

Dr. rer. nat. Dominik Franke

Kontakt



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Fax +49 241 80 22150

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Research Topics

- Software Quality of Mobile Embedded Systems
 - Android
 - iOS
 - Java ME
 - Windows Phone
- Real-time Systems
 - [Java Real-Time System](#)
 - [Erlang](#)

Projects

- [The UMIC Software Quality Initiative](#)
- [ENAV](#)
- [MAVerix - Participation in the IMAV \(International Micro Air Vehicle Competition\)](#)

Publications

[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,
  author = { Dzafic, Dzenan and Schoonbrood, Pierre and Franke,
Dominik
    and Kowalewski, Stefan },
  title = { eNav: A Suitable Navigation System for the Disabled },
  booktitle = { Ambient Assisted Living : 9. AAL-Kongress,
Frankfurt/M,
    Germany, April 20 - 21, 2016 / edited by Reiner Wichert,
    Beate Mand },
  publisher = { Springer International Publishing ; Imprint: Springer
},
  pages = { 133-150 },
  series = { Advanced Technologies and Societal Change },
  year = { 2017 },
  address = { Cham ; s.l. },
  organization = { 9th Congress on Ambient Assisted Living,
Frankfurt/M
    (Germany), 2016-04-20 - 2016-04-21 },
  doi = { 10.1007/978-3-319-52322-4_9 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2018-222675 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/720210 },
}
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[DWS+17]

[PDFBIB](#)

Dzafic, D., Wagener, N., Schoonbrood, P., Franke, D., and Kowalewski, S., "Multimodales Dynamisches Routen mit eNav", in *Proc. agit_2017 geospatialonline / Herausgeber: Prof. Dr. Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner, Prof. Dr. Thomas Blaschke*, Berlin ; Offenbach, 2017 in AGIT : Journal für angewandte Geoinformatik, Wichmann, pp. 278-287.

Multimodales Dynamisches Routen mit eNav

Bibtex entry :

```
@inproceedings { DWS+17,
  author = { Dzafic, Dzenan and Wagener, Nicolas and Schoonbrood,
Peter
    and Franke, Dominik and Kowalewski, Stefan },
  title = { Multimodales Dynamisches Routen mit eNav },
  booktitle = { agit_2017 geospatialonline / Herausgeber: Prof. Dr.
Josef
    Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner, Prof.
    Dr. Thomas Blaschke },
  publisher = { Wichmann },
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pages = { 278-287 },
series = { AGIT : Journal f{"u}r angewandte Geoinformatik },
year = { 2017 },
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organization = { 29. Symposium f{"u}r Angewandte Geoinformatik,
Salzburg
(Austria), 2017-07-05 - 2017-07-07 },
typ = { PUB:(DE-HGF)7 },
reportid = { RWTH-CONV-236300 },
cin = { 122810 / 120000 / 414110 },
url = { http://publications.rwth-aachen.de/record/752276 },
}

```

[DWS+17a]

[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+17a,
  author = { Dzafic, Dzenan and Wagener, Nicolas and Schoonbrood,
Peter
and Franke, Dominik and Kowalewski, Stefan },
  title = { Multimodal Dynamic Routing for Wheelchairs and
Pedestrians },
  booktitle = { Proceedings International Conference on Intelligent
Transport Systems in Theory and Practice, mobil.TUM 2017 },
  publisher = { Elsevier B.V. },
  pages = { 1-10 },
  year = { 2017 },
  organization = { International Conference on Intelligent Transport
Systems in
Theory and Practice, M{"u}nchen (Germany), 2017-07-04 -
2017-07-05 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-236301 },
  cin = { 122810 / 120000 / 414110 },
  url = { http://publications.rwth-aachen.de/record/752277 },
}

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[DKS+16]

[PDFBIB](#)

Dzafic, D., Klein-Ridder, D., Schoonbrood, P., Franke, D., and Kowalewski, S., "Der Bodenbelag-Detektor des eNav-Systems", in *Proc. agit_2016 - open:spatial:interfaces / Herausgeber: Prof.*

Dr. Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner, Prof. Dr. Thomas Blaschke, Berlin, 2016 in AGIT : Journal für Angewandte Geoinformatik, Wichmann, eine Marke der VDE Verlag GmbH, pp. 318-327.

