

# Paul Voigtlaender

M.Sc. in Computer Science

Bergstraße 46  
52062 Aachen, Germany  
✉ voigtlaender@vision.rwth-aachen.de

## Personal Information

Born 19th October 1991 in Aachen  
Nationality German

## Education and Work Experience

Since 12/2016

**Ph.D. student at the Computer Vision Group**, RWTH Aachen University

Supervisor: Prof. Dr. Bastian Leibe

Topics:

- Video object segmentation using deep convolutional neural networks
- End-to-end deep learning approaches for multi-object tracking

2014–2016

**Master student in Computer Science**, RWTH Aachen University

Overall grade: Excellent (1.0)

Master thesis: “Handwriting Recognition with Large Multidimensional Long Short-Term Memory Recurrent Neural Networks”

2013–2016

**Student assistant at the Human Language Technology and Pattern Recognition Group**, RWTH Aachen University

Topic: Handwriting recognition with recurrent neural networks

2012–2014

**Bachelor student in Computer Science**, RWTH Aachen University

Overall grade: Excellent (1.0)

Bachelor thesis: “Sequence Training of Recurrent Neural Networks for Handwriting Recognition”

2010–2012

**Bachelor student in Scientific Programming**, University of Applied Sciences Aachen

Combined with training as Mathematical Technical Software Developer at the Chair for Medical Information Technology at RWTH Aachen University

2010

**High School Diploma**

Average grade: 1.7 (on a scale of 1–5)

Intensive courses: Mathematics and Physics

## Prizes, Awards & Scholarships

2017

**Berthold Vöcking Master Award**

By the Department of Computer Science of RWTH Aachen University

2016

**IAPR Best Student Paper Award**

Handwriting Recognition with Large Multidimensional Long Short-Term Memory Recurrent Neural Networks

2016

**Winner of the ICFHR2016 Competition on Handwritten Text Recognition on the READ Dataset**

Together with Patrick Doetsch and Hermann Ney

See <http://transcriptorium.eu/~htrcontest/>

2013–2016

**Stipend of the education fund of the RWTH Aachen University (“Deutschlandstipendium”)**

2012–2016

**Inclusion on the Dean’s List containing the top 5% of best students**

## Publications

- 1 Patrick Doetsch, Albert Zeyer, **Paul Voigtlaender**, Ilya Kulikov, Ralf Schlüter, and Hermann Ney. RETURNN: the RWTH extensible training framework for universal recurrent neural networks. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2017.
- 2 Aljoša Ošep, Wolfgang Mehner, **Paul Voigtlaender**, and Bastian Leibe. Track, then decide:

- Category-agnostic vision-based multi-object tracking. In *IEEE International Conference on Robotics and Automation*, 2018. To appear.
- 3 Aljoša Ošep, **Paul Voigtlaender**, Jonathon Luiten, Stefan Breuers, and Bastian Leibe. Large-scale object discovery and detector adaptation from unlabeled video. *arXiv preprint arXiv:1712.08832*, 2017.
  - 4 **Paul Voigtlaender**, Patrick Doetsch, and Hermann Ney. Handwriting recognition with large multidimensional long short-term memory recurrent neural networks. In *International Conference on Frontiers in Handwriting Recognition*, 2016. IAPR Best Student Paper Award.
  - 5 **Paul Voigtlaender**, Patrick Doetsch, Simon Wiesler, Ralf Schlüter, and Hermann Ney. Sequence-discriminative training of recurrent neural networks. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2015.
  - 6 **Paul Voigtlaender** and Bastian Leibe. Online adaptation of convolutional neural networks for the 2017 DAVIS challenge on video object segmentation. In *The 2017 DAVIS Challenge on Video Object Segmentation - CVPR Workshops*, 2017.
  - 7 **Paul Voigtlaender** and Bastian Leibe. Online adaptation of convolutional neural networks for video object segmentation. In *British Machine Vision Conference*, 2017.
  - 8 Albert Zeyer, Patrick Doetsch, **Paul Voigtlaender**, Ralf Schlüter, and Hermann Ney. A comprehensive study of deep bidirectional LSTM RNNs for acoustic modeling in speech recognition. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2017.