicle Concepts", in *Proc. { 27. Aachener Kolloquium Fahrzeug- und Motorentechnik : October 8th - 10th, 2018 - Eurogress Aachen, Aachen, 2018, Aachener Kolloquium Fahrzeug- und Motorentechnik GbR, pp. 663-694.*

UNICARagil - Disruptive Modular Architectures for Agile, Automated Vehicle Concepts

Bibtex entry :

```

@inproceedings { WLB+18,
    author = { Woopen, Timo and Lampe, Bastian and B{"o}ddeker, Torben
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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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    Siepenk{\o}tter, Norbert and Elbs, Martin and v.
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er%20Partner%20.pdf },
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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,
    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,
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Silke Dorothee and Hahn, Udo and Henkel, Andreas and
Kirsten, Toralf and Kl{"o}ss, Thomas and Lippert, J{"o}rg
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Oliver and Maschmann, Jens and Meister, Sven and
Mikolajczyk, Rafael and N{"u}chter, Matthias and Pletz,
Mathias W. and Rahm, Erhard and Riedel, Morris and Saleh,
Kutaiba and Schuppert, Andreas and Smers, Stefan and
Stollenwerk, Andr{e} and Uhlig, Stefan and Wendt, Thomas and
Zenker, Sven and Fleig, Wolfgang and Marx, Gernot and
Scherag, Andr{e} and L{"o}ffler, Markus },
title = { Smart Medical Information Technology for Healthcare
(SMITH)
: Data Integration based on Interoperability Standards },
journal = { Methods of information in medicine },
pages = { e92-e105 },
volume = { 57 },
number = { S 01 },
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issn = { 2511-705X },
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http://publications.rwth-aachen.de/record/757852/files/757852.pdf },
}

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[AMA17]

[PDFBIB](#)

Alrifaae, B., Maczijekowski, J., and Abel, D., "Sequential Convex Programming MPC for Dynamic Vehicle Collision Avoidance", in *Proc. First Annual IEEE Conference on Control Technology and Applications : Kohala Coast, Hawai'i, August 27-30, 2017 : CCTA 2017 / IEEE, CSS, IEEE Robotics & Automation Society, SICE, Piscataway, NJ, 2017, IEEE*, pp. 2202-2207.

Sequential Convex Programming MPC for Dynamic Vehicle Collision Avoidance

Bibtex entry :

```

@inproceedings { AMA17,
  author = { Alrifaae, Bassam and Maczijekowski, Janis and Abel, Dirk
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Collision Avoidance },
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and
Applications : Kohala Coast, Hawai'i, August 27-30, 2017 :
CCTA 2017 / IEEE, CSS, IEEE Robotics & Automation Society,
SICE },
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pages = { 2202-2207 },
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}
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[BHK17]

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Ben Makhlof, I., Hansen, N., and Kowalewski, S., "HyReach: A Reachability Tool for Linear Hybrid Systems Based on Support Functions", in *Proc. ARCH16. 3rd International Workshop on Applied Verification for Continuous and Hybrid Systems / Editors: Goran Frehse and Matthias Althoff*, 2017 in EPiC Series in Computing, pp. 68-79.

HyReach: A Reachability Tool for Linear Hybrid Systems Based on Support Functions

Bibtex entry :

```
@inproceedings { BHK17,
    author = { Ben Makhlof, Ibtissem and Hansen, Norman and
Kowalewski,
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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", *Biomedizinische Technik*, vol. 62, iss. 2, pp. 199-212, 2017

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

Bibtex entry :

```
@article { BMK+17,
  author = { Brendle, Christian and M{"u}lders, Thorsten and
K{"u}hn,
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    Rolf and Stollenwerk, André and Kowalewski, Stefan and
    Misgeld, Berno Johannes Engelbert and Leonhardt, Steffen and
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  title = { Physiological closed-loop control of mechanical
ventilation
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  journal = { Biomedizinische Technik },
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  pages = { 199-212 },
  volume = { 62 },
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}
```

[CMW+17]

PDFBIB

Chomicz, P., Müller-Lerwe, A., Wegner, G., Busch, R., and Kowalewski, S., "Towards the Use of Controlled Natural Languages in Hazard Analysis and Risk Assessment", in *Proc. Automotive - Safety & Security 2017*, 2017 in Lecture Notes in Informatics, Gesellschaft für Informatik, pp. 163-174.

Towards the Use of Controlled Natural Languages in Hazard Analysis and Risk Assessment

Bibtex entry :

```
@inproceedings { CMW+17,
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author = { Chomicz, Paul and Müller-Lerwe, Armin and Wegner,  
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title = { Towards the Use of Controlled Natural Languages in Hazard  
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}
```

[DDK+17]

[PDFBIB](#)

Dankert, J., Dernehl, C., Kusmenko, E., Eckstein, L., Kowalewski, S., and Rumpe, B. D., "RapidCoop - Robuste Architektur durch geeignete Paradigmen für Kooperativ Interagierende Automobile", in *Proc. AAET - Automatisiertes und Vernetztes Fahren : Beiträge zum gleichnamigen 18. Braunschweiger Symposium vom 8. und 9. Februar 2017, Stadthalle, Braunschweig / ITS automotive nord e.V. (Hrsg.)*, Braunschweig, 2017, ITS automotive nord e.V., pp. 225-244.

RapidCoop - Robuste Architektur durch geeignete Paradigmen für Kooperativ Interagierende Automobile

Bibtex entry :

```
@inproceedings { DDK+17,  
  author = { Dankert, Jens and Dernehl, Christian and Kusmenko,  
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            e.V. (Hrsg.) },  
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geeignete-Paradigmen-fuer-Kooperativ-Interagierende-
Automobile.pdf?PHPSESSID=eb66ba2042d9500e5135d33f6b7575af },
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[DKK17]

[PDFBIB](#)

Dernehl, C., Kühn, J., and Kowalewski, S., "Case studies on automated verification with slope boundaries for block diagrams", *Computer Languages, Systems & Structures*, vol. 54, pp. 528-543, 2017

Case studies on automated verification with slope boundaries for block diagrams

Bibtex entry :

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@article { DKK17,
  author = { Dernehl, Christian and K{"u}hn, Jan and Kowalewski,
Stefan },
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boundaries
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  volume = { 54 },
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```

[DNS+17]

[PDFBIB](#)

Dzafic, D., Nicolas, W., Schoonbrood, P., Franke, D., and Kowalewski, S., "Multimodales Dynamisches Routen mit eNav", in *Proc. AGIT Journal für Angewandte Geoinformatik*, 2017, Herbert Wichmann Verlag, VDE VERLAG GMBH, Berlin/Offenbach., pp. 278-287.

Multimodales Dynamisches Routen mit eNav

Bibtex entry :

```
@inproceedings { DNS+17,  
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Peter  
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```

[DSF+17]

[PDFBIB](#)

Dzafic, D., Schoonbrood, P., Franke, D., and Kowalewski, S., "ENav: A Suitable Navigation System for the Disabled", in *Proc. Ambient Assisted Living : 9. AAL-Kongress, Frankfurt/M, Germany, April 20 - 21, 2016 / edited by Reiner Wichert, Beate Mand*, Cham ; s.l., 2017 in *Advanced Technologies and Societal Change*, Springer International Publishing ; Imprint: Springer, pp. 133-150.

eNav: A Suitable Navigation System for the Disabled

Bibtex entry :

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@inproceedings { DSF+17,  
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},  
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[DWS+17]

[PDFBIB](#)

Dzafic, D., Wagener, N., Schoonbrood, P., Franke, D., and Kowalewski, S., "Multimodal Dynamic Routing for Wheelchairs and Pedestrians", in *Proc. Proceedings International Conference on Intelligent Transport Systems in Theory and Practice, mobil.TUM 2017*, 2017, Elsevier B.V., pp. 1-10.

Multimodal Dynamic Routing for Wheelchairs and Pedestrians

Bibtex entry :

```
@inproceedings { DWS+17,
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```

[Ger17]

[PDFBIB](#)

Gerlitz, T., "Incremental Integration and Static Analysis of Model-Based Automotive Software Artifacts", PhD Thesis, Aachen, 2017.