Der Bodenbelag-Detektor des eNav-Systems

Bibtex entry :

```
@inproceedings { DKS+16,
  author = { Dzafic, Dzenan and Klein-Ridder, Daniel and Schoonbrood,
    Pierre and Franke, Dominik and Kowalewski, Stefan },
  title = { Der Bodenbelag-Detektor des eNav-Systems },
  booktitle = { agit_2016 - open:spatial:interfaces / Herausgeber:
Prof. Dr.
    Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner,
    Prof. Dr. Thomas Blaschke },
  publisher = { Wichmann, eine Marke der VDE Verlag GmbH },
  pages = { 318-327 },
  series = { AGIT : Journal f{"u}r Angewandte Geoinformatik },
  year = { 2016 },
  address = { Berlin },
  organization = { 28. AGIT-Symposium, Salzburg (Austria), 2016-07-06
-
    2016-07-08 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-2016-12052 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/680869 },
}
```

[DLS+16]

[PDFBIB](#)

Dzafic, D., Lahr, F., Schoonbrood, P., Franke, D., and Kowalewski, S., "Das Barrierenerkennungssystem von eNav", in *Proc. agit_2016 - open:spatial:interfaces / Herausgeber: Prof. Dr. Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner, Prof. Dr. Thomas Blaschke, Berlin, 2016 in AGIT : Journal für Angewandte Geoinformatik, Wichmann, eine Marke der VDE Verlag GmbH, pp. 298-307.*

Das Barrierenerkennungssystem von eNav

Bibtex entry :

```
@inproceedings { DLS+16,
  author = { Dzafic, Dzenan and Lahr, Florian and Schoonbrood, Pierre
and
    Franke, Dominik and Kowalewski, Stefan },
  title = { Das Barrierenerkennungssystem von eNav },
  booktitle = { agit_2016 - open:spatial:interfaces / Herausgeber:
Prof. Dr.
    Josef Strobl, Dr. Bernhard Zagel, Mag. Gerald Griesebner,
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    Prof. Dr. Thomas Blaschke },
    publisher = { Wichmann, eine Marke der VDE Verlag GmbH },
    pages = { 298-307 },
    series = { AGIT : Journal f{"u}r Angewandte Geoinformatik },
    year = { 2016 },
    address = { Berlin },
    organization = { 28. AGIT-Symposium, Salzburg (Austria), 2016-07-06
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    2016-07-08 },
    typ = { PUB:(DE-HGF)7 },
    reportid = { RWTH-2016-12055 },
    cin = { 122810 / 120000 },
    url = { http://publications.rwth-aachen.de/record/680872 },
}

```

[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.

Routing über Flächen mit SpiderWebGraph

Bibtex entry :

```

@inproceedings { DKF+15,
  author = { Dzafic, Dzenan and Klug, Stefan and Franke, Dominik and
    Kowalewski, Stefan },
  title = { Routing {"u}ber Fl{"a}chen mit SpiderWebGraph },
  booktitle = { Journal f{"u}r angewandte Geoinformatik 1-2015 },
  pages = { 516-252 },
  year = { 2015 },
  organization = { Journal f{"u}r angewandte Geoinformatik 1-2015 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-2017-00133 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/681324 },
}

```

[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 :

```

@techreport { FKL15,
  author = { Franke, Dominik and Kowalewski, Stefan and Lichter,

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Horst },
  title = { Testing life cycle-related properties of mobile
applications },
  publisher = { Shaker },
  school = { RWTH Aachen University },
  pages = { X, 114 S. : Ill., graph. Darst. },
  volume = { 2015,02 },
  number = { AIB-2015-02 },
  series = { Aachener Informatik-Berichte },
  year = { 2015 },
  address = { Aachen },
  typ = { PUB:(DE-HGF)11 },
  reportid = { RWTH-2015-01925 },
  cin = { 122810 / 120000 },
  url = {
http://publications.rwth-aachen.de/record/466122/files/466122.pdf },
}
```

[AFK+14]

PDFBIB

Armoush, A., Franke, D., Kalkov, I., and Kowalewski, S., "An Approach for Using Mobile Devices In Industrial Safety-Critical Embedded Systems" Cham: Springer, 2014, vol. 130, pp. 294-297.

