

# Torsten Sattler

## Curriculum Vitae

**Senior Researcher**

Czech Institute of Informatics, Robotics and Cybernetics

Czech Technical University in Prague

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📄 <https://tsattler.github.io/>

## Employment

- 07/2020 – present **Senior Researcher**, *Czech Institute of Informatics, Robotics and Cybernetics, Czech Technical University in Prague, Czech Republic.*
- 01/2019 – 06/2021 **Associate Professor**, *Department for Electrical Engineering, Chalmers University of Technology, Sweden, on unpaid leave and have essentially left Chalmers.*
- 12/2015 – 12/2018 **Senior Researcher (Oberassistent)**, *Computer Vision and Geometry Group (CVG), Institute for Visual Computing, ETH Zürich, Switzerland.*
- 07/2016 – 06/2018 **Deputy of Prof. Marc Pollefeys**, *Computer Vision and Geometry Group (CVG), Institute for Visual Computing, ETH Zürich, Switzerland.*  
Deputy of Prof. Marc Pollefeys during his 2 year sabbatical at Microsoft (Redmond, USA), managing the CVG lab in Prof. Pollefeys absence
- 12/2013 – 11/2015 **Postdoctoral Researcher**, *Computer Vision and Geometry Group (CVG), Institute for Visual Computing, ETH Zürich, Switzerland.*
- 05/2013 – 08/2013 **Software Engineering Intern**, *Google, Los Angeles, United States of America.*  
Summer internship with the Visual Search Group

## Education

- 07/2008 – 10/2013 **PhD (Dr. rer. nat.)**, *Computer Graphics & Multimedia Group, RWTH Aachen University, Germany.*  
Supervisors: Prof. Dr. Leif Kobbelt, Prof. Dr. Bastian Leibe  
Thesis: Efficient & Effective Image-Based Localization  
Date of defense / oral examination: 25th October 2013, **degree awarded:** 20th May 2014
- 09/2003 – 06/2008 **Diploma (equiv. M.Sc.) in Computer Science**, *RWTH Aachen University, Germany.*  
Thesis: Adhoc-Network Formation with Locality Considerations  
Graduated with distinction
- 09/2006 – 01/2007 **Unitech Exchange Student**, *Delft University of Technology, the Netherlands.*  
Selected to participate in the Unitech International Exchange Program.
- 08/1993 – 06/2002 **Gymnasium (Academic High School)**, *Städtisches Gymnasium Haan, Haan, Germany.*

## Awards & Honors

Outstanding Reviewer Awards ICCV 2015, CVPR 2015, ECCV 2016, CVPR 2017, CVPR 2019, ICCV 2019, CVPR 2020, ICLR 2021, CVPR 2021

- 2021 **Best Paper Candidate**, *Conference on Computer Vision and Pattern Recognition (CVPR)*, the paper "Human POSEitioning System (HPS): 3D Human Pose Estimation and Self-Localization in Large Scenes From Body-Mounted Sensors" was selected as a candidate for the best paper award; 32 out of 1661 accepted papers were shortlisted as candidates.

- 2019 **Best Paper Award**, *Photogrammetric Image Analysis (PIA)*, awarded for the paper "Image-to-image translation for enhanced feature matching, image retrieval and visual localization".
- Best Paper Honorable Mention**, *IEEE Winter Conference on Applications of Computer Vision (WACV)*, awarded for the paper "DGC-Net: Dense Geometric Correspondence Network".
- 2018 **Best Industrial Paper Award**, *Swedish Symposium on Image Analysis*, awarded for the presentation of the CVPR 2018 paper "Benchmarking 6DOF Outdoor Visual Localization in Changing Conditions".
- 2015 **Best Systems Paper Finalist**, *Robotics: Science and Systems (RSS)*, nominated with the paper "Get Out of My Lab: Large-scale, Real-Time Visual-Inertial Localization".
- 2013 **Best Paper Award**, *ICCV 2013 Workshop on Big Data in 3D Computer Vision*, awarded for the paper "A Scalable Collaborative Online System for City Reconstruction".
- 2008-2010 **Fellow of the DFG (German Research Foundation)**, *Research Training Group "Software für mobile Kommunikationssysteme" ("Software for Mobile Communication Systems") (GRK 632)*, RWTH Aachen University, Germany.
- 2009 **Springorum-Medal**, *RWTH Aachen University*, Germany.  
Award for graduating with distinction from RWTH Aachen University.

