Francis Engelmann

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Current Position

- **Ph.D. Student**, Computer Vision Group, RWTH Aachen, Germany.   06/2014 - present
  Advisor: Prof. Dr. Bastian Leibe
  Research interests: Computer Vision, Machine Learning

Education

- **M.Sc. in Computer Science**, RWTH Aachen University.   10/2011 - 01/2014
  Minor: Electrical Engineering. German Grade: 1.5 (A)
  Thesis topic: *"Multiple Target Tracking for Marker-less Augmented Reality"*
- **B.Sc. in Computer Science**, RWTH Aachen University.   10/2008 - 10/2011
  Minor: Electrical Engineering. German Grade: 1.4 (A)
  Thesis topic: *"FabScan: Affordable 3D Laser Scanner of Physical Objects"*

Publications

- **Francis Engelmann**, Theodora Kontogianni, Alexander Hermans, Bastian Leibe
  Exploring Spatial Context for 3D Semantic Segmentation of Point Clouds
  International Conference on Applications of Computer Vision (ICCV), 3DRMS Workshop, 2017.

- **Francis Engelmann**, Jörg Stückler, Bastian Leibe
  SAMP: Shape and Motion Priors for 4D Vehicle Reconstruction
  Winter Conference on Applications of Computer Vision (WACV), 2017.

- Anton Kasyanov, **Francis Engelmann**, Jörg Stückler, Bastian Leibe
  Keyframe-Based Visual-Inertial Online SLAM with Relocalization
  International Conference on Intelligent Robots and Systems (IROS), 2017.

- **Francis Engelmann**, Jörg Stückler, Bastian Leibe
  Joint Object Pose Estimation and Shape Reconstruction in Street Scenes Using 3D Shape Priors
  German Conference on Pattern Recognition (GCPR), 2016. **(Oral Presentation)**

- Aljoša Ošep, Alexander Hermans, **Francis Engelmann**, Dirk Klosterman, Markus Mathias, Bastian Leibe
  Multi-Scale Object Candidates for Generic Object Tracking in Street Scenes
  International Conference on Robotics and Automation (ICRA), 2015.

Teaching Experience

- **Teaching Assistant**: Machine Learning (PDE, SVM, Random Forests, CNN, RNN)   Winter 2017
- **Teaching Assistant**: Computer Vision 2 (Visual Odometry, SLAM, Dense Reconstruction)   Summer 2016
- **Teaching Assistant**: Introduction to Computer Science   Winter 2014, 2016

Work Experience

- **Apple Inc.** Maps 3D Vision Intern, Cupertino, California, USA   04/2018 - 08/2018
  Applying computer vision and machine learning techniques on 3D semantic segmentation.
- **Computer Vision Group**, Student Research Assistant, RWTH Aachen University.   10/2012 - 05/2013
  Development of visualization tool for pedestrian tracking pipeline (C++, OpenGL3.0).
- **FabLab Aachen**, Student Research Assistant, RWTH Aachen University.   11/2011 - 11/2013
  Maintaining the FabScan software, a 3D laser scanner created during my bachelor thesis. (Cocoa/Obj-C, Qt/C++).
  Design and implementation of extrinsic camera calibration mounted on laser-cutters using fiducial markers.

Programming Languages and Software

- C/C++, Python, Objective-C, MatLab, Java.
- Boost, Ceres-Solver, Eigen, OpenCV, PCL, TensorFlow, VTK, Qt.