

## Curriculum Vitae Ulrich Norbistrath

### Contact Information

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### Research Interests (<http://research.ulno.net>)

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- Internet of Things (Home Automation, Ubiquitous Systems, Mobile Computing, Mobile Authentication)
- Software Engineering (Model Driven Engineering, Service Oriented Computing)
- Information Systems (Knowledge Management)
- Distributed systems (Cloud Computing, P2P Systems, High Performance Computing)
- Security and privacy (in IoT and Home Automation)
- Active learning (and using this in my teaching)

### Education

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2007/06	PhD Computer Science, RWTH Aachen University (Aachen, Germany) <b>Research areas:</b> component based programming, model driven engineering, software architectures, smart home systems <b>Dissertation title:</b> <i>Configuring eHome Systems</i> <b>Grade:</b> magna cum laude (1.0) <b>Advisors:</b> Professor Dr.-Ing. M. Nagl, RWTH Aachen University (Aachen, Germany), Professor Dr. rer.-nat. Albert Zündorf, University of Kassel (Kassel, Germany)
2000/07	Diploma Computer Science, RWTH Aachen University (Aachen, Germany) <b>Research areas:</b> functional programming languages, networks <b>Thesis title:</b> <i>Port Based Distributed Haskell</i>
1995/08	Intermediate diploma (Vordiplom) Mathematics, RWTH Aachen University (Aachen, Germany)

### Academic Experience

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2017/01 –	Adjunct Professor at Department of Computer Science at George Mason
2018/05	University (VA, USA)
2014/09 –	FH Professor in Mobile Computing, FH Upper Austria (first year full
present	professor, then since 2015/09 as adjunct)

2012/09 – Assistant professor Computer Science in School of Science and Technology  
2014/05 (SST) at Nazarbayev University (Astana Kazakhstan)

2009/08 – *Senior research fellow* in Distributed Systems group at University of Tartu  
2012/09 (Tartu, Estonia)

2009/10 *Visiting researcher* at Prof. Lisa Singh's group at Georgetown University,  
Washington, DC, USA

2006/10 – *Lecturer and researcher* in Computer Science at University of Tartu (Tartu,  
2012/09 Estonia)

2007/07 – *Postdoc* in Distributed Systems group at University of Tartu (Tartu, Estonia)  
2009/08

2008/09 – *Visiting researcher* at Prof. M. Brian Blake's group at Georgetown  
2008/10 University, Washington, DC, USA

2004/04 – *Consultant* of the Department of Computer Science (Fachgruppenreferent)  
2006/10

2002/03 – PhD student *lecturer* and *system administrator* at RWTH Aachen University  
2007/06 (Aachen, Germany), Department of Computer Science 3,  
**Teaching:** Supervision, lectures, seminars and lab courses  
**Additional:** Linux administration, web-server administration

1994/07 – *Studentische Hilfskraft* (similar to *research assistant*), aps GmbH, European  
1999/03 Center of Mechatronics (Aachen, Germany)

**Projects:**

- 3D robotic and milling simulation
- Application design of Lotus Notes applications
- Administration of heterogeneous development environments (SGI IRIX, PC Linux, PC WIN NT, SUN SUN-OS, SUN Linux, PPC Parallel Computer VXWorks, Lotus Domino-Server)
- Preparation of and participation in international meetings (IECON '98)

## Additional Experience

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2005/01 – current *Independent Technical Consultant* at <http://ulno.net>

2015/09 – 2015/01 *Game Developer*, ulno.net  
**Project:** Development of the game McMinos (<http://mcminos.com>) for iOS and Android

2010/12 – 2014/09 *CTO* Biometry Inc. (former BIOMETRY.com)

2008/03 – 2009/08 *Representative of University of Tartu*, Dept. of Computer Science (Tartu, Estonia) for Mobile Computing (i.e. on [Mobile Monday Estonia](#) events)

2009/03 – 2009/09 *Mentor* in the Google Summer of Code 2009 (project: sip-communicator, now jitsi)

2008/09 Course on Supervision, Sagadi, Estonia

2008/03 – 2008/09 *Mentor* in the Google Summer of Code 2008 (project: sip-communicator,

now jitsi)

2007/11 – 2008/04 *Gaming: Situated and Action Learning* (<http://algs.ulno.net>), Cultural Institute, Viljandi, Estonia

1999/05 – 2004/10 *Management director* of the company WeSolv'IT (specialization in networks, datawarehousing, and integrating Linux solutions)

**Projects:**

- Linux gateways (in beginning of 2001 in 30 Schools and 5 offices -> ~1000 Computers connected to the Internet)
- Linux desktop solutions (application in three offices and one school),
- Linux surf terminal (bookstores Mayersche Deutschland, Förderverein Kunst und Internet more than 50 terminals),
- data warehouse Solution for Düker Sanitär
- re-engineering and extension of the Linux solution for the bookstores Mayersche Deutschland (this software controls more than 100 computers all over Germany up to today)
- accelerated email accounting at schools for ePost (15000 mail-accounts created from 2001/07 to 2002/01)

**Experience:** network administration (pharmacies, churches, architects, insurance offices, movie production office, travel agencies, schools), web design, experience in teaching and customer care

**Research:** virtualization, system security, network deployment strategies, requirements analysis, functional filters for databases