An Approach for Using Mobile Devices In Industrial Safety-Critical Embedded Systems

Bibtex entry :

```
@inbook { AFK+14,
  author = { Armoush, Ashraf and Franke, Dominik and Kalkov, Igor and
Kowalewski, Stefan },
  title = { An Approach for Using Mobile Devices In Industrial
Safety-Critical Embedded Systems },
  booktitle = { Mobile Computing, Applications, and Services : 5th
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,
Social-Informatics and Telecommunications Engineering },
  year = { 2014 },
  address = { Cham },
  doi = { 10.1007/978-3-319-05452-0_27 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-203202 },
  cin = { 120000 / 122810 },
  url = { http://publications.rwth-aachen.de/record/225590 },
}
```

[DF14]

PDFBIB

Dzafic, D. and Franke, D., "Integration von Informationen über die Bodenbeschaffenheit in das eNav-System : [Zusammenfassung der] Masterarbeit" Bonn: Ges. für Informatik, 2014, vol. S-13, pp. 123-126.

Integration von Informationen über die Bodenbeschaffenheit in das eNav-System : [Zusammenfassung der] Masterarbeit

Bibtex entry :

```
@inbook { DF14,
  author = { Dzafic, Dzenan and Franke, Dominik },
  title = { Integration von Informationen über die
    Bodenbeschaffenheit in das eNav-System : [Zusammenfassung
    der ] Masterarbeit },
  booktitle = { Informatiktage 2014 / Fachwissenschaftlicher
    Informatik-Kongress, 27. und 28. März 2014,
    Hasso-Plattner-Institut der Universität Potsdam ... },
  publisher = { Ges. für Informatik },
  pages = { 123-126 },
  volume = { S-13 },
  series = { GI-Edition : lecture notes in informatics / Seminars },
  year = { 2014 },
  address = { Bonn },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-204904 },
  cin = { 120000 / 122810 },
  url = { http://publications.embedded.rwth-aachen.de/file/59 },
}
```

[DFB+14]

PDFBIB

Dzafic, D., Franke, D., Baumeister, D., and Kowalewski, S., "Integration von Bodenbelagsinformationen zum energieeffizienten Routen von Elektrorollstühlen", in *Proc. Angewandte Geoinformatik 2014 : Beiträge zum 26. AGIT-Symposium Salzburg / Strobl/ Blaschke/Griesebner/Zagl (Hrsg.)*, Berlin [u.a.], 2014, Wichmann, pp. 451-460.

Integration von Bodenbelagsinformationen zum energieeffizienten Routen von Elektrorollstühlen

Bibtex entry :

```
@inproceedings { DFB+14,
  author = { Dzafic, Dzenan and Franke, Dominik and Baumeister, Danni
    and
    Kowalewski, Stefan },
  title = { Integration von Bodenbelagsinformationen zum
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energieeffizienten Routen von Elektrorollst{\u}hlen },
booktitle = { Angewandte Geoinformatik 2014 : Beitr{\a}ge zum 26.
  AGIT-Symposium Salzburg / Strobl/ Blaschke/Griesebner/Zagl
  (Hrsg.) },
publisher = { Wichmann },
pages = { 451-460 },
year = { 2014 },
address = { Berlin [u.a.] },
typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-205745 },
cin = { 120000 / 122810 },
url = { http://publications.embedded.rwth-aachen.de/file/5c },
}
```

[FK14]

[PDFBIB](#)

Franke, D. and Kowalewski, S., "Concept and Experiences on Using a Wiki-Based System for Software-Related Seminar Papers" Berlin [u.a.]: Springer, 2014, vol. 7991, pp. 140-146.

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

Bibtex entry :

```
@inbook { FK14,
  author = { Franke, Dominik and Kowalewski, Stefan },
  title = { Concept and Experiences on Using a Wiki-Based System for
    Software-Related Seminar Papers },
  booktitle = { Information technology and open source: applications
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;
  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 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-202914 },
  cin = { 120000 / 122810 },
  url = { http://publications.rwth-aachen.de/record/225247 },
}
```

[DF13]

PDFBIB

Dzafic, D. and Franke, D., "Entwicklung und Evaluation eines Navigationssystems für Elektrorollstühle" Bonn: Gesellschaft für Informatik e.V., 2013, vol. 12, pp. 185-188.