## Professional Activities

- program chair **GCPR 2020, ECCV 2024**
- area chair **VMV 2015, CVPR 2018, 3DV 2018, GCPR 2018, 3DV 2019, ECCV 2020, ACCV 2020, 3DV 2020, WACV 2021, ICCV 2021, 3DV 2021, CVPR 2022**
- associate editor **ICRA 2019, ICRA 2020, IEEE RA-L**
- int. program committee **EuroGraphics 2020**
- others workshop chair CVPR 2021, co-organizer of the [3DGV seminar series](#)
- membership European Laboratory for Learning and Intelligent Systems (ELLIS), IEEE, IEEE Computer Society, Computer Vision Foundation (CVF)
- tutorial **CVPR 2020: How to write a good review?**, with Laura Leal-Taixe
- organization **ICCV 2019: Large-Scale Visual Place Recognition and Image-Based Localization** (main organizer), with Erich Brachmann, Giorgos Tolias
- ECCV 2018: Visual Localization: Feature-based vs. Learned Approaches** (main organizer), with Erich Brachmann
- CVPR 2017: Large-Scale Visual Place Recognition and Image-Based Localization** (main organizer), with Alex Kendall, Giorgos Tolias, Akihiko Torii
- CVPR 2015: Large-Scale Visual Place Recognition and Image-Based Localization** (main organizer), with Akihiko Torii
- CVPR 2014: Large-Scale Visual Place Recognition and Image-Based Localization** (main organizer), with Akihiko Torii

workshop organization **ECCV 2020: Long-Term Visual Localization under Changing Conditions** (main organizer), with Vassileios Balntas, Lars Hammarstrand, Huub Heijnen, Fredrik Kahl, Fredrik Kahl, Will Maddern, Krystian Mikolajczyk, Tomas Pajdla, Marc Pollefeys, Johannes L. Schönberger, Josef Sivic, Pablo Speciale, Carl Toft, Akihiko Torii  
**CVPR 2020: Joint workshop on Long Term Visual Localization, Visual Odometry and Geometric and Learning-based SLAM**, with Vassileios Balntas, Lars Hammarstrand, Huub Heijnen, Fredrik Kahl, Fredrik Kahl, Will Maddern, Krystian Mikolajczyk, Tomas Pajdla, Marc Pollefeys, Johannes L. Schönberger, Josef Sivic, Pablo Speciale, Carl Toft, Akihiko Torii, Guoyu Lu, Friedrich Fraundorfer, Yan Yan, Nicu Sebe, Chandra Kambhampettu, Sebastian Scherer, Ashish Kapoor, Wenshan Wang  
**CVPR 2019: Long-Term Visual Localization under Changing Conditions** (main organizer), with Vassileios Balntas, Lars Hammarstrand, Huub Heijnen, Fredrik Kahl, Will Maddern, Krystian Mikolajczyk, Tomas Pajdla, Marc Pollefeys, Johannes L. Schönberger, Pablo Speciale, Josef Sivic, Carl Toft, Akihiko Torii  
*Landmark Recognition*, with Bohyung Han, Andre Araujo, Bingyi Cao, Shih-Fu Chang, Jack Sim, Ondrej Chum, Giorgos Tolias, Tobias Weyand, Xu Zhang  
**ECCV 2018: The 2nd Workshop on 3D Reconstruction Meets Semantics: Integration of 3D Vision with Recognition and Learning**, with Radim Tylecek, Thomas Brox, Marc Pollefeys, Robert B. Fisher, Theo Gevers  
**CVPR 2018: Robust Vision Challenge**, with Andreas Geiger, Carsten Rother, Matthias Niessner, Marc Pollefeys, Daniel Scharstein, Joel Janai, Jonas Wulff, Thomas Schöps, Johannes Schönberger, Oliver Zendel, Katrin Honauer, Jonas Uhrig  
*Large-Scale Landmark Recognition: A Challenge*, with Bohyung Han, Andre Araujo, Shih-Fu Chang, Ondrej Chum, Jack Sim, Giorgos Tolias, Tobias Weyand, Xu Zhang  
**ICCV 2017: 3D Reconstruction meets Semantics** (main organizer), with Thomas Brox, Robert Fisher, Mark Pollefeys, Radim Tylecek  
**CVPR 2015: Visual Place Recognition in Changing Environments**, with Niko Sünderhauf, Michael Milford, Peter Corke

reviewer CVPR, ICCV, ECCV, PAMI, IJCV, SIGGRAPH, SIGGRAPH Asia, ACCV, 3DV, ICLR, ICRA, IROS, ISMAR, CVIU, ISPRS, VMV, TIP, NeurIPS

