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Research Activities

- Validating automatically generated code
- BMBF-funded project [ZAMOMO](#)
- In the context of my diploma thesis Anforderungen an einen Modelchecker für Matlab/Simulink (Requirements for a model checker for Matlab/Simulink) I developed an evaluation suite for model checkers for Matlab/Simulink.

Publications

[Pal14]

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

Palczynski, J., "Time continuous behaviour comparison based on abstract models", PhD Thesis, Aachen, 2014.

Time continuous behaviour comparison based on abstract models

Bibtex entry :

```
@phdthesis { Pal14,  
  author = { Palczynski, Jacob },  
  othercontributors = { Kowalewski, Stefan },  
  title = { Time continuous behaviour comparison based on abstract  
    models },  
  publisher = { Fachgruppe Informatik, RWTH Aachen University },  
  pages = { II-XI, 126 S. },  
  series = { Aachener Informatik-Berichte },  
  year = { 2014 },  
  address = { Aachen },  
  typ = { PUB:(DE-HGF)11 },
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reportid = { RWTH-CONV-144280 },
cin = { 120000 / 122810 },
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http://publications.rwth-aachen.de/record/229310/files/4941.pdf },
}
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[PWK+11]

[PDFBIB](#)

Palczynski, J., Weise, C., Kowalewski, S., and Ulmer, D., "Estimation of Clock Drift in HiL Testing by Property-Based Conformance Check", in *Proc. 2011 IEEE Fourth International Conference on Software Testing, Verification and Validation workshops (ICSTW 2011) : Berlin, Germany, 21 - 25 March 2011 ; [proceedings] / [sponsored by IEEE Computer Society]*, Piscataway, NJ, 2011, IEEE, pp. 590-595.

Estimation of Clock Drift in HiL Testing by Property-Based Conformance Check

Bibtex entry :

```
@inproceedings { PWK+11,
  author = { Palczynski, Jacob and Weise, Carsten and Kowalewski,
Stefan
    and Ulmer, Daniel },
  title = { Estimation of Clock Drift in HiL Testing by Property-
Based
    Conformance Check },
  booktitle = { 2011 IEEE Fourth International Conference on Software
Testing, Verification and Validation workshops (ICSTW 2011)
: Berlin, Germany, 21 - 25 March 2011 ; [proceedings] /
[sponsored by IEEE Computer Society] },
  publisher = { IEEE },
  pages = { 590-595 },
  year = { 2011 },
  address = { Piscataway, NJ },
  organization = { IEEE Fourth International Conference on Software
Testing,
    Verification and Validation workshops, Berlin (Germany),
    2011-03-21 - 2011-03-25 },
  doi = { 10.1109/ICSTW.2011.101 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-196810 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/126479 },
}
```

[PWM+11]

[PDFBIB](#)

Palczynski, J., Weise, C., Moj, S., and Kowalewski, S., "Comparing Continuous Behaviour in Model-based Development of Embedded Software", in *Proc. Tagungsband / Dagstuhl-Workshop MBEES (MBEES 2011): Modellbasierte Entwicklung eingebetteter Systeme VII : model-based*

development of embedded systems ; 16.02.2011 - 18.02.2011 / Holger Giese ..., München, 2011, fortiss, pp. 61-70.

Comparing Continuous Behaviour in Model-based Development of Embedded Software

Bibtex entry :