Entwicklung und Evaluation eines Navigationssystems für Elektrorollstühle

Bibtex entry :

```
@inbook { DF13,
  author = { Dzafic, Dzenan and Franke, Dominik },
  title = { Entwicklung und Evaluation eines Navigationssystems
f{"u}r
  Elektrorollst{"u}hle },
  booktitle = { Informatiktage 2013 : smart life - dank Informatik ;
  fachwissenschaftlicher Informatik-Kongress 22. und 23.
  M{"a}rz 2013 B-IT Bonn-Aachen International Center for
  Information Technology, Bonn / Gesellschaft f{"u}r
  Informatik (Hrsg.). [Red.: Ludger Porada] },
  publisher = { Gesellschaft f{"u}r Informatik e.V. },
  pages = { 185-188 },
  volume = { 12 },
  series = { GI-Edition : lecture notes in informatics },
  year = { 2013 },
  address = { Bonn },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-203657 },
  cin = { 120000 / 122810 },
  url = { http://publications.rwth-aachen.de/record/226146 },
}
```

[DFB+13]

PDFBIB

Dzafic, D., Franke, D., Baumeister, D., and Kowalewski, S., "Modifikation des A*-Algorithmus für energieeffizientes 3D-Routing", in *Proc. Angewandte Geoinformatik 2013 : Beiträge zum 25. AGIT-Symposium Salzburg / Strobl ; Blaschke ; Griesebner ; Zagel (Hrsg.)*, Berlin ; Offenbach, 2013, Wichmann, pp. 414-423.

Modifikation des A*-Algorithmus für energieeffizientes 3D-Routing

Bibtex entry :

```
@inproceedings { DFB+13,
  author = { Dzafic, Dzenan and Franke, Dominik and Baumeister, Danni
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  title = { Modifikation des A*-Algorithmus f{"u}r
energieeffizientes
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3D-Routing },
booktitle = { Angewandte Geoinformatik 2013 : Beitr{"a}ge zum 25.
  AGIT-Symposium Salzburg / Strobl ; Blaschke ; Griesebner ;
  Zagel (Hrsg.) },
publisher = { Wichmann },
pages = { 414-423 },
year = { 2013 },
address = { Berlin ; Offenbach },
typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-205272 },
cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/228156 },
}
```

[FHK13]

[PDFBIB](#)

Franke, D., Hempel, S., and Kowalewski, S., "Specifying Life Cycle Requirements in a Natural-like Language and ptLTL", in *Proc. 2013 IEEE Sixth International Conference on Software Testing, Verification and Validation Workshops (ICSTW), Luxembourg 18-22 March 2013*, Piscataway, NJ, 2013, IEEE Computer Society, pp. 120-121.

Specifying Life Cycle Requirements in a Natural-like Language and ptLTL

Bibtex entry :

```
@inproceedings { FHK13,
  author = { Franke, Dominik and Hempel, Stefan and Kowalewski,
  Stefan },
  title = { Specifying Life Cycle Requirements in a Natural-like
  Language and ptLTL },
  booktitle = { 2013 IEEE Sixth International Conference on Software
  Testing, Verification and Validation Workshops (ICSTW),
  Luxembourg 18-22 March 2013 },
  publisher = { IEEE Computer Society },
  pages = { 120-121 },
  year = { 2013 },
  address = { Piscataway, NJ },
  doi = { 10.1109/ICSTW.2013.72 },
  typ = { PUB:(DE-HGF)8 },
  reportid = { RWTH-CONV-203748 },
  cin = { 120000 / 122810 },
  url = { http://publications.rwth-aachen.de/record/226262 },
}
```

[GKS+13]

[PDFBIB](#)

Gerlitz, T., Kalkov, I., Schommer, J. F., Franke, D., and Kowalewski, S., "Non-Blocking Garbage Collection for Real-Time Android" New York, NY: ACM, 2013, pp. 108-117.