1999/05 – 2000/02 *Developer*, Multidata GmbH, Prüm

**Projects:**

- Application development for the health area
- Consulting and support migrating SCO servers to Linux

**Experience:** Migration of Windows 9x applications to Linux, Network administration

1992/01 – 1993/08 *Game Developer*, Trifle Softworx

**Project:** Development of the game McMinos for Atari ST/TT/Falcon

**Skills**

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Languages	German	native
	English	fluent
	Brazilian Portuguese	intermediate
	French	intermediate
	Estonian	basic
	Indonesian	basic
	Russian	basic

Operating Systems	Windows, Linux, Android, Mac OSX, iOS, Minix
Applications	MS/Open/Libre Office, IntelliJ, Eclipse, VMware, VirtualBox, QEMU/KVM
Programming languages	C/C++, Java, C#, Python, Unix Shell Scripts, HTML, JavaScript, Assembler MIPS/68k, Haskell, Perl, Tcl/Tk, Basic, SQL, Fortran, Lua, ADA, Ruby

## Publications (<http://publications.ulno.net>)

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- 1 Franken, S., Norbistrath, U., Prinz, W.: *The Impact of SearchTrails on the Quality of Collaborative Search. A Novel Trail-based Visualization Facilitating the Search Process.* i-Com 2017, Journal of Interactive Media. Volume 16, Issue 1, Pages 3-14. De Gruyter, Oldenburg.
- 2 Bennett, C.; Norbistrath, U.: *Disrupted Communities: a unique view of how people, organizations, making things, and the Internet of Things (IoT) can change the world for the better.* <https://www.linkedin.com/pulse/disrupted-communities-unique-view-how-people-making-things-bennett>
- 3 Franken, S.; Norbistrath, U.; Prinz, W. (2016) *The Impact of SearchTrails on the Quality of Collaborative Search.* In Proceedings of Mensch und Computer 2016.
- 4 Franken, S.; Norbistrath, U.; Prinz, W. (2015) *Search Trails as Collaboration Artifacts—Evaluating the UX.* In Proceedings of Mensch und Computer 2015.
- 5 Franken, S.; Norbistrath, U. (2014) *Trail Building During Complex Search Tasks.* In: M. Koch, A. Butz & J. Schlichter (Hrsg.): Mensch und Computer 2014, München: Oldenburg, pp. 135-144.
- 6 Franken, S.; Norbistrath, U. (2014) *Supporting the Evaluation of Complex Search Tasks with the SearchTrails Tool.* In: CASCON 2014, Toronto. IBM Corp. Riverton, NJ, USA, pp. 262-274.
- 7 Javed, S.; Norbistrath, U. (2014) *Service integration for biometric authentication.* In Emerging Technologies (ICET), 2014 International Conference on (pp. 30-35). IEEE.
- 8 Norbistrath, U.; Blessing, W. (2014) *Method for sequential biometric authentication and mobile station.* US Patent App. 13/769,571
- 9 Zündorf, A.; George, T.; Lindel, S.; Norbistrath, U. (2013). *Story Driven Modeling Library (SDMLib): an Inline DSL for modeling and model transformations, the Petrinet-Statechart case.*, in Sixth Transformation Tool Contest (TTC 2013), ser. EPTCS, 2013
- 10 Norbistrath, U.; Zündorf, A.; Jubeh, R. (2013) *Story Driven Modeling.* CreateSpace Independent Publishing Platform, 2013, S. 1-333, ISBN 978-1483949253
- 11 Singer, G.; Norbistrath, U.; Lewandowski, D. (2012) *An experiment with ordinary Web search engine users carrying out complex search tasks.* arXiv preprint arXiv:1206.1492.
- 12 Singer, G.; Norbistrath, U.; Lewandowski, D. (2012) *Impact of gender and age on performing complex search tasks online.* Mensch & Computer. arXiv preprint arXiv:1206.1494.
- 13 Singer, K.; Singer, G.; Lepik, K., Norbistrath, U.; Pruulmann-Vengerfeldt, P. (2012) *Search Strategies of Library Search Experts.* arXiv preprint arXiv:1206.2465.
- 14 Singer, G.; Pruulmann-Vengerfeldt, P.; Norbistrath, U.; Lewandowski, D. (2012) *The relationship between internet user type and user performance when carrying out simple vs. complex search tasks.* First Monday 17.