Incremental Integration and Static Analysis of Model-Based Automotive Software Artifacts

Bibtex entry :

```
@phdthesis { Ger17,
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Science },  
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http://publications.rwth-aachen.de/record/706814/files/706814.pdf },  
}
```

[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*, 2017, Maximilian Eibl, Martin Gaedke, 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,  
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Closed-Loop Automotive Software with Arttest },  
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url = { http://publications.rwth-aachen.de/record/752274 },  
}
```

[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,
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  pages = { 1 Online-Ressource (xx, 114 Seiten) : Illustrationen,
    Diagramme },
  series = { Aachener Informatik-Berichte },
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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 :

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@article { KBS+17,
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[KGK17]

[PDFBIB](#)

Kalkov, I., Gurghian, 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,
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2014-10-13 - 2014-10-14 },
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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,
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  url = { http://publications.rwth-aachen.de/record/752278 },
}
```

[Leo17]

[PDFBIB](#)

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Special Issue: Smart Life Support

Bibtex entry :

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@book { Leo17,
  author = { Leonhardt, Steffen },
  title = { Special Issue: Smart Life Support },
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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", in *Proc. 16. CTI Symposium*, 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 },
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[SAB+17]

[PDFBIB](#)

Schupp, S., Abraham, E., Ben Makhlof, I., and Kowalewski, S., "HyPro: A C++ Library of State Set Representations for Hybrid Systems Reachability Analysis" Cham: Springer, 2017, vol. 10227, pp. 288-294.

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

Bibtex entry :

```
@inbook { SAB+17,
  author = { Schupp, Stefan and Abraham, Erika and Ben Makhlof, Ibtissem and Kowalewski, Stefan },
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title = { HyPro: A C++ Library of State Set Representations for
Hybrid
Systems Reachability Analysis },
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NFM 2017,
Moffett Field, CA, USA, May 16-18, 2017 : proceedings /
Clark Barrett, Misty Davies, Temesghen Kahsai (eds.) },
publisher = { Springer },
pages = { 288-294 },
volume = { 10227 },
series = { Lecture Notes in Computer Science },
year = { 2017 },
address = { Cham },
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Field, CA
(USA), 2017-05-16 - 2017-05-18 },
doi = { 10.1007/978-3-319-57288-8_20 },
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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,
Florian
and Janisch, Thorsten },
title = { Tauchcomputerunterst{"u}tzung durch vernetzte Smart
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journal = { Caisson : Mitteilungen der GT{"U}M e.V. },
publisher = { GT{"U}M },
volume = { 32 },
number = { 4 },
year = { 2017 },
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cin = { 122810 / 9210120 / 120000533000-3 },
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}

[SPD+17]

[PDFBIB](#)

Schmidt, T., Philipsen, R. T., 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,  
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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 },  
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  doi = { 10.1007/978-3-319-58466-9_33 },  
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 }
```

[SSK+17]

[PDFBIB](#)

Smieschek, M. T., 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,
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zur
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Algorithmen -
  Systeme - Anwendungen. Proceedings des Workshops vom 12. bis
  14. M{"a}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 },
  year = { 2017 },
  address = { Berlin, Heidelberg },
  organization = { Bildverarbeitung f{"u}r die Medizin 2017 :
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  Systeme - Anwendungen, Heidelberg (Germany), 2017-03-12 -
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  doi = { 10.1007/978-3-662-54345-0_35 },
  typ = { PUB:(DE-HGF)7 },
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[SSM+17]

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  author = { Stollenwerk, André and Sehl, Florian and Marx, Gernot  
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and  
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sponsors: IEEE, EMB },  
  publisher = { IEEE },  
  pages = { 169-172 },  
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[WKK+17]

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  author = { Walter, Marian and Kunczik, Janosch and K{"u}hn, Jan  
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  title = { Robust control of extracorporeal gas exchange },  
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    pages = { 365, 150-150 },
    year = { 2017 },
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    Conference on Biomedical Engineering and Medical Physics
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    author = { Wiechowski, Norbert and Rambow, Thomas and Busch, Rainer
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    booktitle = { SAE Technical Paper },
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    typ = { PUB:(DE-HGF)8 },
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  title = { Non-convex MPC for Vehicle Collision Avoidance },  
  booktitle = { European Conference on Computational Optimization  
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  author = { Ben Makhlof, Ibtissem },  
  othercontributors = { Kowalewski, Stefan and Frehse, Goran },  
  title = { Comparative evaluation and improvement of computational  
  approaches to reachability analysis of linear hybrid systems },  
  publisher = { Shaker Verlag },  
  school = { RWTH Aachen },  
  pages = { viii, 221 Seiten : Illustrationen, Diagramme },  
  series = { Aachener Informatik-Berichte },  
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[BHK+16]

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  Stefan and Leonhardt, Steffen and Walter, Marian and
  Misgeld, Berno Johannes Engelbert },
  title = { Closed-loop control of extracorporeal oxygen and carbon
  dioxide gas transfer },
  journal = { Control engineering practice },
  publisher = { Elsevier Science },
  pages = { 10 Seiten },
  year = { 2016 },
  address = { Amsterdam [u.a.] },
  issn = { 0967-0661 },
  doi = { 10.1016/j.conengprac.2016.09.016 },
  typ = { PUB:(DE-HGF)16 },
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  author = { Brendle, Christian and Hackmack, K.-F. and K{"u}hn, Jan
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title = { Continuous gas transfer monitoring during extracorporeal
membrane oxygenation },
journal = { Biomedical signal processing and control },
publisher = { Elsevier },
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volume = { 31 },
year = { 2016 },
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author = { Biallas, Sebastian },
othercontributors = { Kowalewski, Stefan and Fay, Alexander },
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model checking and static analysis },
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pages = { 1 Online-Ressource (x, 153 Seiten) : Illustrationen,
Diagramme },
series = { Aachener Informatik Berichte },
year = { 2016 },
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  author = { Banila, Madalina and Kowalewski, Stefan },
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    Automobilbereich },
  booktitle = { Entwurf komplexer Automatisierungssysteme :
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  publisher = { Institut f{"u}r Automation und Kommunikation e.V.
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    Magdeburg) },
  pages = { 1-10 },
  year = { 2016 },
  address = { Magdeburg },
  organization = { 14. Fachtagung Entwurf komplexer
    Automatisierungssysteme,
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  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2017-05172 },
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    17. Branchentreff der Mess- und Automatisierungstechnik :
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pages = { 13-14 },
series = { VDI-Berichte },
year = { 2016 },
address = { D{"u"}sseldorf },
organization = { 17. Branchentreff der Mess- und
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    Baden-Baden (Germany), 2016-06-07 - 2016-06-08 },
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cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/680852 },
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Bibtex entry :

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Systemen", Freiburg im Breisgau (Germany), 2016-03-01 -