Non-Blocking Garbage Collection for Real-Time Android

Bibtex entry :

```
@inbook { GKS+13,  
  author = { Gerlitz, Thomas and Kalkov, Igor and Schommer, John F.  
and  
  Franke, Dominik and Kowalewski, Stefan },  
  title = { Non-Blocking Garbage Collection for Real-Time Android },  
  booktitle = { 11th International Workshop on Java Technologies for  
Real-time and Embedded Systems : JTRES 2013 ; 9-10 October  
2013, Karlsruhe, Germany },  
  publisher = { ACM },  
  pages = { 108-117 },  
  series = { ACM Digital Library },  
  year = { 2013 },  
  address = { New York, NY },  
  doi = { 10.1145/2512989.2512999 },  
  typ = { PUB:(DE-HGF)8 },  
  reportid = { RWTH-CONV-202515 },  
  cin = { 120000 / 122810 },  
  url = { http://publications.rwth-aachen.de/record/224782 },  
}
```

[HF13]

[PDFBIB](#)

Hansen, N. and Franke, D., "Reverse Engineering des Windows Phone Process Execution Models" Bonn: Gesellschaft für Informatik e.V., 2013, vol. 12, pp. 83-86.

Reverse Engineering des Windows Phone Process Execution Models

Bibtex entry :

```
@inbook { HF13,  
  author = { Hansen, Norman and Franke, Dominik },  
  title = { Reverse Engineering des Windows Phone Process Execution  
Models },  
  booktitle = { Informatiktage 2013 : smart life - dank Informatik ;  
fachwissenschaftlicher Informatik-Kongress 22. und 23.  
M{"a"}rz 2013 B-IT Bonn-Aachen International Center for  
Information Technology, Bonn / Gesellschaft f{"u"}r  
Informatik (Hrsg.). [Red.: Ludger Porada] },  
  publisher = { Gesellschaft f{"u"}r Informatik e.V. },  
  pages = { 83-86 },  
  volume = { 12 },  
  series = { GI-Edition : lecture notes in informatics },  
  year = { 2013 },  
  address = { Bonn },  
  typ = { PUB:(DE-HGF)8 },
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cin = { 120000 / 122810 },
url = { http://publications.rwth-aachen.de/record/226725 },
}
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[FDB+12]

[PDFBIB](#)

Franke, D., Dzafic, D., Baumeister, D., and Kowalewski, S., "Energieeffizientes Routing für Elektrorollstühle", in *Proc. 13. Aachener Kolloquium Mobilität und Stadt (AMUS/ACMOTÉ)*, 2012, RWTH Aachen, pp. 65-68.

Energieeffizientes Routing für Elektrorollstühle

Bibtex entry :

```
@inproceedings { FDB+12,
  author = { Franke, Dominik and Dzafic, Dzenan and Baumeister, Danni
and
  Kowalewski, Stefan },
  title = { Energieeffizientes Routing f{"u}r Elektrorollst{"u}hle
},
  booktitle = { 13. Aachener Kolloquium Mobilit{"a}t und Stadt
(AMUS/ACMOTÉ) },
  publisher = { RWTH Aachen },
  pages = { 65-68 },
  year = { 2012 },
  typ = { PUB:(DE-HGF)7 },
  reportid = { RWTH-CONV-236333 },
  cin = { 122810 / 120000 },
  url = { http://publications.rwth-aachen.de/record/752300 },
}
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[FEK12]

[PDFBIB](#)

Franke, D., Elsemann, C., and Kowalewski, S., "Reverse Engineering and Testing Service Life Cycles of Mobile Platforms", in *Proc. 2nd DEXA Workshop on Information Systems for Situation Awareness and Situation Management (ISSASiM) : 3. - 7. September, Wien, 2012*, IEEE Computer Society, pp. 16-20.