## Invited Talks and Lectures

09/28/2021 Keynote at **IROS 2021**, virtual  
06/20/2021 **CVPR 2021 Workshop "4th International Workshop on Visual Odometry & Computer Vision Applications Based on Location Clues"**, virtual  
06/07/2021 **Mixed Reality Seminar at Microsoft**, virtual  
10/09/2020 **Facebook Reality Labs**, virtual  
06/14/2020 **CVPR 2020 Workshop "Vision for all Seasons: Adverse Weather and Lighting Conditions"**, virtual  
05/26/2020 **GdR ISIS seminar on "3D vision and learning"**, virtual  
11/27/2019 **1st "AI for Robotics" Workshop at Naver Labs Europe**, Grenoble, France  
11/02/2019 **ICCV 2019 Workshop "AutoNUE: Autonomous Navigation in Unconstrained Environments"**, Seoul, South Korea  
09/23/2019 **Istituto Italiano di Tecnologia**, Genova, Italy  
08/26/2019 **Czech Institute of Informatics, Robotics and Cybernetics**, Prague, Czech Republic  
07/09/2019 lecture at the **International Computer Vision Summer School**, Sicily, Italy  
06/16/2019 **CVPR 2019 Workshop "Image Matching: Local Features & Beyond"**, Long Beach, USA

- 10/12/2018 **ISPRS Technical Commission I Midterm Symposium on "Innovative Sensing - From Sensors to Methods and Applications"**, Karlsruhe, Germany
- 07/24/2018 **Czech Institute of Informatics, Robotics and Cybernetics**, Prague, Czech Republic
- 05/24/2016 **ICRA 2018 Workshop "Long-term autonomy and deployment of intelligent robots in the real-world"**, Brisbane, Australia
- 05/21/2016 **ICRA 2018 Workshop "Representing a Complex World: Perception, Inference, and Learning for Joint Semantic, Geometric, and Physical Understanding"**, Brisbane, Australia
- 03/04/2018 **Facebook**, Seattle, USA
- 12/06/2017 **IST Austria**, Klosterneuburg, Austria
- 12/05/2017 **IEEE Swiss Circuits and Systems "Real-time deep learning" Workshop**, Zurich, Switzerland
- 09/13/2017 **56th Photogrammetric Week, University of Stuttgart**, Stuttgart, Germany
- 08/21/2017 **Czech Institute of Informatics, Robotics and Cybernetics**, Prague, Czech Republic
- 07/07/2017 lecture at the **Pre-doc Summer School on Learning Systems**, Zurich, Switzerland
- 03/11/2017 **Czech Institute of Informatics, Robotics and Cybernetics**, Prague, Czech Republic
- 01/19/2017 **TU Munich**, Munich, Germany
- 12/06/2016 **University of North Carolina at Chapel Hill**, Chapel Hill, USA
- 12/05/2016 **Stevens Institute of Technology**, Hoboken, USA
- 12/02/2016 **New York University**, New York, USA
- 11/30/2016 **Google**, Seattle, USA
- 11/29/2016 **Microsoft Research**, Seattle, USA
- 11/28/2016 **Facebook**, Seattle, USA
- 07/01/2016 **CVPR 2016 Workshop "Visual Analysis of Satellite to Street Imagery"**, Las Vegas, USA
- 05/03/2016 **Max-Planck Institute Informatics**, Saarbrücken, Germany
- 04/19/2016 **Microsoft Research**, Cambridge, UK
- 04/18/2016 **University of Cambridge**, Cambridge, UK
- 04/15/2016 **Imperial College London**, London, UK
- 04/14/2016 **University College London**, London, UK
- 12/18/2015 **ICCV 2015 Workshop "The Future of Real-Time SLAM: Sensors, Processors, Representations, and Algorithms"**, Santiago de Chile, Chile
- 11/10/2015 **Dagstuhl Seminar "Vision for Autonomous Vehicles and Probes"**, Dagstuhl, Germany
- 10/16/2014 **35th Pattern Recognition and Computer Vision Colloquium**, Prague, Czech Republic
- 04/24/2014 **Imperial College London**, London, UK
- 11/06/2013 **INRIA Willow / École Normale Supérieure**, Paris, France
- 08/19/2013 **Cornell University**, Ithaca, USA
- 12/13/2012 **Max-Planck Institute Informatics**, Saarbrücken, Germany