- 15 Singer, G.; Norbistrath, U.; Lewandowski, D. (2012) *Ordinary search engine users carrying out complex search tasks*. Journal of Information Science.
- 16 Singer, G.; Norbistrath, U.; Lewandowski, D. (2012) *Ordinary search engine users assessing difficulty, effort, and outcome for simple and complex search tasks*. Proceedings of the 4th Information Interaction in Context Symposium. pp. 110–119.
- 17 Singer, G.; Norbistrath, U.; Lewandowski, D. (2012) *An experiment with ordinary Web search engine users carrying out complex search tasks*. arXiv preprint arXiv:1206.1492,.
- 18 Singer, G.; Danilov, D.; Norbistrath, U. (2012) *Complex Search: Aggregation, Discovery, and Synthesis*. Proceedings of the Estonian Academy of Sciences, vol. 61, no. 2, pp. 89–106, 2012.
- 19 Tamme, Tõnu; Norbistrath, Ulrich; Singer, Georg; Vainikko, Eero (2011) *Improving Email Management*. IMMM 2011 : The First International Conference on Advances in Information Mining and Management; Barcelona, Spain, October 23-29, 2011. XPS (Xpert Publishing Services), 2011, 67 – 72.
- 20 Kirsimäe, S., Norbistrath, U. Singer, Georg; Srirama, Satish Narayana; Lind, Artjom (2011) *Extending Friend-to-Friend Computing to Mobile Environments*. MOBILITY, The First International Conference on Mobile Services, Resources, and Users; Barcelona, Spain; October 23-29, 2011, 75 – 80.
- 21 Singer, G.; Norbistrath, U.; Vainikko, E.; Kikkas, H.; Lewandowski, D. F. (2011) *Search-Logger – Analyzing Exploratory Search Tasks*. ACM Symposium On Applied Computing. Taiwan: ACM, 2011, (SAC '11 Proceedings of the 2011 ACM Symposium on Applied Computing ACM New York), 751 – 756.
- 22 Singer, K.; Singer, G.; Lepik, K.; Norbistrath, U.; Pruulmann-Vengerfeldt, P. (2011) *Search Strategies of Library Search Experts*. In: Proceedings of the International Conference on QQL 2011: 3rd International Conference on Qualitative and Quantitative Methods in Libraries. World Scientific, 2011.
- 23 Lind, A.; Norbistrath, U.; Jubeh, R. (2011) *Using Fujaba in Systems Modeling A Teaching Experience Report*. Fujaba Days 2011 28.
- 24 Singer, G.; Livenson, I.; Dumas, M.; Srirama, S. N.; Norbistrath, U. (2010) *Towards a model for cloud computing cost estimation with reserved resources*. Proceedings of 2nd International ICST Conference on Cloud Computing (CloudComp 2010), Barcelona, Spain.
- 25 Pöcher, C.; Batrašev, O; Norbistrath, U.; Vainikko, E. (2009) *DougFlow – Offering Scientific Applications via Web Services*, International Conference on Internet and Web Applications and Services (ICIW 2009), May 2009, Venice, Italy, pp. 487-492, ISBN 978-0-7695-3613-2 (best paper award)
- 26 Neljandik, J.; Norbistrath, U.; Vainikko, E.; VILLEMS, A.; Männamaa, I. (2009) *Mullivelled 2.0 - Wrapping a Real-Time Strategy Computer Game into an Educational Gaming Environment*, Proceedings of the International Conference on Internet and Web Applications and Services (ICIW 2009), May 2009, Venice, Italy, pp. 487-492, ISBN 978-0-7695-3613-2
- 27 Norbistrath, U.; Männamaa, I.; VILLEMS, A.; Kalamees-Pani, K. (2009) *Mullivelled - Wrapping Computer Games into Educational Gaming Environments*. Games: virtual

- world and reality, selected papers of International Gaming and Simulation Association Conference (ISAGA 2008, July 2008), Editors: E.Bagdonas & I.Patasiene. Technologija, Kaunas/Lithuania 2009, pp.219-225
- 28 Norbistrath, U.; Kraaner, K.; Vainikko, E.; Batrašev, O. (2008) *Friend-to-Friend Computing - Instant Messaging Based Spontaneous Desktop Grid*. The Third International Conference on Internet and Web Applications and Services (ICIW 2008), June 2008, Athens/Greece, IEEE Computer Society Press.
  - 29 Norbistrath, U. (2007) *Konfigurierung von eHome-Systemen (Configuring eHome Systems)*. PhD, ISBN 978-9985-4-0519-2, 293 Pages, 2007.
  - 30 Norbistrath, U.; Mosler, C. (2006) *Tool Support for the eHome Specification, Configuration, and Deployment Process*. 1st International Workshop on Mobile Services and Personalized Environments (MSPE'06), Aachen, Germany, 16-17 November 2006, Lecture Notes in Informatics (LNI), 2006.
  - 31 Norbistrath, U.; Mosler, C. (2006): *Functionality Configuration for eHome Systems*. 16th International Conference on Computer Science and Software Engineering (CASCON'06), Toronto, Canada, 16-19 October 2006, ACM Digital Library, 2006.
  - 32 Norbistrath, U.; Mosler, C.; Armac, I. (2006) *The eHomeConfigurator Tool Suite*. 1st International Workshop on Pervasive Systems (PerSys'06), Montpellier, France, 30-31 October 2006, Lecture Notes in Computer Science (LNCS), 2006.
  - 33 Norbistrath, U.; Mosler, C. (2006) *Component-Based Development for eHome Systems*. International Conference on Computational Methods in Science and Engineering (ICCMSE'06), Chania, Crete, Greece, 27 October - 1 November 2006, Lecture Series of Computer and Computational Sciences (LSCCS), 2006.
  - 34 Norbistrath, U.; Salumaa, P.; Malik, A.; Schwerdtner, Tim (2005) *eHome Specification, Configuration, and Deployment*. Demonstration-Paper D15 on UbiComp2005, <http://ubicomp.org/ubicomp2005/programs/demos.shtml>
  - 35 Norbistrath, U.; Salumaa, P.; Schultchen, E.; Kraft, B. (2005) *Fujaba based tool development for ehome systems*. In Proceedings of the International Workshop on Graph-Based Tools (GraBaTs 2004), volume 127 of Electr. Notes in Theor. Comp. Sci., pages 89-99. Elsevier Science, 2005.
  - 36 Norbistrath, U.; Kirchhof, M. (2004) *Configuration and Deployment in eHome-Systems*. Proceedings of International Conference on Information Systems: New Generations (ISNG 2004), ISBN 0-9762601-0-7, pp. 23-28, PHASE, 2004.
  - 37 Kirchhof, M.; Norbistrath, U.; Mosler (nee Skrzypczyk), C. (2004) *Towards Automatic Deployment in eHome Systems: Description Language and Tool Support*. 2004, Springer, Lecture Notes in Computer Science, Vol. 3290, On the Move to Meaningful Internet Systems 2004: CoopIS, DOA, and ODBASE: OTM Confederated International Conferences 2004, CoopIS'04, DOA, and ODBASE 2004, Agia Napa, Cyprus, October 25-29. Proceedings, Part I, Robert Meersman, Zahir Tari, ISBN 3-540-23663-5, 460 pp.
  - 38 Kirchhof, M.; Nagl, M.; Norbistrath, U. (2003) *EAI heißt insbesondere Integration: Probleme und die Rolle technischer Hilfsmittel (Enterprise Application Integration is in Particular Integration: Problems and the Role of Technical Utilities)*. Proceedings of ONLINE 2003, Online Verlag, 2003.
  - 39 Jiao, Y.; Norbistrath, U. (2003) *Dynamische Komponententechnologien für Limited Devices*. K. Irmscher (Component Based Frameworks for Limited Devices), K.-P. Fähnrich, VDI-Verlag, 189 - 196, 13. ITG/GI-Fachtagung Kommunikation in verteilten