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    (EUCA)] },
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  pages = { 441-446 },
  year = { 2016 },
  address = { [Piscataway, NJ] },
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  author = { Dernehl, Christian and Hansen, Norman and Kowalewski,
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  title = { Abstract Interpretation of MATLAB Code with Interval Sets
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  publisher = { Springer International Publishing },
  pages = { 25-38 },
  series = { Lecture Notes in Computer Science },
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Critical Systems, Pisa (Italy), 2016-09-26 - 2016-09-28 },
  doi = { 10.1007/978-3-319-45943-1 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2016-12021 },
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[DHK16a]

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for a Static Value Range Analysis of Block Diagrams },  
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Bibtex entry :

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Validation : proceedings of the 13th Workshop on
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Model-Driven Engineering, Verification and Validation
co-located with ACM/IEEE 19th International Conference on
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Famelis, Daniel Ratiu, Gehan M. K. Selim },
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url = { http://ceur-ws.org/Vol-1713/MoDeVva_2016_paper_3.pdf },
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Prof. Dr.
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Artifacts

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[GK16]

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[GK16a]

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[GK16b]

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[KSB+16]

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[PDFBIB](#)

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Technik im VDE ; Editoren: Prof. Dr.-Ing. habil. Olaf
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[SSJ+16]

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[SSS16]

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[SSS16a]

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[WBK+16]

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[ZAB+16]

[PDFBIB](#)

Zimmermann, W., Alperowitz, L., Br gge, 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 Wei bach, R., Eds., *Gemeinsamer Tagungsband der Workshops der Tagung Software Engineering 2016 (SE-WS 2016)*, Wien, 23.-26. Februar 2016, Aachen: RWTH, 2016.

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Bibtex entry :

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@proceedings { ZAB+16,
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Riehle, Dirk and Schaefer, Ina and Scheuermann, Constantin
and Schlaefer, Alexander and Schupp, Sibylle and Seitz,
Andreas and Steffens, Andreas and Stollenwerk, Andr e and
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Wei{\ss}bach, R{"u}diger },
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[BFS+15]

[PDFBIB](#)

Biallas, S., Friedrich, N., Simon, H., and Kowalewski, S., "Automatic Error Cause Localization of Faulty PLC Programs", *IFAC-PapersOnLine*, vol. 48, iss. 7, pp. 79-84, 2015

Automatic Error Cause Localization of Faulty PLC Programs

Bibtex entry :

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@article { BFS+15,
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}

[BGK15]

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A Study on Solving Guard and Invariant Set Intersection in Zonotope-based Reachability of Linear Hybrid Systems

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@article { BGK15,
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(USA),
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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., Leonhardt, S., and Walter, M., "In silico evaluation of gas transfer estimation during extracorporeal membrane oxygenation", *IFAC-PapersOnLine*, vol. 48, iss. 20, 2015

In silico evaluation of gas transfer estimation during extracorporeal membrane oxygenation

Bibtex entry :

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@article { BHK+15,  
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K{\\"u}hn,  
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http://www.sciencedirect.com/science/article/pii/S2405896315020819 },  
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[BK15]

[PDFBIB](#)

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Networked Cooperative Platoon of Vehicles for Testing Methods and Verification Tools

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@inbook { BK15,  
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atoon_of_Vehicles_for_Testing_Methods_and_Verification_Tools },
}

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[BK15a]

[PDFBIB](#)

Ben Makhlof, I. and Kowalewski, S., "Optimizing Safe Control of a Networked Platoon of Trucks Using Reachability"EasyChair, 2015, vol. 34, pp. 169-179.

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http://www.easychair.org/publications/download/Optimizing_Safe_Control_
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  author = { Biallas, Sebastian and Simon, Hendrik and Kowalewski,  
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12. Juni 2015 / VDI/VDE-Gesellschaft Mess- und  
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[CSB+15]

[PDFBIB](#)

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    Abraham, Erika and Frehse, Goran and Kowalewski, Stefan },
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NFM 2015,
    Pasadena, Calif., USA, April 27-29, 2015, Proceedings /
    edited by Klaus Havelund, Gerard Holzmann, Rajeev Joshi },
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[DHG+15]

[PDFBIB](#)

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Thomas
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    booktitle = { Informatik 2015 : Tagung vom 28. September – 02.
Oktober
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cin = { 122810 / 120000 },  
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[Dia15]

[PDFBIB](#)

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Experimental validation and mathematical analysis of cooperative vehicles in a platoon

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@phdthesis { Dia15,  
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[DKF+15]

[PDFBIB](#)

Dzafic, D., Klug, S., Franke, D., and Kowalewski, S., "Routing über Flächen mit SpiderWebGraph", in *Proc. Journal für angewandte Geoinformatik 1-2015*, 2015, pp. 516-252.

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Bibtex entry :

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@inproceedings { DKF+15,  
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[dMK+15]

[PDFBIB](#)

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Bibtex entry :

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@article { dMK+15,
  author = { de Brouwer, P. and Mager, Ilona and Kopp, R{\u}dger and
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```

[FKL15]

[PDFBIB](#)

Franke, D., Kowalewski, S., and Lichter, H., "Testing life cycle-related properties of mobile applications", , Aachen, AIB-2015-02, 2015.

Testing life cycle-related properties of mobile applications

Bibtex entry :

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@techreport { FKL15,
  author = { Franke, Dominik and Kowalewski, Stefan and Lichter,
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http://publications.rwth-aachen.de/record/466122/files/466122.pdf },
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[Fra15]

[PDFBIB](#)

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Testing life cycle-related properties of mobile applications = Testen von Lebenszykluseigenschaften mobiler Anwendungen

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@phdthesis { Fra15,
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[GSK15]

[PDFBIB](#)

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Modellen

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@inproceedings { GSK15,
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Michaela Huhn, Jan Philipps, Bernhard Sch{"a}tz },
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2015-03-22 -
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[GTD15]

[PDFBIB](#)

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@inproceedings { GTD15,
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Proceedings of the International Workshop on Modelling in
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Automotive Software Engineering co-located with ACM/IEEE
18th International Conference on Model Driven Engineering
Languages and Systems (MODELS 2015) : Ottawa, Canada.
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Atlee ** Juergen Dingel *** Ramesh S **** (* Electrical and
Computer Engineering, University of Waterloo, Waterloo,
Ontario, Canada ** School of Computer Science, University of
Waterloo, Waterloo, Ontario, Canada *** School of Computing,
Queen's University, Kingston, Ontario, Canada **** Global
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[HBS+15]

[PDFBIB](#)

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[JMR+15]

[PDFBIB](#)

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Introducing computer programming to secondary school students using mobile robots

Bibtex entry :

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    author = { Jawawi, Dayang N. A. and Mamat, Rosbi and Ridzuan,
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[KGK15]

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Bibtex entry :

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@inproceedings { KGK15,
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Technologies for Real-time and Embedded Systems - JTRES '15
- ACM Press New York, New York, USA, 2015 },
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  pages = { 5, 10 Seiten },
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[KKO+15]

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@article { KKO+15,
  author = { Kowalewski, Stefan and Kalkov, Igor and Obster, Mathias
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Th{"o}nnessen, David },
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[KSB+15]

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  author = { K{"u}hn, Jan and Stollenwerk, André and Brendle,
    Christian
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    R{"u}dger and Kowalewski, Stefan },
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  author = { K{"u}hn, Jan and Stollenwerk, André and Kowalewski,
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Steffen and Wardeh, Markus Nabil and Kopp, R{"u}dger and
Rossaint, Rolf },
title = { Pulsatile Ansteuerung einer Diagonalblutpumpe },
journal = { Atp-Edition },
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  author = { K{"u}hnel, Marián and Smieschek, Manfred Thomas and Meyer, Ulrike },
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  organization = { IEEE International Conference on Trust, Security and Privacy
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    2015-08-20 - 2015-08-22 },
    doi = { 10.1109/Trustcom.2015.377 },
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  author = { K{"u}hn, Jan and Schoonbrood, Pierre and Stollenwerk,
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    Engineering 2015, Dresden, 17. - 18. M{"a}rz 2015 / hrsg.
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[KWS+15]

