

# Isaak Lim

## Curriculum Vitae

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Married, Two Children

## Education

- Since Nov. 2013 **Doctoral Studies**, *Visual Computing Institute, RWTH Aachen University*, supervised by Prof. Dr. Leif Kobbelt.
- Oct. 2011 – Sep. 2013 **Master of Science (Computer Science, minor: Biology)**, *RWTH Aachen University*, *Grade: 1.6, 1(best) – 6(worst)*, Master-Thesis: Hexahedral Meshing from Quadrilateral Meshes via Successive Local Reduction of the Surface Graph, supervised by Prof. Dr. Leif Kobbelt.
- Aug. 2007 – Sep. 2011 **Bachelor of Science (Computer Science, minor: Biology)**, *RWTH Aachen University*, *Grade: 2.8, 1(best) – 6(worst)*, Bachelor-Thesis: Interactive Volume Rendering of Multivariate Gaussian Mixture Models, supervised by Prof. Dr. Leif Kobbelt.
- Dec. 2006 **Externes Abitur (A-Levels)**, *Institut für Lernsysteme Hamburg (ILS)*, Germany & Thailand.

## Employment

- Since Nov. 2013 **Research and teaching assistant**, *Visual Computing Institute, RWTH Aachen University*. Apart from various teaching tasks, my main research focus is on controlling the embedding of 3D shapes with neural networks.
- Oct. 2011 – Sep. 2013 **Student assistant**, *Visual Computing Institute, RWTH Aachen University*. Maintenance and development of the Openflipper framework and the OpenMesh library (C++)

## Skills

### Programming Languages

- C++ Proficient: experience since 2011
- Python Proficient: experience since 2015
- Java, Matlab, Haskell, Prolog Past experience

### Frameworks and Tools

- Tooling Vim, Git, SVN, CMake, Make, Gcc, Clang, Valgrind, Tmux, Fish, Bash
- Numerics and Optimization PyTorch, Tensorflow, Numpy, Scipy, Numba, CVXPY, Eigen, Gurobi, Ipopt
- Frameworks Jupyter, Qt
- Office Tools Microsoft Word, Microsoft PowerPoint, Microsoft Excel, Latex

### Natural Languages

- German mother tongue
- English fluent
- Thai fluent

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## Publications

- 2019 **Isaak Lim, Moritz Ibing, and Leif Kobbelt**, *A Convolutional Decoder for Point Clouds using Adaptive Instance Normalization*, In Computer Graphics Forum volume 38(5).
- 2019 **Javor Kalojanov, Isaak Lim, Niloy Mitra, and Leif Kobbelt**, *String-Based Synthesis of Structured Shapes*, In Computer Graphics Forum volume 38.
- 2018 **Isaak Lim, Alexander Dielen, Marcel Campen, and Leif Kobbelt**, *A simple approach to intrinsic correspondence learning on unstructured 3d meshes*, In European Conference on Computer Vision, Geometry Meets Deep Learning Workshop.
- 2018 **Anne Gehre, Isaak Lim, and Leif Kobbelt**, *Feature curve co-completion in noisy data*, In Computer Graphics Forum volume 37.
- 2016 **Isaak Lim, Anne Gehre, and Leif Kobbelt**, *Identifying style of 3d shapes using deep metric learning*, In Computer Graphics Forum volume 35(5).
- 2016 **Anne Gehre, Isaak Lim, and Leif Kobbelt**, *Adapting feature curve networks to a prescribed scale*, In Computer Graphics Forum volume 35.
- 2013 **Michael Kremer, David Bommers, Isaak Lim, and Leif Kobbelt**, *Advanced automatic hexahedral mesh generation from surface quad meshes*, In Proceedings of the 22nd International Meshing Roundtable.

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## Teaching Experience

- 2015 – 2018 **Data Analysis and Visualization**, *Lecturer*.
- 2013, 2014, 2017 **Basic Techniques in Computer Graphics**, *Teaching assistant*.
- 2016, 2017 **Geometry Processing**, *Teaching assistant*.
- 2014 – 2016 **Medical Image Processing**, *Teaching assistant*.
- 2017 **Summer School on 3D Printing**, *Lecturer*.
  
- 2018 **Image-based Shadow Generation using Convolutional Neural Networks**, *Bachelor thesis*, Julian Thull.
- 2018 **RNNs vs. CNNs on unstructured 3D Meshes**, *Bachelor thesis*, Alexander Dielen.
- 2018 **Interactive Depth Prediction from RGB Images**, *Bachelor thesis*, Wesley Drechsel.
- 2017 **A Comparison of Deep Learning Techniques for Discriminative Tasks on 3D Shape Collections**, *Bachelor thesis*, Jan Marewski.
- 2016 **Constrained Co-Segmentation of 3D Shapes**, *Master thesis*, Frederic Schiltz.
- 2014 **Performance Evaluation of Feature-Based Shape Descriptors for 3D Models**, *Bachelor thesis*, Joschka Kliege.
- 2014 **Mesh Joinery: Producing Wooden Prototyping Models of 3D Models**, *Bachelor thesis*, Stefan Kohnen.

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## Community Service

- 2015 **Member of the organization committee of the 20th International Symposium on Vision, Modeling and Visualization (VMV 2015)**, <http://vmv2015.rwth-aachen.de>.
- 2015 **Reviewer Computer-Aided Design**, *Full papers*.
- 2015 **Reviewer Pacific Graphics**, *Full papers*.