Systemen KiVs 2003, ISBN 3-80072753-6.

- 40 Huch, F.; Norbistrath, U. (2000) *Distributed Programming in Haskell with Ports*. 2000, Springer, Lecture Notes In Computer Science, Vol. 2011, Selected Papers from the 12th International Workshop on Implementation of Functional Languages, Pages: 107 – 121, ISBN 3-540-41919-5.

### Awards

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- 2016/09 Honorable Mention in Mensch und Computer 2016
- 2010/12 Winner of the biometry challenge at Mobile Monday Baltics
- 2009/05 Best paper award with *DougFlow — Offering Scientific Applications via Web Services* on The Fourth International Conference on Internet and Web Applications and Services – ICIW2009, Venice, Italy
- 2002/03 – Enhanced scholarship for Graduate College “Software for Communication Systems“, RWTH Aachen University (Aachen, Germany)
- 2004/02
- 1991/07 Course for students with outstanding performance in natural sciences in high school: High school Students' (Schülerakademie) II in Braunschweig, Germany (for highly talented students): Mathematic Methods in Neurophysics

### Grants

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- 2012/11 *Private Academic Cloud Computing*, Nazarbayev University, Astana Kazakhstan, \$800,000 (acquired myself – Principal Investigator – handed over to Prof. Michael Lewis after one year)
- 2011/11 Consulting Services for various companies in Estonia for *biometric technology evaluation*. \$20,000 (acquired myself)
- 2009/03 *Feasibility study for research initiative Multidimensional Contextual Graph Databases*, Enterprise Estonia: \$20,000 for 3 months (one of the project leaders)
- 2008/11 *Scholarship for visiting PhD student*, DoRa European Social Fund: \$3,000 (acquired myself)
- 2007/10 *Playstation Computing Engine (16 Sony Playstation 3)*, Tiger University Estonia: \$15,000 (acquired myself)
- 2007/11 *4 supporting student scholarships for 4 years*, Estonian Science Foundation: \$20,000/annum (acquired together with Eero Vainikko)
- 2008/03 *High Performance Computing Center*, University Base Funding: \$250,000 (acquired in team)
- 2008/04 *Centre of Excellence in Computer Science (EXCS)*, European Union, Centers of Excellence: \$1,000,000/annum (\$300,000 for computer science) for 7 years (acquired in team)
- 2004/03 *3 Scholarships for students as research students*, Graduate College “Software for Communication Systems“, support for 2 years, total \$36,000 (acquired myself)

**Presentations** (<http://presentations.ulno.net>)

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## Ubiquitous Systems / Internet of Things / Mobile Computing