```
@inproceedings { PWM+11,
  author = { Palczynski, Jacob and Weise, Carsten and Moj, Sebastian
and
  Kowalewski, Stefan },
  title = { Comparing Continuous Behaviour in Model-based Development
of
  Embedded Software },
  booktitle = { Tagungsband / Dagstuhl-Workshop MBEES (MBEES 2011):
  Modellbasierte Entwicklung eingebetteter Systeme VII :
  model-based development of embedded systems ; 16.02.2011 -
  18.02.2011 / Holger Giese ... },
  publisher = { fortiss },
  pages = { 61-70 },
  year = { 2011 },
  address = { M{"u"}nchen },
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2011):
  Modellbasierte Entwicklung eingebetteter Systeme VII :
  model-based development of embedded systems, 2011-02-16 -
  2011-02-18 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-196792 },
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  url = {
http://www.in.tu-clausthal.de/fileadmin/homes/GI/Documents/MBEES2011_Ge
samt_final_web.pdf },
}
```

[PWK10]

[PDFBIB](#)

Palczynski, J., Weise, C., and Kowalewski, S., "Testing Continuous Systems Conformance Using Cross Correlation", in *Proc. Proceedings of the 22nd IFIP International Conference on Testing Software and Systems: Short Papers ; October, 2010 / Eds.: Alexandre Petrenko ..., Montreal, 2010 in CRIM : Documentation/Communications, CRIM, pp. 31-36.*

Testing Continuous Systems Conformance Using Cross Correlation

Bibtex entry :

```
@inproceedings { PWK10,
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```
author = { Palczynski, Jacob and Weise, Carsten and Kowalewski,
Stefan },
title = { Testing Continuous Systems Conformance Using Cross
Correlation },
booktitle = { Proceedings of the 22nd IFIP International Conference
on
Testing Software and Systems: Short Papers ; October, 2010 /
Eds.: Alexandre Petrenko ... },
publisher = { CRIM },
pages = { 31-36 },
series = { CRIM : Documentation/Communications },
year = { 2010 },
address = { Montreal },
organization = { 22. IFIP International Conference on Testing
Software and
Systems, 2010-10 - 2010-10 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-196796 },
cin = { 122810 / 120000 },
url = {
http://www.crim.ca/Publications/2010/documents/plein_texte/ASD_PetA_al_
201010_ICTSS_sp.pdf },
}
```

[PK09]

[PDFBIB](#)

Palczynski, J. and Kowalewski, S., "Early Behaviour Modelling for Control Systems", in *Proc. 2009 Third UKSim European Symposium on Computer Modeling and Simulation : EMS 2009 ; Athens, Greece, 25 - 27 November 2009 / [technical sponsors: IEEE United Kingdom and Republic of Island [i.e. Ireland] Section ...]. Ed.: David Al-Dabass ...*, Piscataway, NJ, 2009, IEEE, pp. 148-153.

Early Behaviour Modelling for Control Systems

Bibtex entry :

```
@inproceedings { PK09,
author = { Palczynski, Jacob and Kowalewski, Stefan },
title = { Early Behaviour Modelling for Control Systems },
booktitle = { 2009 Third UKSim European Symposium on Computer
Modeling and
Simulation : EMS 2009 ; Athens, Greece, 25 - 27 November
2009 / [technical sponsors: IEEE United Kingdom and Republic
of Island [i.e. Ireland] Section ...]. Ed.: David Al-Dabass
... },
publisher = { IEEE },
pages = { 148-153 },
year = { 2009 },
address = { Piscataway, NJ },
organization = { 3. UKSim European Symposium on Computer Modeling
and
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Simulation, Athen (Greece), 2009-11-25 - 2009-11-27 },
doi = { 10.1109/EMS.2009.69 },
typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-171883 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/98844 },
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```

[SZR+09]

[PDFBIB](#)

Schmitz, D., Zhang, M., Rose, T., Jarke, M., Polzer, A., Palczynski, J., Kowalewski, S., and Reke, M., "Mapping Requirement Models to Mathematical Models in Control System Development", in *Proc. Model driven architecture - foundations and applications : 5th European conference, ECMDA-FA 2009, Enschede, The Netherlands, June 23 - 26, 2009 ; proceedings / Richard F. Paige; Alan Hartman; Arend Rensink (eds.)*, Berlin [u.a.], 2009 in *Lecture notes in computer science*, Springer.

