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## Education

- 10/2003 – 05/2009 **University of Mannheim, Germany**  
Student of Computer Engineering; Expected Graduation: May 2009; Major: Optoelectronics; Final thesis: "Development and Validation of a Real-Time Freehand 3D Ultrasound Navigation System for Liver Surgery with GPGPU Acceleration"
- **Research Experience** –
- 09/2008 – 02/2009 **Brigham and Women's Hospital and Harvard Medical School, USA**  
Research assistant; Project: "Real-Time 3D Ultrasound Navigation"; Developed a software to generate real-time-updated 3D volumes with tracked ultrasound for surgical navigation; Contributed to the open-source image guided therapy software Slicer3D; Results will be documented as my final thesis and published as a paper
- 09/2006 – 08/2007 **University of Waterloo, Canada**  
Exchange student in Computer Engineering

## Professional Experience

- 01/2008 – 07/2008 **Internship** at the iC-Haus GmbH, Bodenheim, Germany  
Developed the optics for a laser rangefinder with the optical simulation software Zemax; Solicited bids for the production of a prototype of the optic; Analysed and simulated electrical circuits; Documented the work in a 28 page long report
- 09/2007 – 12/2007 **Research Assistant** under the supervision of Prof. Dr. Karl-Heinz Brenner at the chair of Optoelectronics at the University of Mannheim, Germany  
Evaluated and implemented different camera calibration algorithms
- 08/2004 – 08/2006 **Research Assistant** under the supervision of Prof. Dr. Karl-Heinz Brenner at the chair of Optoelectronics at the University of Mannheim, Germany  
Developed a software for "Digital Homogenization of the Brightness of digital Video Projection Systems" in Delphi. The software is able to uniform the output's brightness of arbitrary video projectors. The program records the display of the projector and calculates a characteristic curve for every output pixel. With this characteristic curves it is possible to adjust future projections in a way that the brightness is consistent; Documented the work in a 34 page long report

## Awards

- 12/2007 – present **Scholarship** of e-fellows  
Awarded to outstanding students in Germany
- 09/2006 - 07/2007 **Scholarship** of the state Baden-Württemberg  
Awarded to outstanding students in the federal state Baden-Württemberg
- 03/2006 – present **Scholarship** of the Friedrich-Ebert-Stiftung  
Foundation to support students and academics with outstanding qualifications from Germany and abroad; Only awarded to 0.5% of all German students.

# Skills

## – Research Skills –

- Highly motivated and **innovative problem solver**
- Ability to **work in a team** or individually with minimal support
- **Fast learner** with strong interpersonal skills
- **Very attentive** and always working to meet deadlines while attempting to surpass selected goals
- Excellent education background with **international experiences** as a student in Computer Engineering

## – Technical Skills –

|                   |  |
|-------------------|--|
| Programming       | C, <b>C++</b> , Delphi, Java, <b>LaTeX</b> , Scheme, SQL, Turbo Pascal, Visual Basic, Verilog  |
| Scripting         | HTML, Perl, PHP, Python, XML   |
| Operating Systems | Linux: <b>Ubuntu</b> , Debian, Fedora, Suse; Windows: 95, 98, ME, 2000, XP; Windows Server: 2000, 2003; Palm OS; NachOS                            |
| Software          | <b>Zemax</b> , Microsoft Visual Studio, <b>Eclipse</b> , Maple, Matlab, Mathematica, DB2, Xilinx Ise, Sonnet EM Suite, Adobe Photoshop, Solidworks |
| Development       | Open-Source: Slicer3D ( <a href="http://www.slicer.org">http://www.slicer.org</a> ), vtk ( <a href="http://www.vtk.org">http://www.vtk.org</a> )   |

## – Writing Experience –

|                |  |
|----------------|--|
| Presentations  | <b>Review of Optical Coherence Tomography</b><br>74 Slides                     |
| Documentations | <b>Software Requirements and Specifications for a VoIP System</b><br>138 pages |

## – Languages –

|         |                |
|---------|----------------|
| German  | Native Speaker |
| English | Fluent         |

# Co-Curricular Activities

## – Honorary Posts –

|                   |  |
|-------------------|--|
| 11/2007           | <b>Student volunteer</b> at the Supercomputing Conference 2007 in Reno, NV, USA<br>Installed glass fibers for this important conference; Worked at the information desk of the network team; Helped exhibitors in time of need to fix network problems |
| 11/2005           | <b>Student volunteer</b> at the Supercomputing Conference 2005 in Seattle, WA, USA<br>see above  |
| 10/2005 – 10/2006 | <b>Supervisory Board</b> of the University of Mannheim,<br>Sole student member   |
| 07/2005 – 07/2006 | <b>President</b> of the Students Representatives<br>Faculty of Mathematics and Informatics of the University of Mannheim   |
| 06/2005 – 09/2006 | <b>Senior organizer</b> of the 2 weeks long freshman introduction course<br>Faculty of Mathematics and Informatics of the University of Mannheim   |
| 04/2005 – 08/2006 | <b>Board of Directors</b> of the Institute of Computer Engineering,<br>Sole student member   |
| 10/2004 – 09/2006 | <b>Faculty Council</b> of the Faculty of Mathematics and Informatics of the University of Mannheim,<br>Student member  |
| 09/2004 – 10/2005 | <b>Students Council</b> of the University of Mannheim,<br>Financial consultant   |

## – Activities and Interests –

|                |   |
|----------------|---|
| 2000 – present | <b>Long distance bicycle trips</b><br>up to 3500 km long; Germany → France; Germany → Sweden; Germany → Austria                                 |
| 1999 – present | <b>Rowing as a competitive sport</b><br>Winner of the German Championships in 2000 and the Championships of the State Baden-Württemberg in 2000 |