- 2019/02/10-15 (3x) *Tinker with the Internet of Things – How to harvest the motivational power of the Internet of Things to facilitate good STEM education.* Techcamp, USP, São Paulo
- 2018/11/06 *How to Fix the Internet of Broken Things.* Keynote at Seetii 2018, UNINOVE, São Paulo, Brazil
- 2018/10/03 *Use Affordable Electronics to Conquer the World and Beyond.* NASA Space Apps Challenge Brasilia Meet Up. Brasilia, Brazil.
- 2018/03/10 *Magic and Technology.* 17.arts. Museo Nacional. Brasilia, Brazil.
- 2018/09/28 *Internet of Things - New Perspectives in Education.* Seminar in UnB project week. Brasilia, Brazil.
- 2018/09/28 Smart Communities, Global Insights, IoT security. PMI Washington DC 2018. Online, Washington, DC, USA.
- 2018/06/28 *Affordable DIY Home Automation - From light switch robots to privacy concerned voice assistants.* Calango Hackerclube, Campus Party, Brasilia 2018.
- 2017/10/19 *From Ubiquitous Computing via Indonesia to Austria to the Internet of Things.* Invited lecture for Interface Cultures, Kunstuniversität Linz, Austria.
- 2017/02/05 *Build Your Own Data Collection IoT Devices.* Analytics Seminar, Georgetown University, Washington DC, USA.
- 2017/03/26 *Making and the Internet of Things. New Perspectives in CS Education.* Colloquium at Hampden-Sydney College, Virginia, USA.
- 2017/03/19 *A Maker's Approach to Home Automation. From DIY light switch robots to affordable synchronous multi-room audio.* NoVa Maker Faire 2017, Reston, Virginia.
- 2017/02/07 *A Paradigm Shift in Teaching Programming? Try Using Hardware First.* Software Engineering Seminar, George Mason University, Fairfax Campus
- 2016/01/16 *Building an IoT Empire – Only from knowledge comes true power – IoT "Hello World",* IoT Workshop at Hackerspace.sg, Singapore
- 2016/01/15 *Building an IoT Empire – Why we need to teach programming with an IoT motivation,* IoT Workshop at Hackerspace.sg, Singapore
- 2015/11/24 *Building Automation Lab,* invited speaker at Klimaaktiv 2015, FH Upper Austria, Wels, Austria
- 2015/11/06 *Learn to Code to Shape the World – Using the Right Motivation to Learn or Teach Coding* at Sampoerna University, Faculty of Science and Technolog, Jakarta, Indonesia
- 2015/10/03 *Learn to Program to Shape the World – Why we need to teach programming with an IoT motivation,* invited Speaker to IoT Meetup, Bandung, Indonesia
- 2015/06/02 Rapid Prototyping and Integration of Sensors in Smart Home Environments, Droidcon 2015, Berlin, Germany
- 2015/06/01 *Future HCI,* open house presentation at FH Upper Austria, Austria

- 2015/05/04 *Story-Driven Scenario Design*, presentation and workshop in Learnathon IATFL, Budapest, Hungary
- 2015/02/24-26 9 presentations *Future HCI* as part of Traumberuf Technik (Dream Job Engineering) at JKU Linz, Austria
- 2015/01/10 Presentation of FH Upper Austria and *From 3D Printing to De-Globalization* at Syarif Hidayatullah State Islamic University Jakarta, in Science and Technology and Economics Department, Jakarta, Indonesia.
- 2013/11/25 *Advances in Mobile Biometry*, Distributed Computing Seminar (Tartu, Estonia)
- 2013/11/23 *Higher Security through Mobile Biometrics*, Rigacomm 2013 (Riga, Latvia)
- 2013/09/22 *Mobile Biometrics*, IT-Club Nazarbayev University (Astana, Kazakhstan)
- 2013/03/28 *Greeting Cards were Yesterday! – Let's build our own mobile greeting APP*. Talk at 3rd Nauryz meeting at NIS at Taldykorgan, Kasakhstan
- 2012/03/12 *Easy security – is this possible? — How biometry will shape our future sense and use of security*. Talk at the Baltisch-Deutsches Hochschulkontor in Riga, Latvia
- 2012/03/09 *Presentation of Mobile Biometric Authentication* at CeBIT, Hannover, Germany
- 2012/02/27 – *Presentation of Mobile Biometric Authentication* at Mobile World Congress, 2012/03/01 Barcelona, Spain
- 2011/02/13 and *Greeting cards? Boring! Let's customize our own Android Greeting APP*. 2011/03/23 Talk at University of Tartu, Estonia for Open house day and the Informatics Olympiad.
- 2007/09/19 *Configuring eHome Systems* (same talk as in Aachen). Distributed Systems Seminar, University of Tartu (Tartu, Estonia)
- 2007/06/27 *Configuring eHome Systems*. PhD Colloquium at RWTH Aachen University (Aachen, Germany)
- 2007/04/17, *Software Design with FUJABA*. Distributed Systems Seminar, University of 2007/04/19 Tartu (Tartu, Estonia)
- 2007/01/26 *Configuring eHome Systems*. Theory Days (Rõuge, Estonia)
- 2006/11/30 *Component-Based Development for eHome Systems*. International Conference on Computational Methods in Science and Engineering - ICCMSE'06 (Chania, Greece)
- 2006/10/17 *Functionality Configuration for eHome Systems*. 16th International Conference on Computer Science and Software Engineering - CASCON'06 (Toronto, Canada)
- 2006/01/05 *Configuring eHome Systems*. Colloquium at University of Tartu, (Tartu, Estonia)
- 2005/09/13 Demonstration: *eHome Specification, Configuration, and Deployment*. UbiComp2005 (Tokyo, Japan)
- 2005/05/03 *The eHomeConfigurator Tool Suite*. Fujaba Developer Days 2005, University of Kassel (Kassel, Germany)
- 2005/10/11 *Specification, Configuration, and Deployment of eHome Systems – Status and Future Work*. Workgroup Software Engineering (Aachen, Germany)