Reverse Engineering and Testing Service Life Cycles of Mobile Platforms

Bibtex entry :

```
@inproceedings { FEK12,
  author = { Franke, Dominik and Elsemann, Corinna and Kowalewski,
Stefan },
  title = { Reverse Engineering and Testing Service Life Cycles of
Mobile Platforms },
  booktitle = { 2nd DEXA Workshop on Information Systems for
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Situation

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Awareness and Situation Management (ISSASiM) : 3. - 7.
September, Wien },
publisher = { IEEE Computer Society },
pages = { 16-20 },
year = { 2012 },
doi = { 10.1109/DEXA.2012.40 },
typ = { PUB:(DE-HGF)8 },
reportid = { RWTH-CONV-182860 },
cin = { 122810 / 120000 },
url = { http://publications.rwth-aachen.de/record/110850 },
}

```

[FKW+12]

[PDFBIB](#)

Franke, D., Kowalewski, S., Weise, C., and Prakobkosol, N., "Testing Conformance of Life Cycle Dependent Properties of Mobile Applications", in *Proc. 2012 IEEE Fifth International Conference on Software Testing, Verification and Validation (ICST 2012) : Montréal, Québec, Canada, 17 - 21 April 2012 ; [proceedings ; including workshop papers] / [IEEE Computer Society]*, Piscataway, NJ, 2012, IEEE, pp. 241-250.

Testing Conformance of Life Cycle Dependent Properties of Mobile Applications

Bibtex entry :

```

@inproceedings { FKW+12,
  author = { Franke, Dominik and Kowalewski, Stefan and Weise, C. and
    Prakobkosol, N. },
  title = { Testing Conformance of Life Cycle Dependent Properties of
    Mobile Applications },
  booktitle = { 2012 IEEE Fifth International Conference on Software
    Testing, Verification and Validation (ICST 2012) :
    Montréal, Québec, Canada, 17 - 21 April 2012 ;
    [proceedings ; including workshop papers] / [IEEE Computer
    Society] },
  publisher = { IEEE },
  pages = { 241-250 },
  year = { 2012 },
  address = { Piscataway, NJ },
  doi = { 10.1109/ICST.2012.104 },
  typ = { PUB:(DE-HGF)8 },
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```

[FKW12]

[PDFBIB](#)

Franke, D., Kowalewski, S., and Weise, C., "A Mobile Software Quality Model", in *Proc. 12th*

International Conference on Quality Software (QSIC), 2012 : Xi'an, Shaanxi, China, 27 - 29 August 2012 ; proceedings; [including workshop papers] / technical sponsor: IEEE Reliability Society. Ed. by Antony Tang ..., Piscataway, NJ, 2012, IEEE, pp. 154-157.

A Mobile Software Quality Model

Bibtex entry :

```
@inproceedings { FKW12,
  author = { Franke, Dominik and Kowalewski, Stefan and Weise, Carsten },
  title = { A Mobile Software Quality Model },
  booktitle = { 12th International Conference on Quality Software (QSIC),
    2012 : Xi'an, Shaanxi, China, 27 - 29 August 2012 ;
    proceedings; [including workshop papers] / technical
    sponsor: IEEE Reliability Society. Ed. by Antony Tang ... },
  publisher = { IEEE },
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    Xi'an,
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  doi = { 10.1109/QSIC.2012.49 },
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}
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[FSK12]

[PDFBIB](#)

Franke, D., Schommer, J., and Kowalewski, S., "Softwarequalität in der Mobilen Welt: Testen von Lebenszyklen Mobiler Applikationen", in *Proc. Embedded Software Engineering Kongress (ESE)*, 2012, ELEKTRONIKPRAXIS, pp. 478-482.

Softwarequalität in der Mobilen Welt: Testen von Lebenszyklen Mobiler Applikationen

Bibtex entry :

```
@inproceedings { FSK12,
  author = { Franke, Dominik and Schommer, John and Kowalewski, Stefan },
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```

[FTK12]

[PDFBIB](#)

Franke, D., Tobias, R., and Kowalewski, S., "AndroLIFT: A Tool for Android Application Life Cycles", in *Proc. 4th International Conference on Advances in System Testing and Validation Lifecycle (VALID)*, 2012, Xpert, pp. 28-33.

AndroLIFT: A Tool for Android Application Life Cycles

Bibtex entry :

```

@inproceedings { FTK12,
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http://www.thinkmind.org/index.php?view=article&articleid=valid_2012_1_50_40107 },
}

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[GDF+12]

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Gathmann, F., Dernehl, C., Franke, D., and Kowalewski, S., "An integrated vision aided GPS/INS Navigation System for ultra-low-cost MAVs", in *Proc. International Micro Air Vehicle Conference (IMAV)*, 2012, IMAV, pp. 1-8.