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## Media

- Articles **Mobile 3D Mapping:** [ETH News](#), [NBC News](#)  
**CVPR 2019 Workshop on Long-Term Visual Localization:** [Robin.ly](#), [Computer Vision News](#)

Videos Talk: [BMVA technical meeting: Computer Vision for Automotive Applications - the road ahead](#)  
Tutorial: [CVPR 2017](#)  
Project documentary: [Cutting Hedge Research - The Trimbot2020 Project](#)

## Teaching Experience

### Lectures

- Spring 2021 *Geometry of Computer Vision and Graphics* (graduate course), co-taught with Tomas Pajdla
- Spring 2020 *Image Analysis* (graduate course)
- Spring 2019 *Image Analysis* (graduate course)
- Spring 2018 *3D Vision* (graduate course), co-taught with Martin R. Oswald
- Spring 2017 *3D Vision* (graduate course), co-taught with Andreas Geiger
- Spring 2016 *3D Vision* (graduate course), co-taught with Marc Pollefeys
- Spring 2015 *3D Photography* (graduate course), co-taught with Marc Pollefeys
- Winter 2012/13 *Basic Techniques in Computer Graphics* (graduate course), teaching assistant, co-taught part of the lecture
- Winter 2011/12 *Basic Techniques in Computer Graphics* (graduate course), teaching assistant
- Winter 2009/10 *Basic Techniques in Computer Graphics* (graduate course), teaching assistant
- Winter 2008/09 *Basic Techniques in Computer Graphics* (graduate course), teaching assistant
- Summer 2007 *Efficient Algorithms 2* (graduate course), teaching assistant
- Winter 2005/06 *Computability and Complexity* (undergraduate course), teaching assistant

At ETH Zurich, students were asked to grade the performance of their lecturers on a scale of 1 to 5, with 5 being the best grade. The average grades I received for the 3D Photography (2015) and 3D Vision (2017) courses were 4.1 and 3.9, respectively. No evaluation was conducted for the 3D Vision lecture in 2016. For the Image Analysis course in 2019, the mean and median overall grades for the course were 4.4 and 5.0, respectively, on a scale from 1 (worst) to 5 (best). The mean and median scores for the teaching of the course were 4.16 and 5.0.

Evaluation sheets are available on request.

### Seminars

- Summer 2012 *Computer Graphics and Computer Vision*, tutor
- Summer 2011 *Current Topics in Computer Graphics, Geometry Processing, and Computer Vision*, tutor
- Winter 2010/11 *Computer Graphics and Computer Vision*, tutor
- Summer 2010 *Computer Graphics and Computer Vision*, tutor
- Summer 2009 *Current Topics in Computer Graphics, Geometry Processing, and Computer Vision*, tutor

### (Co-)Supervision of PhD Students

- Varun Burde* (2021 – ), Czech Technical University in Prague, co-advised with Pavel Burget (starting 09/2021)
- Jonas Kulhanek* (2021 – ), Czech Technical University in Prague, main advisor (starting 09/2021)
- Maxime Pietrantoni* (2021 – ), Czech Technical University in Prague, main advisor
- Vojtech Panek* (2020 – ), Czech Technical University in Prague, main advisor (since 2021)
- Kunal Chelani* (2020 – ), Chalmers University of Technology, main advisor

*Carl Toft* (2019 – 2020), Chalmers University of Technology, 2nd advisor (main advisor: Fredrik Kahl)

*Måns Larsson* (2019 – 2020), Chalmers University of Technology, 2nd advisor (main advisor: Fredrik Kahl)