- 2005/01/11 *Configuration, Specification, Deployment in eHome Systems*. Presentation and demonstration of the graduate college to the DFG, RWTH Aachen University (Aachen, Germany)
- 2005/02/25 *Specification, Configuration, and Deployment in eHome Systems*. Workshop Applications of Software Engineering Methods in Ubiquitous Computing, University of Tartu (Tartu, Estonia)
- 2004/10/29 *Towards Automatic Deployment in eHome Systems: Description Language and Tool Support*. International Conference on Cooperative Information Systems - CoopIS'04 (Agia Napa, Cyprus)
- 2004/10/20 *Specification, Configuration, and Deployment in eHome Systems*. Workgroup Software Engineering, RWTH Aachen University (Aachen, Germany)
- 2004/09/15 *Fujaba-based Tool Development and Generic Activity Mapping: Building an eHomeSpecifier* (presentation and demonstration). FujabaDays 2004 (Darmstadt, Germany)
- 2004/07/27 *Configuration and Deployment for eHome systems*. Workgroup Software Engineering, RWTH Aachen University (Aachen, Germany)
- 2004/10/02 *Fujaba based tool development for eHome systems*. International Workshop on Graph-Based Tools 2004 (GraBaTs'04), Workshop of ICGT'04, Rome
- 2003/11/04 *A Complete eHome Scenario – Status and Strategies*. Workgroup Software Engineering, RWTH Aachen University (Aachen, Germany)
- 2003/10/07 *eHome-Configuration Management – A Short Outline*. Workgroup Software Engineering, RWTH Aachen University (Aachen, Germany)
- 2003/06/17 *Configurations in eHomes*. Annual meeting of the computer science graduate colleges Germany on castle Dagstuhl. (Dagstuhl, Germany)
- 2003/06/04 *Software Engineering for Home Automation - Configurations in eHomes*. Seminar of the graduate college, RWTH Aachen University (Aachen, Germany)
- 2002/12/06 *Demonstration eHome Laboratory*. Day of Computer Science 2002, RWTH Aachen University (Aachen, Germany)
- 2002/11/06 and 2002/10/26 *Integrated eBusiness Systems and Home Automation*. Seminar of the graduate college, RWTH Aachen University (Aachen, Germany)

### **Information Systems / Complex Search**

- 2011/10/24 *Complex Search: From Lookup to Understanding*, Keynote talk at Infocomp 2011 in Barcelona, Spain. (I also chaired 5 sessions at this conference.)
- 2009/11/13 *Search vs. Exploration – From Lookup to Understanding*, Colloquium at Georgetown University, Washington, DC, USA
- 2009/11/05 *Search vs. Exploration – From Lookup to Understanding*, Colloquium at Hampdon-Sydney College, Hampdon-Sydney, Virginia, USA
- 2009/01/31 *Inferato – Don't search inferate. Scenario based Search.*, Theory Days, Käärikuu, Estonia
- 2009/01/16 *Inferato – Don't search inferate. Scenario based Search.*, Colloquium at

Georgetown University, Washington, DC, USA

### **Distributed and Cloud Computing**

- 2013/11/27 Guest Lecture in Scientific Computing Course on *Private Academic Cloud Computing in Research and Teaching*, University of Tartu (Tartu, Estonia)
- 2013/11/20 Keynote: *Private Academic Cloud Computing in Research and Teaching – An Experience Report on Using Existing Infrastructure for Cloud Resources* at Nazarbayev University (Astana, Kazakhstan)
- 2010/08/24 *F2F private cloud demo presentation* at 9th Estonian Summer School on Computer and Systems Science, Pedase, Estonia
- 2008/11/21 *Friend-To-Friend (F2F) Computing for the Grid*. Distributed Systems Seminar, University of Tartu (Tartu, Estonia)
- 2008/10/28 *A Friend-To-Friend (F2F) Computing Layer for ARC*. Nordugrid 2008 Conference (Budapest, Hungary)
- 2008/10/27 *Friend-To-Friend (F2F) Computing*. II. Symposium on Innovative Software Technology – IST'2008 (Tartu, Estonia)
- 2008/08/26 *An Introduction to Friend-To-Friend (F2F) Computing*. Colloquium at George Washington University (Virginia, USA)
- 2008/06/10 *Friend-to-Friend Computing – Instant Messaging Based Spontaneous Desktop Grid*. The Third International Conference on Internet and Web Applications and Services – ICIW2008, (Athens, Greece)
- 2008/03/26 *An Introduction to F2F Computing*. Minimum Intrusion Grid Workshop, University of Copenhagen (Copenhagen, Denmark)
- 2008/01/26 *Friend-To-Friend (F2F) Computing*. Theory Days (Põlva, Estonia)
- 2007/10/03 *From Reverse Engineering to Round-Trip Engineering of Distributed Applications* (in cooperation with Oleg Batrašev). University of Tartu, Tartu Estonia

### **Additional Talks and Presentations**

- 2013/11/29 *Makers Generation and Friends (3D Printing and virtual currencies like Bitcoins)*, Rotary Club Riga (Riga, Latvia)
- 2013/11/20 Keynote: *Private Academic Cloud Computing in Research and Teaching – An Experience Report on Using Existing Infrastructure for Cloud Resources* at Nazarbayev University (Astana, Kazakhstan)
- 2012/11/29 *Trends in IT Manager Education*, Kazakhstan IT Managers Society Summit, Almaty, Kasakhstan
- 2009/10/24 *FLOSS and the Invisible Hand of Publish or Perish*, Session Co-Lead with Nicolas Robidoux at Google Mentor Summer of Code Summit 2009 in Mountainview, California
- 2009/05/25 *DougFlow — Offering Scientific Applications via Web Services*, The Fourth International Conference on Internet and Web Applications and Services – ICIW2009, Venice, Italy (best paper award)