An integrated vision aided GPS/INS Navigation System for ultra-low-cost MAVs

Bibtex entry :

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@inproceedings { GDF+12,
  author = { Gathmann, Felix and Dernehl, Christian and Franke, Dominik

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[KFS+12]

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Bibtex entry :

```
@inproceedings { KFS+12,
  author = { Kalkov, Igor and Franke, Dominik and Schommer, John F.
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  title = { A Real-time Extension to the Android Platform },
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[SFL+12]

[PDFBIB](#)

Schommer, J. F., Franke, D., Lange, T., and Kowalewski, S., "Load Balancing for Cross Layer Communication", in *Proc. 2012 IEEE 36th Annual Computer Software and Applications*

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Bibtex entry :

```
@inproceedings { SFL+12,
  author = { Schommer, John F. and Franke, Dominik and Lange, Tim and
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  Conference workshops (COMPSACW 2012) : Izmir, Turkey, 16 -
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  Ed.: Xiaoying Bai ...] },
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[DFD+11]

[PDFBIB](#)

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An Architecture with Integrated Image Processing for Autonomous Micro Aerial Vehicles

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[FDW+11]

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@inproceedings { FDW+11,
  author = { Franke, Dominik and Dzafic, Dzenan and Weise, Carsten
and
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  Elektrofahrzeuge auf Basis von OpenStreetMap-Daten },
  booktitle = { Anwenderkonferenz f{"u}r Freie und Open Source
Software
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  5. - 7. April, 2011 },
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Bibtex entry :

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@inproceedings { FDW+11a,
  author = { Franke, Dominik and Dzafic, Dzenan and Weise, Carsten
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  AGIT-Symposium (AGIT) },
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http://gispoint.de/fileadmin/user_upload/paper_gis_open/537508024.pdf
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[FEW+11]

[PDFBIB](#)

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  Council on Software Engineering]. Ed.: Martin Pinzger },
  publisher = { IEEE },
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  year = { 2011 },
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[FW11]

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Bibtex entry :

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@inproceedings { FW11,
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  Software Testing, Verification, and Validation ; Berlin,
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[MWF+11]

PDFBIB

Mitsching, R., Weise, C., Franke, D., Gerlitz, T., and Kowalewski, S., "Coping with Complexity of Testing Models for Real-Time Embedded Systems", in *Proc. 2011 Fifth International Conference on Secure Software Integration and Reliability Improvement - Companion : SSIRI-C 2011 ; 27-29 June 2011, Jeju Island, Korea, Los Alamitos, 2011, IEEE*, pp. 128-135.

Coping with Complexity of Testing Models for Real-Time Embedded Systems

Bibtex entry :

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@inproceedings { MWF+11,
  author = { Mitsching, Ralf and Weise, Carsten and Franke, Dominik
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  url = { http://publications.rwth-aachen.de/record/123848 },
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[FK10]

[PDFBIB](#)

Franke, D. and Kowalewski, S., "Verifikation der Java-Echtzeitfähigkeit für den Einsatz in zeitkritischen Systemen", in *Proc. Informatiktage 2010 : Fachwissenschaftlicher Informatik-Kongress, 19. und 20. März 2010, B-IT Bonn-Aachen International Center for Information Technolgy in Bonn / Gesellschaft für Informatik (Hrsg.)*. [Red.: Ludger Porada], Bonn, 2010 in GI-Edition : Seminars, Ges. für Informatik e.V. (GI), pp. 165-168.

