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## Personal Data

Date of birth 13th of December 1980  
Nationality German  
Languages German, English

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## Academic Career

2014–2015 SFB / Transregio 109 Discretization in Geometry and Dynamics, Project A01: Discrete Riemann Surfaces  
2007–2014 DFG Research Center MATHEON "Mathematics for key technologies", Project F1: Discrete Surface Parametrizations at TU-Berlin  
2006–2007 Member of the geometry group at TU-Berlin  
2005–2006 Student assistant at DFG Research Center MATHEON at TU-Berlin  
2002–2005 Tutor Computerorientierte Mathematik at TU-Berlin

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## Education

**Ph.D. Thesis in preparation**, *Variational Methods for Discrete Surface Parameterization. Applications and Implementation*, at TU Berlin.  
2004–2007 **University**, *Technische Universität Berlin*.  
Technomathematik with focus on mathematical visualisation and computergraphics  
1993–2000 **Abitur**, *Erich-Hoepner-Oberschule*, Berlin.  
Advanced courses: Math and Music  
1987–1993 **Grundschule**, *Grundschule am Weinmeisterhorn*, Berlin.

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## Publications

- 2014 Surface panelization using periodic conformal maps. With T. Rörig, A. Kycia, and M. Fleischmann. In *Advances in Architectural Geometry 2014*. ISBN: 978-3-319-11417-0 *Best Paper Award AAG 2014*
- 2012 Quasiisothermic Mesh Layout. With T. Rörig and A. I. Bobenko. In *Advances in Architectural Geometry 2012*. ISBN 978-3-7091-1250-2
- 2012 Topology Optimisation of Regular and Irregular Elastic Gridshells by means of a Non-linear Variational Method. With E. Lafuente Hernández, T. Rörig, and C. Gengnagel. In *Advances in Architectural Geometry 2012*. ISBN 978-3-7091-1250-2
- 2012 Uniformization of discrete Riemann surfaces. In *Discrete Differential Geometry*. Oberwolfach Reports, vol. 9, no. 3, European Mathematical Society
- 2011 On the Materiality and Structural Behaviour of highly-elastic Gridshell Structures. With E. Lafuente Hernández, C. Gengnagel, and T. Rörig. In *Computational Design Modeling: Proceedings of the Design Modeling Symposium Berlin 2011* ISBN 978-3-642-23435-4

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## Ph.D. Thesis (in preparation)

Title *Variational Methods for Discrete Surface Parameterization. Applications and Implementation.*  
Supervisor Prof. Alexander I. Bobenko

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## Diploma Thesis

Title *Discrete Minimal Surfaces, Koebe Polyhedra, and Alexandrov's Theorem. Variational Principles, Algorithms, and Implementation.*  
Supervisor Prof. Alexander I. Bobenko  
Link <http://www.sechel.de/DiplomaThesis.pdf>

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## Professional Software Projects

**from 2012** varylab.com  
Status head of development  
varylab.com offers a web based Software-As-A-Service for discrete surface optimization in the architectural context.  
Expertise Implementation of the main software VARYLAB together with members of the geometry group at TU-Berlin. Implementation of the service my.varylab.com based on Google's AppEngine.  
Technology Java, Java Webstart, GWT, Google AppEngine, HTML/CSS, Ajax

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**from 2013** gallery.discretization.de  
Status head of development  
gallery.discretization.de is a web service offered by the *SFB/TR 109 Discretization in Geometry and Dynamics* that allows for the creation and archiving of electronic models in the context of this research initiative.  
Technology XML, XSL/XSLT, XQuery, BaseX,

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**2009–2013** interactive scape GmbH ([www.interactive-scape.com](http://www.interactive-scape.com))  
Status freelance  
interactive scape is a Berlin based start-up company offering interaktive installations und multi-touch solutions.  
Technology Java, Java Webstart, Apache Tomcat, C/C++, XML, XSLT, XQuery, OAuth, HTML/CSS, Unix, Windows, Mac

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## Programming Languages and Tools

Java Guru  
C/C++ Very good knowledge  
XML/XSL/XQuery Very good knowledge  
OpenGL Good knowledge

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