Alexandru Kampmann, M.Sc. RWTH

Member of the Cyber-physical Mobility Group

Contact

Birth name: Gurghian

Research Associate / PhD Candidate

Tel. +49 241 80 21185
Fax +49 241 80 22150

Email: kampmann[at]embedded[dot]rwth-aachen[dot]de

Address: Ahornstr. 55, 52074 Aachen, Germany
Office: 2225

About

As a member of the Cyber-physical Mobility Group. I am researching automotive-grade service-oriented software architectures in the context of the UNICARagil project.

Bachelor/Master Thesis

If you are interested in a Bachelor's or Master's thesis, please contact me by e-mail. Your own suggestions are also possible.
Open HiWi/WiHi Positions

Current vacancies can be found here. Unsolicited applications are also welcome. Applications should include a grade overview and a short CV.

Patents

- Methods and systems for opening of a vehicle access point using audio or video data associated with a user
- Passenger tracking systems and methods
- Inductive loop detection systems and methods
- Pedestrian detection when a vehicle is reversing
- Sinkhole detection systems and methods
- Detecting hazards in anticipation of opening vehicle doors
- Rear camera stub detection
- Accident attenuation systems and methods
- Lane detection systems and methods
- Vehicle localization using cameras

Publications

[KAK+19]

PDF | BIB


A Dynamic Service-Oriented Software Architecture for Highly Automated Vehicles

Bibtex entry :

```bibtex
@inproceedings { KAK+19,
  author = { Kampmann, Alexandru and Alrifaee, Bassam and Kohout, Markus
            and W{"u}stenberg, Andreas and Woopen, Timo and Nolte, Marcus and Eckstein, Lutz and Kowalewski, Stefan },
  title = { A Dynamic Service-Oriented Software Architecture for Highly Automated Vehicles },
  booktitle = { 2019 IEEE Intelligent Transportation Systems
```

Conference
(ITSC) : [Proceedings] },
publisher = { IEEE },
pages = { 2101-2108 },
year = { 2019 },
organization = { IEEE Intelligent Transportation Systems Conference - ITSC,
doi = { 10.1109/ITSC.2019.8916841 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2019-11214 },
cin = { 122810 / 414110 / 120000 },
url = { http://publications.rwth-aachen.de/record/773699 },

[KNR+19]

Keilhoff, D., Niedballa, D., Reuss, H., Buchholz, M., Gies, F., Dietmayer, K., Lauer, M., Stiller, C.,
Ackermann, S., Winner, H., Kampmann, A., Alrifaee, B., Kowalewski, S., Klein, F., Struth, M. M.,
Woopen, T., and Eckstein, L., "UNICARagil - New architectures for disruptive vehicle concepts",

**UNICARagil - New architectures for disruptive vehicle concepts**

Bibtex entry :

@inproceedings { KNR19,
author = { Keilhoff, Dan and Niedballa, Dennis and Reuss, Hans-Christian and Buchholz, Michael and Gies, Fabian and Dietmayer, Klaus and Lauer, Martin and Stiller, Christoph and Ackermann, Stefan and Winner, Hermann and Kampmann, Alexandru and Alrifaee, Bassam and Kowalewski, Stefan and Klein, Fabian and Struth, Michael Manfred and Woopen, Timo and Eckstein, Lutz },
title = { UNICARagil - New architectures for disruptive vehicle concepts },
publisher = { Springer Fachmedien Wiesbaden },
pages = { 830-842 },
series = { Proceedings Springer eBooks },
year = { 2019 },
address = { Wiesbaden },
organization = { 19. Internationales Stuttgarter Symposium :
Automobil- und Motorentechnik, Stuttgart (Germany), 2019-03-19 - 2019-03-20 },
doi = { 10.1007/978-3-658-25939-6_65 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2019-09748 },
cin = { 122810 / 120000 / 414110 },
url = { http://publications.rwth-aachen.de/record/770823 },

[KWA+19]
PDF
BIB

A Portable Implementation of the Real-Time Publish-Subscribe Protocol for Microcontrollers in Distributed Robotic Applications

Bibtex entry :