Verifikation der Java-Echtzeitfähigkeit für den Einsatz in zeitkritischen Systemen

Bibtex entry :

```
@inproceedings { FK10,
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Einsatz in zeitkritischen Systemen },
  booktitle = { Informatiktage 2010 : Fachwissenschaftlicher
Informatik-Kongress, 19. und 20. März 2010, B-IT
Bonn-Aachen International Center for Information Technolgy
in Bonn / Gesellschaft für Informatik (Hrsg.) . [Red.:
Ludger Porada] },
  publisher = { Ges. für Informatik e.V. (GI) },
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pages = { 165-168 },
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url = { http://publications.rwth-aachen.de/record/100437 },
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```

[SFK+09]

[PDFBIB](#)

Schommer, J. F., Franke, D., Kowalewski, S., and Weise, C., "Evaluation of the real-time Java runtime environment for deployment in time-critical systems", in *Proc. 7th International Workshop on Java Technologies for Real-Time and Embedded Systems : JTRES 09 ; Universidad Complutense de Madrid, Facultad de Informatica, 23-25 September 2009, Madrid, Spain / Workshop Chair: M. Teresa Higuera-Toledano ...*, Red Hook, NY, 2009 in ACM international conference proceedings series, Curran, pp. 51-60.

Evaluation of the real-time Java runtime environment for deployment in time-critical systems

Bibtex entry :

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@inproceedings { SFK+09,
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September 2009, Madrid, Spain / Workshop Chair: M. Teresa
Higuera-Toledano ... },
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  pages = { 51-60 },
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Theses

Open

- on inquiry

Current

Finished

- [Integrating Surface Information into eNav](#) (Master Thesis, Student Worker: D. Dzafic)
- [Development of a Test Framework for Life Cycle-related Properties of Mobile Applications](#) (Diploma Thesis, Student Worker: A. Weigelt)
- [Specifying Life Cycle Requirements for mobile Applications](#) (Diploma Thesis, Student Worker: S. Hempel)
- [Integration of the eNav Routing Algorithm into an OSM Server](#) (Bachelor Thesis, Student Worker: D. Baumeister)
- [iOS-Extension to the Higgs Framework](#) (Bachelor Thesis, Student Worker: D. Forster)
- [Test and Stabilization of Real-time Android](#) (Master Thesis, Student Worker: T. Gerlitz)
- [Control of a Manufacturing Plant using Real-time Android](#) (Bachelor Thesis, Student Worker: D. Thönnessen)
- [Reverse Engineering of the Windows Phone Process Execution Model](#) (Bachelor Thesis, Student Worker: N. Hansen)
- [Concept and Prototype of a Mobile Cross-Device Test Framework](#) (Diploma Thesis, Student Worker: R. Mathes)
- [Tool Extension for Analysis of Android Application Life Cycle Models](#) (Bachelor Thesis, Student Worker: T. Royé)
- [Development of an Autonomous Flight Control System for Micro Aerial Vehicles](#) (Master Thesis, Student Worker: C. Dernehl)
- [Applying Timed Hierarchies to Signaling Equipment](#) (Diploma Thesis, Student Worker: M. Mijatovic)
- [Design and Integration of Real-Time into the Android Platform](#) (Master Thesis, Student Worker: I. Kalkov)
- [Analyzing Life Cycle Models of Mobile Applications](#) (Diploma Thesis, Student Worker: C. Elsemann)
- [Design of a Software Simulation Prototype](#) (Bachelor Thesis, Student Worker: T. Lange)
- [Evaluation of Ressource-Scheduling in Time-Heterogeneous Systems](#) (Bachelor Thesis, Student Worker: D. Schmithausen)
- [Characerization and Application of On-board Timers](#) (Diploma Thesis, Student Worker: D. Losch)
- [Testing Lifecycle Implementations of Mobile Applications](#) (Master Thesis, Student Worker: N. Prakobkosol)
- [Development and Evaluation of a Navigation System for Electric Wheel Chairs](#) (Bachelor Thesis, Student Worker: D. Dzafic)

Teaching

Semester	Title	Type
Summer Semester 2013	Evaluation of a Test Framework for Life Cycles of Mobile Applications	Practical Course
Winter Semester 12/13	Design and Programming Concepts for mobile Applications	Seminar
Summer Semester 2012	System Programming	Practical Course
Winter Semester 11/12	Testing Mobile Applications	Seminar
Summer Semester 2011	System Programming	Practical Course
Winter Semester 10/11	Einführung in die Technische Informatik	V/Ü
Winter Semester 10/11	Design Pattern for Mobile Embedded Systems	Proseminar
Summer Semester 2010	Elektrotechnische Grundlagen der Informatik	Practical Course
Winter Semester 09/10	Einführung in die Technische Informatik	V/Ü

Office Hours

On appointment.

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