While I was not an official supervisor, I was **de-facto providing day-to-day supervision and guidance** to the following PhD students:

*Federico* (2014 – 2018), ETH Zurich, PhD advisor: Marc Pollefeys

*Camposeco*

*Paulsen*

*Dominik Honegger* (2016 – 2018), ETH Zurich, PhD advisor: Marc Pollefeys

*Peidong Liu* (2016 – 2018), ETH Zurich, PhD advisor: Marc Pollefeys

*Johannes L. Schönberger* (2016 – 2018), ETH Zurich, PhD advisor: Marc Pollefeys

*Thomas Schöps* (2014 – 2019), ETH Zurich, PhD advisor: Marc Pollefeys

*Filip Srajer* (2016 – 2017), ETH Zurich, PhD advisor: Marc Pollefeys

*Andrea Cohen* (2014 – 2016), ETH Zurich, PhD advisor: Marc Pollefeys

*Christian Häne* (2014 – 2015), ETH Zurich, PhD advisor: Marc Pollefeys

### **(Co-)Supervision of PostDocs**

Day-to-day supervision as a senior researchers as part of the projects in which I was a (co-)PI:

*Zhaopeng Cui* (2017 – 2018), ETH Zurich, PostDoc advisor: Marc Pollefeys

*Andrea Cohen* (2016 – 2018), ETH Zurich, PostDoc advisor: Marc Pollefeys

### **PhD Committee Memberships & Thesis Reviews**

2021 *Jan Brecha* (Brno University of Technology, Czech Republic), committee member & thesis reviewer

*Janine Thoma* (ETH Zurich, Switzerland), committee member & thesis reviewer

2020 *Assia Benbihi* (Georgia Tech Lorraine, France), committee member & thesis reviewer

*Nikolaus Mayer* (Albert-Ludwigs-Universität Freiburg, Germany), committee member & thesis reviewer

*Fabian Schenk* (Graz University of Technology, Austria), committee member & thesis reviewer

*Thomas Schöps* (ETH Zurich, Switzerland), committee member & thesis reviewer

*Hu Sixing* (National University of Singapore, Singapore), PhD thesis reviewer

2019 *Nathan Piasco* (Universite Bourgogne Franche-Comte, France), committee member & thesis reviewer

*Markus Müller* (Karlsruhe Institute of Technology, Germany), committee member & thesis reviewer

2018 *Matteo Poggi* (University of Bologna, Italy), PhD thesis reviewer

2017 *Petr Gronat* (Czech Technical University in Prague, Czech Republic), committee member & thesis reviewer