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    and Kowalewski, Stefan and Brendle, Christian and Walter,
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[PDFBIB](#)

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Bibtex entry :

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@phdthesis { Pol15a,
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  author = { Schupp, Stefan and Abraham, Erika and Chen, Xin and Ben
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[SKW+15]

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2015-03-17 -  
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[SLR+15]

[PDFBIB](#)

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Bibtex entry :

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  author = { Armoush, Ashraf and Franke, Dominik and Kalkov, Igor and
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    International Conference, MobiCase 2013, Paris, France,
    November 7-8, 2013, Revised Selected Papers },
  publisher = { Springer },
  pages = { 294-297 },
  volume = { 130 },
  series = { Lecture Notes of the Institute for Computer Sciences,
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  url = { http://publications.rwth-aachen.de/record/225590 },
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  booktitle = { Discrete Event Systems : [Proc. Proceedings of the
12th
  International Workshop on Discrete Event Systems, Cachan,
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Faure, Jean-Marc, Cury, Jose E. R., Lennartson, Bengt },
  publisher = { IFAC },
  pages = { 400-405 },
  year = { 2014 },
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  doi = { 10.3182/20140514-3-FR-4046.00065 },
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[DBB+14]

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  booktitle = { International Conference on Indoor Positioning and
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  by Chris Rizos ... },
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  year = { 2014 },
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  organization = { Fifth International Conference on Indoor
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[DFB+14]

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@inproceedings { DFB+14,  
  author = { Dzafic, Dzenan and Franke, Dominik and Baumeister, Danni  
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    AGIT-Symposium Salzburg / Strobl/ Blaschke/Griesebner/Zagl  
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url = { http://publications.embedded.rwth-aachen.de/file/5c },
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[FAK+14]

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Semantic interfaces for automotive software components: exemplary development & validation of a practical specification language

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  author = { F{"o}rster, Marc and Auerswald, Marko and Keldenich,
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    exemplary development & validation of a practical
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  url = { http://publications.rwth-aachen.de/record/752291 },
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[FK14]

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Concept and Experiences on Using a Wiki-Based System for Software-Related Seminar Papers

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  author = { Franke, Dominik and Kowalewski, Stefan },
  title = { Concept and Experiences on Using a Wiki-Based System for
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for
  education, innovation, and sustainability : SEFM 2012
  Satellite Events, InSuEdu, MoKMaSD, and OpenCert,
  Thessaloniki, Greece, October 1 - 2, 2012 ; revised selected
  papers / Antonio Cerone; Donatella Persico; Sara Fernandes;
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    Alexeis Garcia-Perez; Panagiotis Katsaros; Siraj Ahmed
    Shaikh; Ioannis Stamelos (eds.) },
publisher = { Springer },
pages = { 140-146 },
volume = { 7991 },
series = { Lecture notes in computer science },
year = { 2014 },
address = { Berlin [u.a.] },
doi = { 10.1007/978-3-642-54338-8_11 },
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cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/225247 },
}
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[PDFBIB](#)

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  title = { Evaluating Embedded-Software Specifications --
Quantitative
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Reliability
  Engineering Workshops, Naples (Italy), 2014-11-03 -
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[Guc14]

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@phdthesis { Guc14,
  author = { G{"u}ckel, Dominique },
  othercontributors = { Kowalewski, Stefan and Leupers, Rainer },
  title = { Synthesis of state space generators for model checking
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  publisher = { Fachgruppe Informatik, RWTH Aachen University },
  school = { Aachen, Techn. Hochsch. },
  pages = { XI, 181 S. : Ill., graph. Darst. },
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  Department
    of Computer Science, RWTH Aachen },
  year = { 2014 },
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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" Cham [u.a.]: Springer, 2014, vol. 8571, pp. 65-80.

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  author = { Jansen, Christina and G{"o"}be, Florian and Noll, Thomas
},
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  booktitle = { Graph transformation : 7th international conference,
  ICGT
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    2014 ; proceedings / Holger Giese ... (eds.) },
publisher = { Springer },
pages = { 65-80 },
volume = { 8571 },
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year = { 2014 },
address = { Cham [u.a.] },
doi = { 10.1007/978-3-319-09108-2_5 },
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cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/444215 },
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[KGK14]

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  author = { Kalkov, Igor and Gurghian, Alexandru and Kowalewski,
Stefan },
  title = { Predictable Broadcasting of Parallel Intents in Real-Time
Android },
  booktitle = { 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 },
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for
Real-time and Embedded Systems, Niagara Falls, NY (USA),
2014-10-13 - 2014-10-14 },
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}
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[KRR14]

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  author = { Kowalewski, Stefan and Ringert, Jan Oliver and Rumpe,
    Bernhard },
  title = { Editorial for the Software Engineering 2013 Conference },
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    http://www.se-rwth.de/publications/Editorial-for-the-Software-Engineeri
    ng-2013-Conference.pdf },
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[Mer14]

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Merschen, D., "Integration und Analyse von Artefakten in der modellbasierten Entwicklung eingebetteter Software", PhD Thesis, Aachen, 2014.

Integration und Analyse von Artefakten in der modellbasierten Entwicklung eingebetteter Software

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@phdthesis { Mer14,
  author = { Merschen, Daniel },
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  year = { 2014 },
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http://publications.rwth-aachen.de/record/229247/files/4967.pdf },  
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[OKK14]

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Obster, M., Kowalewski, S., and Kalkov, I., "Development and Execution of PLC Programs on Real-Time Capable Mobile Devices", in *Proc. 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]*, Piscataway, NJ, 2014, IEEE, p. 8.

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Bibtex entry :

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  author = { Obster, Mathias and Kowalewski, Stefan and Kalkov, Igor  
},  
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  url = { http://publications.embedded.rwth-aachen.de/file/5e },  
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[Pal14]

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Time continuous behaviour comparison based on abstract models

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  author = { Reinbacher, Thomas and Brauer, J{"o}rg and Horauer,  
Martin  
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Bibtex entry :

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@article { RFB14,
  author = { Reinbacher, Thomas and Fuegger, Matthias and Brauer,
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[SKB+14]

[PDFBIB](#)

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    Industrial Electronics Society] },
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[SKB+14a]

[PDFBIB](#)

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Model-based supervision of a blood pump

Bibtex entry :

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    and Walter, Marian and Arens, Jutta and Wardeh, Markus Nabil
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[VDF+14]

[PDFBIB](#)

Vogel-Heuser, B., Diedrich, C., Fay, A., Jeschke, S., Kowalewski, S., Wollschlaeger, M., and Göhner, P., "Challenges for Software Engineering in Automation", *Journal of software*

engineering and applications : JSEA, vol. 7, iss. 5, pp. 440-451, 2014

Challenges for Software Engineering in Automation

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  author = { Vogel-Heuser, Birgit and Diedrich, Christian and Fay,  
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[PDFBIB](#)

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  booktitle = { Models, Methods, and Tools for Complex Chip Design :  
              Selected Contributions from FDL 2012 / edited by Jan Haase },  
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  series = { Lecture Notes in Electrical Engineering },  
  year = { 2014 },
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}
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[BBK13]

[PDFBIB](#)

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  author = { Biallas, Sebastian and Bohlender, Dimitri and
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  year = { 2013 },
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[BDK13]

