

Sebastian Klaassen

Resume

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📄 <https://rcsepp.github.io/>

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Objective

To secure a challenging position in research oriented software engineering.

Publications

[Solving Communication-Intensive Problems Efficiently Using On-Chip Mesh Interconnection Networks](#)

Thesis and ISC HPC 2016 Research Poster

Description Design and simulation of a mesh-connected three dimensional array processor.

URL http://www.isc-hpc.com/isc16_ap/presentationdetails.htm?t=presentation&o=958&a=select&ra=personendetails

[Interactive Colormapping: Enabling Multiple Data Range and Detailed Views of Ocean Salinity](#)

Publisher ACM New York, NY, USA ©2016

URL <http://dl.acm.org/citation.cfm?doid=2851581.2851587>

[Scalability of Modern Scatterplot Visualizations for Large Image Datasets](#)

Thesis

Description Investigating scatterplot scalability both in terms of what is feasible (performance scalability) and what is reasonable (information scalability).

Scientific Collaborations

08.2017 **Oak Ridge National Lab**, *Invited Talk*, Data mining strategies for extracting material properties from scanning transmission electron microscopy images.

04.2017–08.2017 **Allen Institute for Cell Science**, *Design and implementation of an interactive viewer, optimized for performance and information scalability.*

Education

03.2014–10.2017 **MSc in Computer Science - Media Informatics**, *University of Vienna*, Vienna.
with distinction

03.2011–01.2014 **BSc in Computer Science - Scientific Computing**, *University of Vienna*, Vienna.

06.2009 **Graduation from Technical High School - Mechatronics**, *Höhere Technische Bundeslehranstalt Wien 10*, Vienna, *with distinction.*

10.2012–11.2012 **CS188.1x Artificial Intelligence**, *BerkleyX*, <https://www.edx.org>.
with distinction

Work experience

- 2017 **Allen Institute for Cell Science**, WORK CONTRACT, <http://www.allencell.org/>.
Creation of a WebGL-based successor for the Interactive Plotting tool on the Allen Cell web page. The tool is capable of interactively rendering datasets of more than a million cells.
- 05.2015–02.2016 **Los Alamos National Lab**, INTERNSHIP, <http://lanl.gov/>, Los Alamos, NM.
1) Creation of a global view data analysis tool for in-situ exploration of large scale image databases.
2) Creation of an application for interactively designing color maps.
- 04.2014–04.2015 **University of Vienna - Research group Visualization and Data Analysis**, RESEARCH ASSISTANT, <http://cs.univie.ac.at/vda>, Austria: Vienna.
Implementation of a novel ray tracing algorithm.
- 08.2008 **International Institute for Applied Systems Analysis**, INTERNSHIP, <http://www.iiasa.ac.at>, Austria: Laxenburg.
Assistance with adopting the web interface to JasperReports.
- 08.2007 **International Institute for Applied Systems Analysis**, INTERNSHIP, <http://www.iiasa.ac.at>, Austria: Laxenburg.
Preparation of environmental data for database upload.

Awards

- 2017 **SMC Data Challenge 2017**, *Smokey Mountain Computational Science and Engineering Conference*, <https://smc-datachallenge.ornl.gov/2017/>, **Best Solution**.
Data mining atomically resolved images for material properties
- 2009 **ARGE 3D-CAD Competition**, *Category: ProEngineer - Advanced*, <http://www.3d-cad.at>, **1st Place**.
3D model and animation of the thesis *Automated Guided Vehicle*
- 2004 **ARGE 3D-CAD Competition**, <http://www.3d-cad.at>, **2nd Place**.
3D model and animation of a recreational vehicle

Computer skills

Languages	C, C++, C#, Python, Visual Basic, JavaScript, Java, NASM, Matlab, R
Libraries and SDKs	Direct3D, OpenGL, WebGL, Vulkan, MPI, OpenMP, BLAS, LAPACK, PLASMA, STL, Boost, SQLite, PythonAPI, FFmpeg, Havok Physics
Sw. engineering	UML, Doxygen, Javadoc, JSDoc, GIT, Apache Subversion
Software and tools	Visual Studio, Unity, Eclipse, GCC, GNU Make, LLVM, Flex, GNU Bison, Mathcad, Pro Engineer, Apache Tomcat, TortoiseSVN, WinSCP, PuTTY, Texmaker, GnuPlot

Languages

German	<i>Mother tongue</i>
English	<i>Oral and written expression: very good (TOEFL iBT score: 107)</i>
Dutch	<i>Oral and written expression: good</i>

Volunteer work

- 12.2013–04.2015 Voluntary Fireman, FF SITTENDORF, <http://www.fw-sittendorf.org/>.