- 2008/04/16 *The Educational Computer Game MultiVelled*. Dorpater Dozentenabend (Tartu, Estonia)
- 2008/04/02 *The Educational Computer Game MultiVelled*. Distributed Systems Seminar, University of Tartu (Tartu, Estonia)
- 2004/03/12 *Freely Available Demonstrators and Trouble with Software Licenses*. Regina-Workshop (Aachen, Germany)
- 2003/09/26 *EAI heißt insbesondere Integration: Probleme und die Rolle technischer Hilfsmittel (EAI is Especially Integration: Problems and the Role of Technical Tools)*. ONLINE 2003 (Düsseldorf, Germany)
- 2002/08/27 *Dynamic Structures in Component Based Systems*. Workgroup Software Engineering, RWTH Aachen University (Aachen, Germany)

### Professional Service

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- 2013/11/20 Organizer and host of Seminar on Academic Cloud Computing at Nazarbayev University (Astana, Kazakhstan)
- 2011/05/11 – 2011/05/13 Organizer of 8th International Fujaba days (Tartu, Estonia)
- 2009/05/24 – present Committee member of SLAECE, ICIW, IMMM, and INFOCOMP conferences
- 2008/09 – 2012/09 Reviewer for IEEE Transactions on Services Computing
- 2008/06/12 Session chair: ICIW 2008 – IWAS – Web Technologies, Frameworks, Languages, Mechanisms (Athens, Greece)
- 2003/09/26 Session chair: ONLINE 2003 – Symposium VI-4 Web-Services: Neue Strategien und Techniken für EAI, ONLINE 2003 (Düsseldorf, Germany)

### Supervised PhD / Diploma / Master / Bachelor Theses (<http://advising.ulno.net>)

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#### PhD

- Sebastian Franken *Supporting asynchronous, discontinuous, collaborative, complex search tasks by the visualization of search trails*, 2016/06, PhD
- Georg Singer *Web search engines and complex information needs*, 2012/10, PhD

#### Master

- Stephan Hener *Swordpass: Mobile Single Sign On System*, 07/2016, Master
- Matthias Hochrieser *Mobile Complex Search Support*, 07/2016, Master
- Damiano Neufeld *A Password-less Mobile Authentication Framework*, 07/2016, Master
- Laurenz Riedler *An Advanced Security Policy System for Android*, 2015/01, Master
- Peeter Jürviste *Supporting Internet Search by Search-Log Publishing*, 2012/06, Master
- Shazia Javed *Service Integration for Biometric Authentication*, 2012/06, Master
- Dmitri Borissenko *Integrative Graph Filesystems*, 2011/06, Master
- Vladimir Skapurelov *Java adapter for F2F Computing*, 2011/06, Master
- Dmitri Danilov *3D Graph Exploring, master thesis*, 2010/06, Master

Oleg Knut *A Low Level Virtual Machine Backend for F2F Computing*, 2010/06, Master

Toomas Laasik *A Conjugate Gradient Solver Library for the Playstation 3*, 2010/06, Master

Artjom Lind *A Flexible Network Layer for F2F Computing*, 2010/06, Master

Lauri Tulmin *A Conjugate Gradient Solver on the Playstation 3 – a native approach*, 2010/06, Master

Sven Kirsimäe *F2F Computing goes Mobile*, 2009/06, Master

Jaan Neljandik *Orchestration of educational computer game environments*, 2009/06, Master

Raido Türk *Topology Data Gathering for F2F Computing*. Master, 2008/06, Master

Indrek Priks *Topology Visualization for F2F Computing*. Master, 2008/06, Master

Andres Luuk *An MPI Layer for Friend-to-Friend Computing*. 2008/06, Master

Keio Kraaner *A Framework for Friend-to-Friend Computing*. 2008/06, Master

Anton Litvinenko *Automatic prediction of source code contribution type*. 2007/06, Master

Christian Pöcher *Modeling Grid Application*. 2007/05, German Diploma

Philipp Böckers *Automated Tests for Access Control Systems*. 2006/08, German Diploma

Tim Schwerdtner *Strategies for Specification of eHome Systems*. 2005/11, German Diploma

Priit Salumaa *Model Transformations in eHome Systems*. 2005/10, Master

Arash Akhoundi *Distributed Automatic Deployment of eHome Configurations*. 2005/03, German Diploma

Adam Malik *Information Acquisition for Automatic Deployment of eHome Systems*. 2005/02, German Diploma

Ingo Kreienbrink *Classification and Search Strategies in eHome Scenarios*. 2004/10, German Diploma

Markus Klinke *Instanciation of eHome Services*. 2004/05, German Diploma

Christof Skrzypczyk *Description Language for eHome Configurations*. 2004/03, German Diploma

## **Bachelor**

Alexander Kröll *Device Unlocking as Authentication Facet*, 2015/09, Bachelor

Dominik Költringer *Linux Desktops for Mobile Phones*, 2015/09, Bachelor

Alexander Gattringer *Device Proximity as Authentication Aspect*, 2015/06, Bachelor

Christian Altenhofer *Geofencing as Authentication Aspect*, 2015/06, Bachelor

Konrad Deubler *Security in Mobile Systems*, 2015/06, Bachelor

Jürgen Punz *VR Drivers for Different Environments*, 2015/06, bachelor thesis 2

Katherina Sick *VR Environments based on Google Cardboard-like VR Viewers*, 2015/06, bachelor thesis 2