[PDFBIB](#)

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  author = { Ben Makhoulouf, Ibtissem and Diab, Hilal and Kowalewski,
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                June 2013 ; [conference proceedings] / [sponsor:
                Mediterranean Control Association. Technical co-sponsors:
                IEEE Control Systems Society; IEEE Robotics & Automation
                Society ... Ed. by Panos Antsaklis ...]. - 1-2 },
  publisher = { IEEE },
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}
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[BGK13]

[PDFBIB](#)

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Bibtex entry :

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                Michael Dierkes },
  publisher = { Springer Berlin Heidelberg ; Imprint: Springer },
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pages = { 123-138 },
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series = { Lecture notes in computer science },
year = { 2013 },
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typ = { PUB:(DE-HGF)8 },
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[BHK13]

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Bibtex entry :

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@inproceedings { BHK13,
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[BK13]

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Bibtex entry :

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@techreport { BK13,  
  author = { Brauer, Jörg and Kowalewski, Stefan },  
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  publisher = { Fachgruppe Informatik, RWTH Aachen University },  
  pages = { IV, 207 S. : graph. Darst. },  
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http://publications.rwth-aachen.de/record/229199/files/4836.pdf },  
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```

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Düsseldorf: VDI-Verl., 2013, vol. 2209, pp. 75-79.

Verifikation von sicherheitsgerichteten SPS-Programmen mit Hilfe von Safety-Automaten

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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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```

[BKK13]

[PDFBIB](#)

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Abstract interpretation of microcontroller code: Intervals meet congruences

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@article { BKK13,
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Bibtex entry :

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@inproceedings { BMC+13,  
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  Technical Council on Software Engineering ... Ed.: Bram  
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}
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[DF13]

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  fachwissenschaftlicher Informatik-Kongress 22. und 23.  
  M{"a}rz 2013 B-IT Bonn-Aachen International Center for  
  Information Technology, Bonn / Gesellschaft f{"u}r  
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publisher = { Gesellschaft f{"u}r Informatik e.V. },
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[DFB+13]

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  url = { http://publications.rwth-aachen.de/record/226262 },  
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  author = { Gerlitz, Thomas and Kalkov, Igor and Schommer, John F.
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2013, Karlsruhe, Germany },
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[HF13]

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    M{"a"}rz 2013 B-IT Bonn-Aachen International Center for
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Model checking and abstract interpretation as building blocks of advanced program analysis techniques

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```

[MGP+13]

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Bibtex entry :

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[PDFBIB](#)

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Roland },
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[PMS+13]

[PDFBIB](#)

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Robust Control of End-Tidal CO₂ using the H_∞ Loop-Shaping Approach

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@article { PMS+13,
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}
```

[Rek13]

[PDFBIB](#)

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Modellbasierte Entwicklung automobiler Steuerungssysteme in kleinen und mittelständischen Unternehmen

Bibtex entry :

```
@phdthesis { Rek13,
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[Rek13a]

[PDFBIB](#)

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Modellbasierte Entwicklung automobiler Steuerungssysteme in kleinen und mittelständischen Unternehmen = Model-based development of automotive control systems in small and medium

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[SDK13]

[PDFBIB](#)

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

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[VK13]

[PDFBIB](#)

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Cyber-physical Systems

Bibtex entry :

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@article { VK13,  
author = { Vogel-Heuser, Birgit and Kowalewski, Stefan },  
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journal = { Automatisierungstechnik : at },  
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[WBS+13]

[PDFBIB](#)

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Patient oriented closed loop control of extracorporeal lung assist

Bibtex entry :

```
@inproceedings { WBS+13,  
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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[WGM+13]

[PDFBIB](#)

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    M{"a"}rz 2013 B-IT Bonn-Aachen International Center for
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```

[WSB+13]

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Smart ECLA—closed loop control of O2 and CO2 for management of extracorporeal lung assist

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@article { WSB+13,
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```
@inproceedings { BBK+12,
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[BBK12]

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Bibtex entry :

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@inproceedings { BBK12,
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[BBK12a]

[PDFBIB](#)

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Access-Based Localization for Octagons

Bibtex entry :

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@article { BBK12a,  
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[BBK12b]

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Biallas, S., Brauer, J., and Kowalewski, S., "Arcade.PLC : a Verification Platform for Programmable Logic Controllers", in *Proc. 2012 proceedings of the 27th IEEE/ACM International Conference on Automated Software Engineering (ASE 2012) : Essen, Germany, 3 - 7 September 2012*, Piscataway, NJ, 2012, IEEE, pp. 338-341.

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Bibtex entry :

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[BDK12]

[PDFBIB](#)

Ben Makhlof, I., Diab, H., and Kowalewski, S., "Safety Verification of a Controlled Cooperative Platoon Under Loss of Communication Using Zonotopes", in *Proc. Inproceeding of the 4th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS 12)*, Eindhoven, NL, 2012, pp. 333-338.

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@inproceedings { BDK12,
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[PDFBIB](#)

Brauer, J., Hansen, R. R., Kowalewski, S., Larsen, K. G., and Olesen, M. C., "Adaptable Value-Set Analysis for Low-Level Code", in *Proc. 6th International Workshop on Systems Software Verification (SSV 2011) [Elektronische Ressource] / Hrsg.: Jörg Brauer ; Marco Roveri ; Hendrik Tews, Wadern, 2012 in OASlcs - OpenAccess Series in Informatics, Schloss Dagstuhl - Leibniz-Zentrum für Informatik*, pp. 32-43.

Adaptable Value-Set Analysis for Low-Level Code

Bibtex entry :

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Verification
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[BK12]

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Bibtex entry :

```

@inproceedings { BK12,
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[BK12a]

[PDFBIB](#)

Brauer, J. and King, A., "Transfer function synthesis without quantifier elimination", *Logical*

methods in computer science : LMCS, vol. 8, iss. 3, 2012

Transfer function synthesis without quantifier elimination

Bibtex entry :

```
@article { BK12a,  
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[BKN12]

[PDFBIB](#)

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A Native Approach to Modeling Timed Behavior in the Pi-Calculus

Bibtex entry :

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@inproceedings { BKN12,  
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[BKS12]

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Biallas, S., Kowalewski, S., and Schlich, B., "Automatische Wertebereichsanalyse von SPS-Programmen", in *Proc. Automation 2012 : der 13. Branchentreff der Mess- und Automatisierungstechnik / VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik ; Kongress 'Automation 2012' ; 13 (Baden-Baden) ; 2011.06.13-14 Branchentreff der Mess- und Automatisierungstechnik*, Düsseldorf, 2012 in VDI-Berichte, VDI-Verl., pp. 79-83.

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@inproceedings { BKS12,
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[BKS12a]

[PDFBIB](#)

Biallas, S., Kowalewski, S., and Schlich, B., "Automatische Wertebereichsanalyse -- Formale Verifikation für SPS-Programme", *Automatisierungstechnische Praxis : atp*, vol. 54, iss. 7/8, pp. 68-74, 2012

Automatische Wertebereichsanalyse -- Formale Verifikation für SPS-Programme

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```

[BKS12b]

[PDFBIB](#)

Biallas, S., Kowalewski, S., and Schlich, B., "Range and Value-Set Analysis for Programmable Logic Controllers", in *Proc. Proceedings of the 11th International Workshop on Discrete Event Systems*, Guadalajara, Mexico, 2012, IFAC, pp. 378-383.

Range and Value-Set Analysis for Programmable Logic Controllers

Bibtex entry :

```
@inproceedings { BKS12b,  
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[BS12]