### **Master Theses**

- 2020 *Admir Alihodza, Jonas Hejderup*: Indoor static 2D map generation and object detection using deep learning and computer vision, academic supervisor and examiner at Chalmers University of Technology for an industrial Master thesis at Volvo  
*Philip Anderberg, Fanny Liesén Gullmander*, Segmentation of Image Sequences using SuperPixel Sampling Networks, academic supervisor and examiner at Chalmers University of Technology for an industrial Master thesis at Volvo  
*Zongshang Pang*, Using Stylization to Improve Visual Localization, at Chalmers University of Technology  
*Ara Jafarzadeh*, Localization in Changing Environments: A More Robust Semantic Visual Localization Approach, at Chalmers University of Technology  
*Celine Back, Ivana Pepic*, Simulating medical image data using generative adversarial networks (GANs), academic supervisor and examiner at Chalmers University of Technology for an industrial Master thesis at QRTECH  
*Filip Franson, Max Wedenmark*, Quality inspection using machine learning techniques for pose estimation, academic supervisor and examiner at Chalmers University of Technology for an industrial Master thesis at Volvo  
*Adam Breitholz*, Understanding the Limitations of PoseNet, co-supervised with Laura Leal-Taixé (TU Munich), at Chalmers University of Technology
- 2019 *Jonas Garsten, Ivar Wikenstedt*, 6DOF camera localization through a short image sequence, at Chalmers University of Technology  
*Rasmus Lundin, John Wedin*, Scalable deep visual localization, co-supervised with Eric Brachmann (TU Dresden), at Chalmers University of Technology  
*Earl Fernando Panimayam Fernando*, Prioritized 2D-3D Matching for Visual Localization Revisited, at Chalmers University of Technology  
*Guoxiang Zhou*, Visual Semantic Odometry in Dynamic Environments, co-supervised with Zhaopeng Cui (ETH Zurich), at ETH Zurich  
*Tomasz Jerzy Firynowicz*, Visual localization under challenging conditions, co-supervised with Zhaopeng Cui (ETH Zurich) and Marcel Geppert (ETH Zurich), at ETH Zurich
- 2018 *Antoni Rosinol Vidal*, Exploiting Regular Structures in SLAM, co-supervised with Luca Carlone (MIT), at MIT  
*Qixuan Zhang*, Global Structure-from-Motion from Learned Relative Poses, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich
- 2017 *Qunjie Zhou*, Learning Relative Pose Estimation for Visual Localization, co-supervised with Laura Leal-Taixé (TU Munich), at TU Munich  
*Nektarios Lianos*, Semantic Simultaneous Localization and Mapping, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich  
*Krzysztof Lis*, Learning Viewpoint Invariant Patches, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich  
*Benjamin Steger*, Building Virtual Scenes from the Real-World for Virtual Reality, co-supervised with Filip Srajer (ETH Zurich), at ETH Zurich  
*Marcel Geppert*, Simultaneous Localization and Mapping using Generalized Cameras, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich  
*Andrin Jenal*, 3D Tree Net, co-supervised with Nikolay Savinov (ETH Zurich) and Gaurav Chaurasia (Disney Research Zurich), at Disney Research Zurich
- 2016 *Hans Hardmeier*, Comparison of handcrafted vs. learned feature descriptors for Structure-from-Motion, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich
- 2015 *Ioannis Marris*, Incremental and Adaptive 3D Reconstruction in the Large, co-supervised with Amael Delaunoy (ETH Zurich), at ETH Zurich
- 2013 *Andreas Haese*, 2.5D Capture to Go, at RWTH Aachen University

- 2012 *Guoyu Lu*, Large-scale image-based localization using learnt projection for local features, at RWTH Aachen University  
*Sven Middelberg*, Hybrid Server-Client Image-Based Localization and Tracking for Mobile Devices, at RWTH Aachen University

### **Bachelor Theses**

- 2017 *Niklaus Bamert*, Efficient Matching Via Hashing for (Close-to) Real-Time Dense 3D Reconstruction, at ETH Zurich
- 2016 *Luzi Sennhauser*, Image-Based Localization using Deep Learning, co-supervised with Johannes L. Schönberger (ETH Zurich), at ETH Zurich
- 2012 *Andre Tebart*, Augmented Reality Game on Android Tablets, co-supervised with Dominik Sibbing (RWTH Aachen University), at (RWTH Aachen University)  
*Ole Untzelmann*, City-Reconstructions by crowdsourcing (RWTH Aachen University)
- 2011 *Falk Pollok*, Real-Time Object Tracking for Augmented Reality on Mobile Devices (RWTH Aachen University)
- 2009 *Eduard Feicho*, Real-Time Feature Extraction and Matching on Mobile Devices (RWTH Aachen University)

### **Semester Theses**

- 2018 *Niklaus D. Bamert*, Two-stage (semi-)dense real-time 3D depth estimation, at ETH Zurich  
*Nadja Kämpf*, Two-stage (semi-)dense real-time 3D depth estimation, Studies in Mechatronics Thesis, at ETH Zurich
- 2017 *Matteo Ruello*, SemanticPaint on HoloLens, co-supervised with Filip Srajer (ETH Zurich), at ETH Zurich
- 2016 *Nadine Rüegg*, Synchronizing Cameras from Motion, at ETH Zurich

## **Publications**

I mainly publish my papers in the top-tier conferences in Computer Vision (ICCV (12 papers), ECCV (7 papers), and CVPR (15 papers)). Compared with other fields that focus on journal publications, the main focus in the field of Computer Vision is on conference publications. The main conferences are highly competitive with acceptance rates of below 30%, with less than 5% of all submissions being accepted for oral presentations. Journals typically have long review cycles and journal articles are often extensions of conference papers. Publications at the top-conferences are thus considered at least as important as publications in journals. For example, CVPR is the highest-ranking IEEE publication in Engineering and Computer Science and the 10th highest-ranking publication overall according to Google Scholar. Similarly, CVPR and ICCV rank first and third among all publications in Computer Vision and Pattern Recognition. Based on the conference H5-index, ECCV, ICCV, and CVPR are higher ranked than the highest-ranking journal in the field (IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)).