Lukas Binder	<i>VR Games for official demonstrations</i> , 2015/06, bachelor thesis 2
Roman Benetseder	<i>3D Scan Tutorial</i> , 2015/06, bachelor thesis 2,
Tobias Zuber	<i>Tutorial for Multi Extrusion 3D Printing</i> , 2015/06, bachelor thesis 2
Martin Vels	<i>Development of pharmaceutical information environment for iPhone</i> , 2011/06, Bachelor
Gleb Stsenov	<i>Measuring mobile search tasks on Android platform</i> , 2011/06, Bachelor
Madis Kapsi	<i>Usability Improvements for the Friend-to-Friend Computing Pidgin Plugin</i> , 2010/06, Bachelor
Peeter Jürviste	<i>Email Information Concentrator</i> , 2010/06, Bachelor
Olga Agen	<i>Distributed log tracer framework</i> , 2010/06, Bachelor
Gert Palok	<i>Port Forwarding with Universal Plug and Play</i> , Bachelor, 2010/06
Dmitri Melnikov	<i>F2F Computing as a Base for Network Games – Bub's Brothers</i> , 2009/06, Bachelor
Rauno Raudpui	<i>Whiteboard for F2F Computing</i> , 2009/06, Bachelor
Maido Käära	<i>F2F Pidgin Plugin</i> , 2009/06, Bachelor
Janno Toots	<i>Skype adapter for Friend-to-Friend Computing</i> . 2008/06, Bachelor
Artjom Lind	<i>NAT-traversal for P2P systems in Java</i> . 2008/06, Bachelor

### Teaching Record (<http://teaching.ulno.net>)

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Lecture, Spring 2017	Software Architecture
Lecture, Spring 2016	Home and Building Automation
Lecture, Fall 2015	The Beauty of Programming (Seminar on programming introduction based on Snap!)
Lecture, Summer 2015	Home and Building Automation (intense one week program though Erasmus at University of Kassel, Germany)
Lecture, Spring 2015	Home and Building Automation
Lecture, Spring 2015	Algorithms and Data Structures
Lecture, Spring 2014	Mobile Computing
Lecture, Spring 2014	Operating Systems (based on Linux)
Lecture, Fall 2013	Computer Systems and Organization
Lecture, Fall 2013	Software Engineering
Lecture, Spring 2013	Operating Systems (based on Minix)
Lecture, Spring 2013	Fundamentals of Programming
Lecture, Fall 2012	Computer Systems and Organization
Lecture, Fall 2012	Web Programming and Problem Solving
Supervision of Lecture, Spring 2012	Systems Administration
Supervision of Lecture, Fall 2011	Systems Modeling
Seminar, Fall 2011	Distributed Systems Seminar
Lecture, Spring 2011	Systems Administration

Seminar, Spring 2011	Distributed Systems Seminar
Lecture, Fall 2011	Systems Modeling
Seminar, Fall 2010	Distributed Systems Seminar
Seminar, Spring 2010	Distributed Systems Seminar
Lecture, Fall 2009	Introduction to Informatics: Distributed Systems (one session)
Lecture, Fall 2009	Software Engineering: Modeling (one session)
Lecture, Fall 2009	Software Modeling: Story driven Modeling and Objects first (one session)
Seminar, Fall 2009	Distributed Systems Seminar
Lecture, Spring 2009	Systems Modeling
Seminar, Spring 2009	Distributed Systems Seminar
Lecture, Fall 2008	Software Engineering: Two sessions: Modeling and and Advances in Software Architecture
Seminar, Fall 2008	Distributed Systems Seminar
Seminar, Spring 2008	Software Engineering in Distributed Systems
Lab course, Spring 2008	P2P Grid Software Project / Friend to Friend (F2F)-Computing
Seminar, Spring 2008	Distributed Systems Seminar
Seminar, Fall 2007	Software Engineering in Distributed Systems
Lab course, Fall 2007	Spontaneous Desktop GRID: Friend to Friend (F2F)-Computing
Lecture, Fall 2007	Software Engineering: Two sessions: Modeling and and Advances in Software Architecture
Lab course, Spring 2007	P2P Grid Computing
Lecture, Spring 2007	Software Architecture
Lecture, Winter 2004/2005	Introduction to Computer Science, Programming in Modula 3
Seminar, Winter 2004/2005	Component Based Embedded Systems: Design, Configuration, and Deployment
Lab course, Summer 2004	Tool Support for the eHome Process
Lab course, Winter 2003/2004	Tool support for the Specification of eHome Services
Lecture, Winter 2003/2004	Introduction to Computer Science, Programming in Modula 3
Lab course, Summer 2003	Ubiquitous Computing in eHomes
Seminar, Winter 2002/2003	Ubiquitous Computing
Lecture, Winter 2002/2003	Introduction to Computer Science, Programming in Modula 3
Seminar, Summer 2002	Noblesse Oblige: XML-Schema and other Graph Types - Applications and Extensions of the Graph Rewriting Language PROGRES

## Hobbies

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Swimming, cycling, ballroom dancing (standard), salsa, singing, baking, cooking

Brasilia, 2019-04-07

Ulrich Norbistrath