[PDFBIB](#)

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Inferring Definite Counterexamples Through Under-Approximation

Bibtex entry :

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@inproceedings { BS12,
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}
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[BSK12]

[PDFBIB](#)

Brauer, J., Schlich, B., and Kowalewski, S., "Parallel and distributed invariant checking of microcontroller software", *Electronic notes in theoretical computer science : ENTCS*, vol. 287, pp. 45-63, 2012

Parallel and distributed invariant checking of microcontroller software

Bibtex entry :

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@article { BSK12,
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[DBK12]

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A Platoon of Vehicles Approaching an Intersection: A Testing Platform for Safe Intersections

Bibtex entry :

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@inproceedings { DBK12,
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Bibtex entry :

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@inproceedings { FDB+12,
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September, Wien },
  publisher = { IEEE Computer Society },
  pages = { 16-20 },
  year = { 2012 },
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url = { http://publications.rwth-aachen.de/record/110850 },
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    Mobile Applications },
  booktitle = { 2012 IEEE Fifth International Conference on Software
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  publisher = { IEEE },
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Xi'an,
  Shaanxi (Peoples R China), 2012-08-27 - 2012-08-29 },
  doi = { 10.1109/QSIC.2012.49 },
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  cin = { 122810 / 120000 },
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  author = { F{"o}rster, Marc },
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specification & assurance },
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  booktitle = { International Micro Air Vehicle Conference (IMAV) },
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    Annotation Concept },
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    Fachtagung des
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author = { Michailidis, Alexander A. },
othercontributors = { Kowalewski, Stefan },
title = { Konzepte für eine virtuelle Integration von
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Entwicklungsphasen },
publisher = { Shaker },
pages = { IX, 178 S. : Ill., graph. Darst. },
series = { Berichte aus der Informatik },
year = { 2012 },
address = { Aachen },
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    Conference workshops (COMPSACW), 2012 : 16 - 20 July 2012,
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    Ed.: Xiaoying Bai ... },
  publisher = { IEEE },
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  year = { 2012 },
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Applications
    Conference workshops, Izmir (Turkey), 2012-07-16 -
    2012-07-20 },
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  url = { http://publications.rwth-aachen.de/record/752306 },
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  publisher = { Elsevier [u.a.] },
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  url = { http://publications.rwth-aachen.de/record/211937 },
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                  Biomimetics (ROBIO 2012) : Guangzhou, China, 11 - 14
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                  Society (RAS) ...] },
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  author = { Sheng, Weihua and Wiebe, Artur and Stulova, Anastasia
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Multicore SoCs
(MCSoc-12), 20-22 Sept. 2012 in Aizu-Wakamatsu },
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[WBB+12]

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author = { Walter, Marian and Brendle, Christian and Bensberg, Ralf
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  author = { Barakat, Kamal },  
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  typ = { PUB:(DE-HGF)26 },
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  publisher = { Springer },
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  pages = { 73-88 },
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  year = { 2011 },
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  title = { Existential Quantification as Incremental SAT },
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    der 12. Branchentreff der Mess- und Automatisierungstechnik ; Kongress Baden-Baden, 28. und 29. Juni 2011 / VDI/VDE-Gesellschaft Mess- und Automatisierungstechnik. [Kongressleiter: Peter Adolphs ...] },
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  pages = { 67-72 },
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author = { Franke, Dominik and Elsemann, Corinna and Weise, Carsten
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pages = { 283-292 },
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[GK11]

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  author = { G{"u}ckel, Dominique and Kowalewski, Stefan },
  title = { Automatic Derivation of Abstract Semantics From
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  Architecture. Technische Universit{"a}t Dresden,
  Fakult{"a}t Informatik. J{"o}rg Brauer ... (ed.) },
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[GKK+11]

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doi = { 10.1007/978-3-642-25489-5_29 },
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pages = { 356-370 },
series = { Lecture notes in computer science },
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[PWK+11]

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  author = { Reinbacher, Thomas and G{"u}ckel, Dominique and
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  booktitle = { INFORMATIK 2011 : Informatik schafft Communities ;
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  publisher = { Ges. f{"u}r Informatik },
  pages = { 15 S. },
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@inproceedings { RSM+11,  
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M{"u}ller,  
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  Kowalewski, Stefan },  
  title = { Hardware Support for Efficient Testing of Embedded  
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  booktitle = { Proceedings of the ASME International Design  
Engineering  
  Technical Conferences and Computers and Information in  
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](#)

Sens, M. and Ascheid, G., "A combined belief propagation and mean field algorithm for soft carrier phase estimation", in *Proc. 2011 8th International Symposium on Wireless Communication Systems (ISWCS 2011) : Aachen, Germany, 6 - 9 November 2011 / IEEE*, Piscataway, NJ, 2011, IEEE, pp. 512-516.

A combined belief propagation and mean field algorithm for soft carrier phase estimation

Bibtex entry :

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@inproceedings { SA11,  
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[SBK11]

[PDFBIB](#)

Schlich, B., Brauer, J., and Kowalewski, S., "Application of Static Analyses for State-Space Reduction to the Microcontroller Binary Code", *Science of computer programming*, vol. 76, iss. 2, pp. 100-118, 2011

Application of Static Analyses for State-Space Reduction to the Microcontroller Binary Code

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@article { SBK11,
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}
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[SGA+11]

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@inproceedings { SGA+11,
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  pages = { 617-617 },
  volume = { 34 },
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[SGB+11]

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

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@inproceedings { SGW+11,
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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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  year = { 2011 },
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[SSK+11]

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Scalable symbolic execution of distributed systems

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  author = { Sasnauskas, Raimondas and Soria Dustmann, Oscar and
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    Carsten and Kowalewski, Stefan },
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    pages = { 333-342 },
    year = { 2011 },
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[WBA+11]

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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.

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    author = { Walter, Marian and Brendle, Christian and Arens, Jutta
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and Leonhardt, Steffen },
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oxygenation },
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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.

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@inproceedings { AdM+10,
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    and Schmitz-Rode, Thomas and Steinseifer, Ulrich },
  title = { A dynamic study on the hemolytic effect of negative
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  url = { http://publications.rwth-aachen.de/record/165220 },
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[Arm10]

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Design patterns for safety-critical embedded systems

Bibtex entry :

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@phdthesis { Arm10,
  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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On-The-Fly Path Reduction

Bibtex entry :

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@inproceedings { BBG+10,
  author = { Biallas, Sebastian and Brauer, J{"o}rg and G{"u}ckel,
    Dominique and Kowalewski, Stefan },
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[BBK10]

[PDFBIB](#)

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PLCs

Bibtex entry :

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[BFK+10]

[PDFBIB](#)

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Bibtex entry :

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@inproceedings { BFK+10,  
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PLCopen auf Modell- und Code-Ebene },  
  booktitle = { 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  
f{\\"u}r Automation und Kommunikation e.V., Magdeburg;
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Otto-von-Guericke-Universit{"a"}t Magdeburg, Institut
f{"u"}r Automatisierungstechnik. [Hrsg.: Ulrich Jumar,
Eckehard Schnieder, Christian Diedrich] },
publisher = { ifak },
pages = { 49-57 },
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[BGL+10]

[PDFBIB](#)

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@proceedings { BGL+10,
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[BK10]

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Bibtex entry :

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@inproceedings { BK10,  
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[BKK+10]

[PDFBIB](#)

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@inproceedings { BKK+10,  
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[BKK10]

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Bibtex entry :

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@inproceedings { BKK10,
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[BNS10]

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[BPD+10]

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@inproceedings { BPD+10,
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},
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[SJW+10]

