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Steffen Vogel

Personal Data

Date of Birth March 20th, 1990, Baden, Switzerland
Nationality German
Family Status Single

Experiences

- 05.2017 – currently **Research Associate**, *Distributed real-time simulation*, Institute for Automation of Complex Power Systems, RWTH Aachen University.
I am currently working towards my Ph.D. Supervisor: Prof. Antonello Monti
- 04.2014 – 07.2016, 02.2017 – 04.2017 **Science Assistant**, *Internet distributed power grid simulation*, Institute for Automation of Complex Power Systems, RWTH Aachen University.
Implementing real-time communication tools based on RT-Linux, OPAL-RT and RTDS simulators. Supervisor: M.Sc. Marija Stevic
- 08.2016 – 01.2017 **Intern**, *FPGA modelling*, eFPGAsim team, OPAL-RT Technologies Inc..
Extending, testing and packaging the electric hardware solver (eHS), a FPGA-based EMTP solver.
- 04.2014 – 08.2014 **Exercise Instructor**, *Hands-on sessions computer science 4*, Chair for Operating Systems, RWTH Aachen University.
Undertaking exercises on system / parallel programming, x86-Assembly and more.
- 10.2011 – 04.2012 **Student Tutor**, *C / C++ programming laboratory*, Institute for Man-Machine Interaction, RWTH Aachen University.
Supervising a practical course on C / C++ programming.
- 09.2011 – 08.2013 **Student Lecturer**, *Micro controller study group*, Institute for Man-Machine Interaction, RWTH Aachen University.
Giving introductory lectures on micro controller programming based on the Atmel ATmega family.

Voluntary commitment

- 05.2011 – 05.2012 **Presidency**, *ROCK YOUR LIFE! Aachen e.V.*, Aachen.
Foundation and organization of a nonprofit association. RYL unites students and pupils in mentoring relations to support them in their succession planning, job-seeking and more.
- 08.2009 – 08.2010 **Voluntary year (FöJ)**, *KATALYSE Institut e.V.*, Cologne.
FöJ in Germany: gap year taken to work as a volunteer in environmental projects.

Education

- 10.2014 – Present **M.Sc. Electrical Engineering, Information Technology and Computer Engineering**, *RWTH University, Aachen*.
with major field of studies Computer Engineering
- 10.2010 – 10.2014 **B.Sc. Electrical Engineering, Information Technology and Computer Engineering**, *RWTH University, Aachen*, Final grade¹: 2.8.
with major field of studies Computer Engineering
- 08.2001 – 06.2009 **Abitur**, *Justus-Liebig-Schule, Darmstadt*, Final grade: 2.2.
Gymnasium²
- 1997 – 2001 **Elementary school**, *Schillerschule, Griesheim*.

¹All grades are in the German grading system: 1.0 = 100 %, 5.0 < 50 %

²Diploma from German secondary school qualifying for university admission or matriculation.

Publications & Contributions

For a full overview of personal and academic projects, take a look at my blog: www.noteblok.net.

