Curriculum Vitae
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Maxim Tatarchenko

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EDUCATION

Albert-Ludwigs-Universität Freiburg   *Jan. 2016 - now*
PhD student
Computer Vision Lab, advisor Prof. Dr.-Ing. Thomas Brox
Research on scalable 3D deep learning
Expected graduation Feb. 2020

Albert-Ludwigs-Universität Freiburg   *Oct. 2012 - Mar. 2013*
Master in Computer Science   *Apr. 2014 - Dec. 2015*
Final grade 1.0, with distinction

"MATI" - K. I. Tsiolkovsky Russian State Technological University *Sep. 2007 - Jun. 2011*
Bachelor in Applied Mathematics and Informatics
Final grade 4,8, with distinction

PROFESSIONAL EXPERIENCE

Intel Labs, Santa Clara, USA   *May 2017 - Nov. 2017*
Intern
Intelligent Systems Lab, advisor Dr. Vladlen Koltun

Albert-Ludwigs-Universität Freiburg, Germany   *Jun. 2014 - Dec. 2015*
Student Research Assistant
Autonomous Intelligent Systems Lab

GPSCOM, Moscow, Russia   *Dec. 2011 - Apr. 2014*
Software Engineer

Crechet corp., Moscow, Russia   *Jun. 2011 - Dec. 2011*
Software Developer

PUBLICATIONS

Google scholar citations: **496**
Not including publications in Russian prior to 2015.
Referred papers
   1. O. Mees, M. Tatarchenko, T. Brox and W. Burgard. "Self-supervised 3d shape and viewpoint estimation from single images." In IROS, 2019

2. <u>M. Tatarchenko*</u>, S. R. Richter*, R. Ranftl, Z. Li, V. Koltun, and T. Brox. "What do single-view 3d reconstruction networks learn?" In CVPR, 2019
3. A. Böhm, <u>M. Tatarchenko</u>, and T. Falk. "ISOO^V2_DL - semantic instance segmentation of touching and overlapping objects." In ISBI, 2019
4. <u>M. Tatarchenko*</u>, J. Park*, V. Koltun, and Q.-Y. Zhou. "Tangent convolutions for dense prediction in 3d." In CVPR, 2018 **(Selected for spotlight oral)**
5. A. Dosovitskiy, J. T. Springenberg, <u>M. Tatarchenko</u>, and T. Brox. "Learning to generate chairs, tables and cars with convolutional networks." TPAMI, Apr 2017
6. <u>M. Tatarchenko</u>, A. Dosovitskiy, and T. Brox. "Octree generating networks: Efficient convolutional architectures for high-resolution 3d outputs." In ICCV, 2017
7. <u>M. Tatarchenko</u>, A. Dosovitskiy, and T. Brox. "Multi-view 3d models from single images with a convolutional network." In ECCV, 2016 **(Selected for spotlight oral)**
8. B. Frank, M. Ruhnke, <u>M. Tatarchenko</u>, and W. Burgard. "3d-reconstruction of indoor environments from human activity." In ICRA, 2015

<u>Preprints</u>
1. S. Mittal, <u>M. Tatarchenko</u> and T. Brox. "Semi-supervised semantic segmentation with high- and low-level consistency", 2019, https://arxiv.org/abs/1908.05724

<u>PROFESSIONAL SERVICES</u>

Reviewer for IROS 2018, ICCV 2018, CVPR 2018, CVPR 2019 (outstanding reviewer)

<u>TECHNICAL SKILLS</u>

Python, C++, TensorFlow

<u>AWARDS</u>

VDI-Förderpreis   *2016*
Sponsorship award of the Association of German Engineers
Awarded for the master's thesis

<u>MEDIA COVERAGE</u>

3sat: Scobel   *2016*
TV program about AI
Mentioned the work "Multi-view 3D models from single images with CNNs"

<u>PATENTS</u>

Tangent convolutions for 3D data   *2019*
US patent
J. Park, V. Koltun, M. Tatarchenko and Q.-Y. Zhou

<u>ADDITIONAL TRAINING</u>

Machine Learning Summer School *2016*
Cadiz, Spain

<u>LANGUAGE SKILLS</u>

Russian (mother tongue), **English** (advanced), **German** (advanced)

<u>TEACHING EXPERIENCE</u>

<u>Thesis supervision</u>

Olesya Tsapenko *Mar. 2019 - Sep. 2019*
Point cloud colorization using sparse convolutions
Master's thesis

Jan Bechtold *Jun. 2018 - Dec. 2018*
3D object detection using tangent convolutions
Master's thesis

Lukas Wiens *Dec. 2017 - Mar. 2018*
Implementierung der Octree Generating Networks Deep
Learning Architektur in Tensorflow
Bachelor's thesis

Sudhanshu Mittal *Mar. 2017 - Nov. 2017*
Semi-supervised learning for real-world object recognition using
adversarial autoencoders
Master's thesis

Vladislav Tananaev *Mar. 2017 - Jun. 2017*
Semantic segmentation in point clouds with deep networks
Master's thesis

<u>Courses</u>

Statistical pattern recognition *2018 - 2019*
Lecture, selected classes
Lecturer

Computer vision *2018*
Lecture, selected classes
Lecturer

Deep learning for biomedical image analysis *2016 - 2019*
Seminar
Supervisor

Current works in computer vision   *2016 - 2019*
Seminar
Supervisor

Deep learning   *SS 2016*
Lab course
Co-organizer and supervisor

Parking space detection   *SS 2015*
Lab course
Co-organizer

SELECTED TALKS

Not including internal lab talks, not including talks prior to 2016.

What do single-view 3d reconstruction networks learn?   *Jul. 2019*
Dynamic Vision workshop, CVPR, Long Beach

Problems of single-image 3d reconstruction   *Sep. 2018*
Intel Network on Intelligent Systems Workshop, Munich

Deep learning in computer vision and its applications to 3D data *Jun. 2018*
Optics Colloquium, University of Freiburg

Multi-view 3D models from single images with a convolutional network *Dec. 2016*
2nd Christmas Colloquium on Computer Vision, Skoltech, Moscow

Multi-view 3D models from single images with a convolutional network *Oct. 2016*
ECCV, Amsterdam

Graduation speech   *Jul. 2016*
Graduation ceremony, University of Freiburg