[PDFBIB](#)

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Modellbasierte Fehlerdiagnose eines Membranoxygenators

Bibtex entry :

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@article { SJW+10,
  author = { Stollenwerk, André and J{"o}rgens, J{"o}rg and Walter,
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  title = { Modellbasierte Fehlerdiagnose eines Membranoxygenators },
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}
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[SLA+10]

[PDFBIB](#)

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KleeNet: discovering insidious interaction bugs in wireless sensor networks before deployment

Bibtex entry :

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

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[ABK09]

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  author = { Armoush, Ashraf and Beckschulze, Eva and Kowalewski,  
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[AK09]

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[BHS09]

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@article { BHS09,  
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  author = { Ben Makhlouf, Ibtissem and Kowalewski, Stefan and Chávez  
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[BPK09]

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Using higher-order transformations to derive variability mechanism

Bibtex entry :

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[BPK09a]

[PDFBIB](#)

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Bibtex entry :

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[BPK09b]

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Bibtex entry :

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symposia at  
MODELS 2009, Denver, CO, USA, October 4 - 9, 2009 ; reports  
and revised selected papers / Sudipto Ghosh (ed.) },  
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series = { Lecture notes in computer science },
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[BPP+09]

[PDFBIB](#)

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Bibtex entry :

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@inproceedings { BPP+09,
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}
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[BSK09]

[PDFBIB](#)

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A Comparison of Dual-Core Approaches for Safety-Critical Automotive Applications

Bibtex entry :

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[BSR+09]

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}

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[DBK+09]

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[DSK09]

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[FHS+09]

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  url = { http://publications.rwth-aachen.de/record/83459 },
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  author = { G{"u}ckel, Dominique },
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  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 },
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http://sunsite.informatik.rwth-aachen.de/Publications/AIB/2009/2009-14.
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[HKK+09]

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  editor = { Hutchison, David and Kanade, Takeo and Kittler, Josef  
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C. and Naor, Moni and Nierstrasz, Oscar and Rangan, C. Pandu  
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Demetri and Tygar, Doug and Vardi, Moshe Y. and Weikum,  
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  title = { Tools and Algorithms for the Construction and Analysis of  
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  publisher = { Springer Berlin Heidelberg },  
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[KGG+09]

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    address = { Cambridge },
    doi = { 10.1017/CB09780511807930.004 },
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    url = { http://publications.rwth-aachen.de/record/752315 },
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[KHS09]

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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 },
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    year = { 2009 },
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  author = { Kopp, R{"u}dger and Leonhardt, Steffen and Kowalewski,  
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    Pulmonary Indications: Improving Patient Safety },  
  booktitle = { Yearbook of Intensive Care and Emergency Medicine :  
  2009 /  
    ed. by Jean-Louis Vincent },  
  publisher = { Springer },  
  pages = { 341-349 },  
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  year = { 2009 },  
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  url = { http://publications.rwth-aachen.de/record/83542 },  
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  author = { Kl{"u}nder, Daniel },  
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    Zustandsmaschinen und business object notation },  
  publisher = { RWTH Aachen, Department of Computer Science },  
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  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 },  
  journal = { Biomedizinische Technik = Biomedical engineering },  
  publisher = { de Gruyter },  
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  title = { Regelung des Gasaustauschs f{"u}r die extrakorporale  
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cin = { 122810 / 611010 / 120000 },
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  author = { Mitsching, Ralf },
  title = { Testing in the Industrial Development Process for
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[MWK+09]

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@inproceedings { MWK+09,  
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Verification  
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Denver, Colorado, USA },  
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  pages = { 29-38 },  
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  author = { Polzer, Andreas and Botterweck, G{"o}tz and Wagnerin,  
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[PK09]

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    author = { Palczynski, Jacob and Kowalewski, Stefan },
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Simulation : EMS 2009 ; Athens, Greece, 25 - 27 November
2009 / [technical sponsors: IEEE United Kingdom and Republic
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    publisher = { IEEE },
    pages = { 148-153 },
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  author = { Polzer, Andreas and Kowalewski, Stefan and Botterweck,  
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[RBH+09]

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    Systems (SIES 2009) : Lausanne, Switzerland, 08 - 10 July
    2009 / [sponsored by: IEEE Industrial Electronics Society
    (IES)] ),
  publisher = { IEEE },
  pages = { 161-170 },
  year = { 2009 },
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[RHS+09]

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Bibtex entry :

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  author = { Reinbacher, Thomas and Horauer, Martin and Schlich,
  Bastian
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  title = { Model checking assembly code of an industrial knitting
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  pages = { 8 S. },
  year = { 2009 },
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  url = { http://publications.rwth-aachen.de/record/129021 },
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[SBW+09]

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  author = { Schlich, Bastian and Brauer, J{"o}rg and Wernerus, J{"o}rg and Kowalewski, Stefan },
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  pages = { 28-33 },
  year = { 2009 },
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url = { http://publications.rwth-aachen.de/record/752318 },
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[SFK+09]

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  booktitle = { 7th International Workshop on Java Technologies for
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Complutense de Madrid, Facultad de Informatica, 23-25
September 2009, Madrid, Spain / Workshop Chair: M. Teresa
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    2067 },
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journal = { The international journal of artificial organs },
publisher = { Wichtig Ed. },
pages = { 428-428 },
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url = {
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  year = { 2008 },
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  url = { http://publications.rwth-aachen.de/record/83460 },
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  author = { Beckschulze, Eva and Salewski, Falk and Siegbert, Thomas
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[DHH+08]

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[DHS+08]

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Goanna: syntactic software model checking

Bibtex entry :

```
@inbook { HFS+08,
  author = { Huuck, Ralf and Fehnker, Ansgar and Seefried, Sean and
    Brauer, J{"o}rg },
  title = { Goanna: syntactic software model checking },
  booktitle = { Automated technology for verification and analysis :
6th
  international symposium, ATVA 2008, Seoul, Korea, October 20
- 23, 2008 ; proceedings / Sungdeok (Steve) Cha; Jin-Young
Choi; Moonzoo Kim; Insup Lee; Mahesh Viswanathan (eds.) },
  publisher = { Springer },
  pages = { 216-221 },
  volume = { 5311 },
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Technology for
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[HSW+08]

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Proving correctness of an efficient abstraction for interrupt handling

Bibtex entry :

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@article { HSW+08,  
  author = { Herberich, Gerlind and Schlich, Bastian and Weise,  
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}
```

[KKK08]

[PDFBIB](#)

Klünder, D., Kameni, D., and Kowalewski, S., "Nahtloser Entwurf sicherheitskritischer, eingebetteter Softwaresysteme mit abstrakten Zustandsmaschinen und Business Object Notation", in *Proc. 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 für Automation und Kommunikation e.V., Magdeburg ... Hrsg.: Ulrich Jumar; Eckehard Schneider; Christian Diedrich, Magdeburg, 2008, Universität.*

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Bibtex entry :