@inproceedings {  KWA+19,
author = { Kampmann, Alexandru and Wüstenberg, Andreas and Alrifaee, Bassam and Kowalewski, Stefan },
title = { A Portable Implementation of the Real-Time Publish-Subscribe Protocol for Microcontrollers in Distributed Robotic Applications },
booktitle = { 2019 IEEE Intelligent Transportation Systems Conference (ITSC) : [Proceedings] },
publisher = { IEEE },
pages = { 443-448 },
year = { 2019 },
doi = { 10.1109/ITSC.2019.8916835 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-2019-11216 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/773701 },
}

[WLB+18]
PDF
BIB
Woopen, T., Lampe, B., Böddeker, T., Eckstein, L., Kampmann, A., Alrifaee, B., Kowalewski, S., Moormann, D., Stolte, T., Jatzkowski, I., Maurer, M., Möstl, M., Ernst, R., Ackermann, S.,

UNICARagil - Disruptive Modular Architectures for Agile, Automated Vehicle Concepts

Bibtex entry :

```bibtex
@inproceedings { WLB+18,
    author = { Woopen, Timo and Lampe, Bastian and B\"{o}ddeker, Torben
    and Eckstein, Lutz and Kampmann, Alexandru and Alrifaee, Bassam
    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 Siepenk\"{o}tter, Norbert and Elbs, Martin and v. Hin\"{u}ber,
    Edgar and Dupuis, Marius and Hecker, Christian },
    title = { UNICARagil - Disruptive Modular Architectures for Agile,
    Automated Vehicle Concepts },
    booktitle = { { 27. Aachener Kolloquium Fahrzeug- und
    Motorentechnik : October 8th - 10th, 2018 - Eurogress Aachen }},
    publisher = { Aachener Kolloquium Fahrzeug- und Motorentechnik GbR
    },
    pages = { 663-694 },
    year = { 2018 },
    address = { Aachen },
    organization = { 27th Aachen Colloquium Automobile and Engine
    Technology
    2018, Aachen (Germany), 2018-10-08 - 2018-10-10 },
    doi = { 10.18154/RWTH-2018-229909 },
    typ = { PUB:(DE-HGF)7 },
    reportid = { RWTH-2018-229909 },
    cit = { 414110 / 122810 / 415410 / 120000 },
    url = { http://publications.rwth-aachen.de/record/749158/files/749158_Liste%20d
```
Explicit prioritization of parallel Intent broadcasts in real-time Android

Bibtex entry:

@inproceedings { KGK17,
    author = { Kalkov, Igor and Gurghian, Alexandru and Kowalewski, Stefan },
    title = { Explicit prioritization of parallel Intent broadcasts in real-time Android },
    booktitle = { Concurrency and computation },
    publisher = { Wiley },
    volume = { 29 },
    number = { 22 },
    year = { 2017 },
    address = { Chichester },
    issn = { 1532-0626 },
    organization = { 12th International workshop on Java Technologies for Real-Time and Embedded systems, Niagara Falls, NY (USA), 2014-10-13 - 2014-10-14 },
    doi = { 10.1002/cpe.4122 },
    typ = { PUB:(DE-HGF)16 },
    reportid = { RWTH-2017-09553 },
    cin = { 122810 / 120000 },
    url = { http://publications.rwth-aachen.de/record/707959 },
}

Priority Inheritance during Remote Procedure Calls in Real-Time Android using Extended Binder Framework

Real-Time Android using Extended Binder Framework

Bibtex entry:

@inproceedings { KGK15,
    author = { Kalkov, Igor and Gurghian, Alexandru and Kowalewski, Stefan },
    title = { Priority Inheritance during Remote Procedure Calls in Real-Time Android using Extended Binder Framework },
    publisher = { ACM Press New York, New York, USA },
    pages = { 5, 10 Seiten },
    year = { 2015 },
    doi = { 10.1145/2822304.2822311 },
    typ = { PUB:(DE-HGF)8 },
    reportid = { RWTH-2016-03747 },
    cin = { 122810 / 120000 },
    url = { http://publications.rwth-aachen.de/record/573802 },
}

[KGK14]


Predictable Broadcasting of Parallel Intents in Real-Time Android

Bibtex entry:

@inbook { KGK14,
    author = { Kalkov, Igor and Gurghian, Alexandru and Kowalewski, Stefan },
    title = { Predictable Broadcasting of Parallel Intents in Real-Time Android },
    publisher = { ACM },
    pages = { 57-66 },
    series = { ACM international conference proceedings series },
    year = { 2014 },
}

Informatik 11 - Embedded Software - https://embedded.rwth-aachen.de/