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Sprechstunde

Nach Vereinbarung

Lehre

Semester	Titel	Art
Sommersemester 17	Entwicklung NXT gesteuerter LEGO-Fahrzeuge mit Java	P
Wintersemester 17/18	Praktikum Systemprogrammierung	P
	Modellbasiertes Testen & Analyse eingebetteter Software	S
Sommersemester 18	Praktikum Systemprogrammierung	P
	Modellbasiertes Testen & Analyse eingebetteter Software	S

Offene Abschlussarbeiten

Laufende Abschlussarbeiten

Betreute Abschlussarbeiten

- Formalisierung von Technical Assumptions und Safety Goals
 - Eingabeunterstützung für kontrollierte Sprachen
 - Evaluation von kontrollierten Sprachen
- Import und semi-automatische Übersetzung von alten Gefährdungsanalysen
 - Implementierung kontrollierter Sprachen im Grammatical Framework
 - Methoden und Algorithmen zur Identifikation von Widersprüchen

- Goal Structuring Notation Editor
 - Datenbankbasierte Eingabeunterstützung für Gefährdungsanalysen
- Semantische Interpretation einer kontrollierten Sprache mit mathematischer Logik
 - Evaluation kontrollierter Sprachen für die Gefährdungsanalyse
- Lexikalische Analyse kontrollierter Sprachen und die Entwicklung eines Werkzeugs zur Eingabeunterstützung
- Klassifikation von Begründungen zur Gefährdungseinstufung durch maschinelle Lernverfahren
 - Word Embedding für semantische Textvergleiche in Gefährdungsanalysen

Publikationen

[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{"o}nnessen, David and Reinker, Niklas and Rakel,  
Stefan  
  and Kowalewski, Stefan },  
  title = { A concept for PLC hardware-in-the-loop testing using an  
extension of structured text },  
  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.2017.8247580 },  
  typ = { PUB:(DE-HGF)7 },  
  reportid = { RWTH-2018-223452 },  
  cin = { 122810 / 120000 },
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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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    Niklas
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  title = { Matching Discrete Signals for Hardware-in-the-Loop-
    Testing
    of PLCs },
  journal = { IFAC-PapersOnLine },
  pages = { 229-234 },
  volume = { 51 },
  number = { 10 },
  year = { 2018 },
  address = { Laxenburg },
  issn = { 2405-8963 },
  organization = { 3rd IFAC Conference on Embedded Systems,
    Computational
    Intelligence and Telematics in Control },
  doi = { 10.1016/j.ifacol.2018.06.267 },
  typ = { PUB:(DE-HGF)16 },
  reportid = { RWTH-2018-227582 },
  cin = { 122810 / 110000 / 120000 },
  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,  
Stefan  
  and Svetlakov, Andrei and Kowalewski, Stefan },  
  title = { Correctness Properties and Exemplified Applicability of a  
Signal Matching Algorithm with Multidimensional Tolerance  
Specifications },  
  booktitle = { 2018 IEEE 14th International Conference on Automation  
Science and Engineering (CASE) : Munich, Germany, August  
20-24, 2018 },  
  publisher = { IEEE },  
  pages = { 1197-1202 },  
  year = { 2018 },  
  address = { Piscataway, NJ },  
  organization = { 2018 IEEE 14th International Conference on  
Automation  
Science and Engineering, Munich (Germany), 2018-08-20 -  
2018-08-24 },  
  doi = { 10.1109/COASE.2018.8560407 },  
  typ = { PUB:(DE-HGF)7 },  
  reportid = { RWTH-2019-00319 },  
  cin = { 122810 / 120000 },  
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