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@inproceedings { KKK08,  
  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 :
```

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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 für Automation und
Kommunikation e.V., Magdeburg ... Hrsg.: Ulrich Jumar;
Eckehard Schneider; Christian Diedrich },
publisher = { Universit{"a}t },
year = { 2008 },
address = { Magdeburg },
typ = { PUB:(DE-HGF)8 },
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url = { http://publications.rwth-aachen.de/record/98748 },
}
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[KLK08]

[PDFBIB](#)

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Bibtex entry :

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@inproceedings { KLK08,
  author = { Kl{"u}nder, Daniel and Li, J. and Kowalewski, Stefan },
  title = { Design-by-Contract for Embedded Systems },
  booktitle = { International Symposium on Software Variability: a
    Programmers' Perspective (SVPP 2008) },
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}
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[Klu08]

[PDFBIB](#)

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Modellierung und Analyse von Fahrzeugsoftware mit Abstract State Machines

Bibtex entry :

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



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title = { Modellierung und Analyse von Fahrzeugsoftware mit
Abstract
State Machines },
booktitle = { Modellierung 2008 : 12. - 14. März 2008, Berlin /
Thomas
Kühne ... (Hrsg.) },
publisher = { Ges. f. Informatik },
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series = { GI-Edition : Proceedings },
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http://subs.emis.de/LNI/Proceedings/Proceedings127/gi-proc-127-017.pdf
},
}

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[MHR+08]

[PDFBIB](#)

Michailidis, A. A., Hedenetz, B., Ringler, T., and Kowalewski, S., "Virtuelle Integration von vernetzten Funktionen in frühen Entwicklungsphasen", in *Proc. 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 München (i.e. Dresden!)] / Bernard Bäker (Hrsg.) u. 46 Mitautoren*, Renningen, 2008 in Haus der Technik Fachbuch, Expert-Verl., pp. 151-167.

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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
frühen Entwicklungsphasen },
booktitle = { Moderne Elektronik im Kraftfahrzeug III : Systeme von
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- technische Innovationen und Entwicklungstrends ; [28.
Tagung 'Elektronik im Kraftfahrzeug' vom Haus der Technik
Essen e.V. in München (i.e. Dresden!)] / Bernard
Bäker (Hrsg.) u. 46 Mitautoren },
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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 },
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}
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[RKH+08]

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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 },  
  title = { Motivating model checking for embedded systems software  
},  
  booktitle = { 2008 IEEE/ASME International Conference on  
Mechatronic and  
  Embedded Systems and Applications : MESA ; Beijing, China,  
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}
```

[RKH+08a]

[PDFBIB](#)

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```
@inproceedings { RKH+08a,  
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  IEEE },  
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doi = { 10.1109/SIES.2008.4577709 },
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url = { http://publications.rwth-aachen.de/record/99569 },
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[Sal08]

[PDFBIB](#)

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Empirical evaluations of safety critical embedded systems

Bibtex entry :

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@phdthesis { Sal08,
  author = { Salewski, Falk },
  othercontributors = { Kowalewski, Stefan },
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  publisher = { Publikationsserver der RWTH Aachen University },
  pages = { X, 175 S. : graph. Darst. },
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http://publications.rwth-aachen.de/record/459474/files/Salewski_Falk.pdf },
}
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[Sch08]

[PDFBIB](#)

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Model checking of software for microcontrollers

Bibtex entry :

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@phdthesis { Sch08,
  author = { Schlich, Bastian },
  othercontributors = { Kowalewski, Stefan },
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  pages = { IV, 159 S. : graph. Darst. },
  series = { Aachener Informatik-Berichte },
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url = {
http://publications.rwth-aachen.de/record/63747/files/Schlich_Bastian.pdf },
}

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[SDH+08]

[PDFBIB](#)

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.

Modellbasierte Anforderungserfassung für softwarebasierte Regelungen

Bibtex entry :

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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 Softwaretechnik, 18. - 22.02.2008 in M{"u}nchen / Gesellschaft f{"u}r Informatik (GI). Korbinian Herrmann; Bernd Bruegge (Hrsg.) },
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[SGK08]

[PDFBIB](#)

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and safety in railway and automotive systems ; proceedings of Symposium FORMS/FORMAT 2008, Budapest, Hungary, October 9 - 10, 2008 / Géza Tarnai ... (ed.), Budapest, 2008, L Harmattan.

Modeling the environment of microcontrollers to tackle the state-explosion problem in model checking

Bibtex entry :

```
@inproceedings { SGK08,
  author = { Schlich, Bastian and Guckel, Dominique and
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the
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```

[SK08]

[PDFBIB](#)

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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,
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  title = { The effect of real-time software reuse in FPGAs and
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    : [SIES'2008] ; La Grande Motte, France, 11 - 13 June 2008 /
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    url = { http://publications.rwth-aachen.de/record/98747 },
}
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[SK08a]

[PDFBIB](#)

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Hardware/software design considerations for automotive embedded systems

Bibtex entry :

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@article { SK08a,
    author = { Salewski, Falk and Kowalewski, Stefan },
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    url = { http://publications.rwth-aachen.de/record/131366 },
}
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[SLK08]

[PDFBIB](#)

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Application of static analyses for state space reduction

to microcontroller assembly code

Bibtex entry :

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  author = { Schlich, Bastian and L{"o"}ll, Jann and Kowalewski,  
Stefan },  
  title = { Application of static analyses for state space reduction  
to  
  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 },  
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  url = { http://publications.rwth-aachen.de/record/83462 },  
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[ST08]

[PDFBIB](#)

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Bibtex entry :

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@inproceedings { ST08,  
  author = { Salewski, Falk and Taylor, Adam },  
  title = { Systematic considerations for the application of FPGAs in  
industrial applications },  
  booktitle = { 2008 IEEE International Symposium on Industrial  
Electronics  
: [ISIE 2008] ; Cambridge, United Kingdom, 30 June - 2 July  
2008. - Vol. 4 },  
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url = { http://publications.rwth-aachen.de/record/98745 },
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[Wil08]

[PDFBIB](#)

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Bibtex entry :

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@phdthesis { Wil08,
  author = { Wilking, Dirk },
  othercontributors = { Kowalewski, Stefan },
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    embedded systems },
  publisher = { Fachgruppe Informatik, RWTH Aachen },
  pages = { XIV, 157 S. : graph. Darst. },
  series = { Aachener Informatik-Berichte },
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  cin = { 122810 / 120000 },
  url = {
http://publications.rwth-aachen.de/record/52375/files/Wilking_Dirk.pdf
},
}
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[WSK08]

[PDFBIB](#)

Wilking, D., Schilli, D., and Kowalewski, S., "Measuring the human factor with the Rasch Model", in *Proc. 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.)*, Berlin [u.a.], 2008 in *Lecture notes in computer science*, Springer, pp. 157-168.

Measuring the human factor with the Rasch Model

Bibtex entry :

```
@inproceedings { WSK08,
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  Poland, October 10-12, 2007 ; revised selected papers /
  Bertrand Meyer; Jerzy R. Nawrocki; Bartosz Walter (eds.) },
  publisher = { Springer },
  pages = { 157-168 },
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[BKK07]

[PDFBIB](#)

Bettenhausen, K. D., Kowalewski, S., and Kugi, A., "Significance of the automation engineering", *Automatisierungstechnik : at*, vol. 55, iss. 5, pp. 269-271, 2007

Significance of the automation engineering

Bibtex entry :

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@article { BKK07,
  author = { Bettenhausen, Kurt D. and Kowalewski, Stefan and Kugi,
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  journal = { Automatisierungstechnik : at },
  publisher = { Oldenbourg },
  pages = { 269-271 },
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  issn = { 0178-2312 },
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[CSK+07]

[PDFBIB](#)

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Bibtex entry :

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@inbook { CSK+07,
  author = { Chen, Xi and Salewski, Falk and Kowalewski, Stefan and
    Spisic, Kresimir },
  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 },
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  booktitle = { Computer safety, reliability, and security : 26th
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address = { Piscataway, NJ },
doi = { 10.1109/SIES.2007.4297320 },
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[BCK+05]

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author = { Bollig, Alexander and Chevalier, Wolf and Kowalewski,
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[BKC+05]

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@inproceedings { SG94,
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