- [1] E. Bompard, A. Monti, A. Tenconi, A. Estebarsari, T. Huang, E. Pons, M. Stevic, S. Vaschetto, and S. Vogel. A multi-site real-time co-simulation platform for the testing of control strategies of distributed storage and V2G in distribution networks. In *2016 18th European Conference on Power Electronics and Applications (EPE'16 ECCE Europe)*. 2016 18th European Conference on Power Electronics and Applications (EPE'16 ECCE Europe), pages 1–9, September 2016. DOI: 10.1109/EPE.2016.7695666.
- [2] Catalin Felix Covrig, Giovanni De Santi, Gianluca Fulli, Marcelo Masera, Miguel Olariaga, Ettore Bompard, Gianfranco Chicco, Abouzar Estebarsari, Tao Huang, and Enrico Pons. *A European Platform for Distributed Real Time Modelling & Simulation of Emerging Electricity Systems*. JRC Technical Reports. JRC Science Hub, European Union, 2016. 50 pages. ISBN: 978-92-79-58545-6. URL: <https://ec.europa.eu/jrc/en/publication/european-platform-distributed-real-time-modelling-simulation-emerging-electricity-systems>.
- [3] M. Stevic, S. Vogel, A. Monti, and S. D'Arco. Feasibility of geographically distributed real-time simulation of HVDC system interconnected with AC networks. In *PowerTech, 2015 IEEE Eindhoven*, pages 1–5, June 2015. DOI: 10.1109/PTC.2015.7232700.
- [4] Marija Stevic, Abouzar Estebarsari, Steffen Vogel, Enrico Pons, Ettore Bompard, Marcelo Masera, and Antonello Monti. A multi-site european framework for real-time co-simulation of power systems. *IET Generation, Transmission & Distribution*, June 7, 2017. ISSN: 1751-8695. DOI: 10.1049/iet-gtd.2016.1576. URL: <http://digital-library.theiet.org/content/journals/10.1049/iet-gtd.2016.1576>.
- [5] Marija Stevic and Steffen Vogel. Geographically Distributed Simulation: A Backbone Platform for Studying Integration of Offshore Wind Energy. Infrastructure Access Report, Institute for Automation of Complex Power Systems, RWTH Aachen University, December 2014. URL: http://www.marinet.eu/public/docs/DistSimOffshoreWind_SINTEF_infrastructure_access_report.pdf.
- [6] Marija Stevic, Steffen Vogel, Markus Grigull, Antonello Monti, Abouzar Estebarsari, Enrico Pons, Tao Huang, and Ettore Bompard. Virtual integration of laboratories over long distance for real-time co-simulation of power systems. In *POWER ENERGY SOCIETY GENERAL MEETING*. IEEE, 2016.
- [7] Steffen Vogel. Camera-based PCB Analysis for Solder Paste Dispensing. Unpublished, Aachen, May 2015. URL: <https://www.noteblok.net/2015/05/26/seminar/>.
- [8] Steffen Vogel. Development of a modular and fully-digital PCIe-based interface to Real-Time Digital Simulator. Master Thesis, Grade: A+, Aachen, August 2016.
- [9] Steffen Vogel. Eine generische speicherverwaltung mit hilfe von seitentabellen für ein minimalistisches betriebssystem. Bachelor Thesis, Grade A+, Aachen, June 2014. URL: https://www.noteblok.net/wp-content/uploads/sites/3/2014/06/Self-mapped_Page-Tables_Vogel_Thesis.pdf.
- [10] Steffen Vogel. Self-referencing Page Tables for the x86-Architecture, January 2015. URL: <https://www.noteblok.net/2015/01/22/abstract-on-my-bachelor-thesis/>. Unpublished.

Skills

Programming languages C / C++, x86-Assembler, VHDL, Python, Matlab, TCL, Bash scripting

Toolchains & libraries	GNU GCC & Core / Bin-utils, Xilinx ISE & XPS, Atmel AVR, Qt, OpenCV, MPI, OpenMP
Modelling & Simulation	MATLAB Simulink, Xilinx System Generator, ISE & Vivado, OPAL-RT eFPGAsim, RT-XSG, RT-LAB, HYPERSIM
Environments	Git, Make, Eclipse, Linux System Programming
System administration	Ansible, Bird routing daemon, BIND, Postfix, Dovecot, iproute2, netfilter
Web	HTML, CSS, Javascript, PHP & SQL
Office	L ^A T _E X, Microsoft Office, GIMP, Inkscape
	Language ability
Native	German
Fluent	English
Beginner	French, Korean

Relevant lectures

EDA	Electronic Design Automation
DSP	DSP Design Methodologies
KAL	Communcation Networks: Analysis and Performance Evaluation

Interests

- Tinkering with electronics
- Build open community networks: Freifunk WiFi-Mesh & DN42 VPN network
- Working on open source software projects
- Sports: Running, Swimming
- Travelling: Asia & Scandinavia

Memberships

- Association for Computing Machinery
- ROCK YOUR LIFE! Aachen e.V.
- Freifunk Rheinland e.V.