Mapping Requirement Models to Mathematical Models in Control System Development

Bibtex entry :

```

@inproceedings { SZR+09,
  author = { Schmitz, Dominik and Zhang, Ming and Rose, Thomas and
    Jarke,
      Matthias and Polzer, Andreas and Palczynski, Jacob and
      Kowalewski, Stefan and Reke, Michael },
  title = { Mapping Requirement Models to Mathematical Models in
    Control
      System Development },
  booktitle = { Model driven architecture - foundations and
    applications :
      5th European conference, ECMDA-FA 2009, Enschede, The
      Netherlands, June 23 - 26, 2009 ; proceedings / Richard F.
      Paige; Alan Hartman; Arend Rensink (eds.) },
  publisher = { Springer },
  series = { Lecture notes in computer science },
  year = { 2009 },
  address = { Berlin [u.a.] },
  organization = { Model driven architecture - foundations and
    applications :
      5. European conference, Enschede (Netherlands), 2009-06-23 -
      2009-06-26 },
  doi = { 10.1007/978-3-642-02674-4_18 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-CONV-172397 },
  cin = { 122810 / 121810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/99431 },
}

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[SDH+08]

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

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.) },
  publisher = { Ges. f{"u"}r Informatik },
  pages = { 257-271 },
  series = { GI-Edition : Proceedings },
  year = { 2008 },
  address = { Bonn },
  organization = { Software Engineering 2008 : Fachtagung des GI-
    Fachbereichs
      Softwaretechnik, M{"u"}nchen (Germany), 2008-02-18 -
      2008-02-22 },
  typ = { PUB:(DE-HGF)8 },
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  cin = { 120000 / 122810 / 121810 / 416610 },
  url = { http://publications.rwth-aachen.de/record/97321 },
}
```

[PSK06]

PDFBIB

Palczynski, J., Schlich, B., and Kowalewski, S., "Eine Evaluationssuite zur schnellen Bewertung von Matlab/Simulink-Modelcheckern", in *Proc. Informatik 2006 : Informatik für Menschen ; Beiträge der 36. Jahrestagung der Gesellschaft für Informatik e.V. (GI) ; 2. bis 6. Oktober 2006 in Dresden / Christian Hochberger ... (Hrsg.). - T. 1. - 1*, Bonn, 2006 in GI-Edition : Proceedings, Ges. für Informatik, pp. 751-755.

Eine Evaluationssuite zur schnellen Bewertung von Matlab/Simulink-Modelcheckern

Bibtex entry :

```
@inproceedings { PSK06,
  author = { Palczynski, Jacob and Schlich, Bastian and Kowalewski,
    Stefan },
  title = { Eine Evaluationssuite zur schnellen Bewertung von
    Matlab/Simulink-Modelcheckern },
  booktitle = { Informatik 2006 : Informatik f{"u}r Menschen ;
    Beitr{"a}ge
      der 36. Jahrestagung der Gesellschaft f{"u}r Informatik
      e.V. (GI) ; 2. bis 6. Oktober 2006 in Dresden / Christian
      Hochberger ... (Hrsg.). - T. 1. - 1 },
  publisher = { Ges. f{"u}r Informatik },
  pages = { 751-755 },
  series = { GI-Edition : Proceedings },
  year = { 2006 },
  address = { Bonn },
  organization = { 36. Jahrestagung der Gesellschaft f{"u}r
    Informatik e.V.,
      Dresden (Germany), 2006-10-02 - 2006-10-06 },
  typ = { PUB:(DE-HGF)8 },
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  cin = { 120000 / 122810 },
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Teaching

Term	Title	Type
Summer Semester 09	Modelling Technical and Physical Systems	PT
Winter Semester 08/09	Driving Assistance Systems and Model-Based Automotive Development	ST
Summer Semester 08	Modelling Technical and Physical Systems	PT
Winter Semester 07/08	Dynamic Systems for Computer Scientists	VÜ
Summer Semester 07	Automotive Software Engineering	PST
Winter Semester 06/07	Dynamic Systems for Computer Scientists	VÜ
Summer Semester 06	Formale Methods for Embedded Systems	VÜ

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