According to Google Scholar, my work has received more than 5700 citations, with 21 papers receiving more than 100 citations, and 29 papers receiving more than 50 citations. My current h-index is 35 and my i10 index (number of publications with 10 or more citations) is 63.

Besides the top-tier Computer Vision conferences, I also publish my work at the main robotics venues (ICRA (6 papers), IROS (4 papers), RSS (1 paper)).

All conference, workshop, and journal publications are peer-reviewed. The three most important publications are marked with an \* below.

### **Journal Publications (Peer Reviewed)**

H. Taira, M. Okutomi, T. Sattler, M. Cimpoi, M. Pollefeys, J. Sivic, T. Pajdla, and A. Torii. "InLoc: Indoor Visual Localization with Dense Matching and View Synthesis". In: *IEEE Trans. on Pattern Anal. and Mach. Intell. (PAMI)* 43.4 (2021), pp. 1293–1307.



- A. Torii, H. Taira, J. Sivic, M. Pollefeys, M. Okutomi, T. Pajdla, and T. Sattler. "Are Large-Scale 3D Models Really Necessary for Accurate Visual Localization?" In: *IEEE Trans. on Pattern Anal. and Mach. Intell. (PAMI)* 43.3 (2021), pp. 814–829.
- Z. Zhang, T. Sattler, and D. Scaramuzza. "Reference Pose Generation for Long-term Visual Localization via Learned Features and View Synthesis". In: *International Journal of Computer Vision (IJCV), Special Issue on Performance Evaluation in Computer Vision* 129 (2021), pp. 821–844.
- P. Liu, J. Janai, M. Pollefeys, T. Sattler, and A. Geiger. "Self-Supervised Linear Motion Deblurring". In: *IEEE Robotics and Automation Letters (RA-L)* 5.2 (2020), pp. 2475–2482.
- S. Lynen, B. Zeisl, D. Aiger, M. Bosse, J. Hesch, M. Pollefeys, R. Siegwart, and T. Sattler. "Large-scale, real-time visual-inertial localization revisited". In: *The Int. J. of Robotics Research (IJRR)* 39.9 (2020), pp. 1061–1084.
- T. Schöps, T. Sattler, and M. Pollefeys. "SurfelMeshing: Online Surfel-Based Mesh Reconstruction". In: *IEEE Trans. on Pattern Anal. and Mach. Intell. (PAMI)* 42.10 (2020), pp. 2494–2507.
- C. Toft, W. Maddern, A. Torii, L. Hammarstrand, E. Stenborg, D. Safari, M. Okutomi, M. Pollefeys, J. Sivic, T. Pajdla, F. Kahl, and T. Sattler. "Long-Term Visual Localization Revisited". In: *IEEE Trans. on Pattern Anal. and Mach. Intell. (PAMI)* (2020 (accepted)).
- C. Häne, L. Heng, G. H. Lee, F. Fraundorfer, P. Furgale, T. Sattler, and M. Pollefeys. "3D visual perception for self-driving cars using a multi-camera system: Calibration, mapping, localization, and obstacle detection". In: *Image and Vision Computing (IMAVIS), Special Issue: Automotive Vision: Challenges, Trends, Technologies and Systems for Vision-Based Intelligent Vehicles* 68 (2017), pp. 14–27.
- \* T. Sattler, B. Leibe, and L. Kobbelt. "Efficient & Effective Prioritized Matching for Large-Scale Image-Based Localization". In: *IEEE Trans. on Pattern Anal. and Mach. Intell. (PAMI)* 39.9 (2017), pp. 1744–1756.
- T. Schöps, T. Sattler, C. Häne, and M. Pollefeys. "Large-scale outdoor 3D reconstruction on a mobile device". In: *Computer Vision and Image Understanding (CVIU)* 157.C (2017), pp. 151–166.

### Conference Publications (Peer Reviewed)

- S. Bhayani, T. Sattler, D. Barath, P. Beliansky, J. Heikkila, and Z. Kukulova. "Calibrated and Partially Calibrated Semi-Generalized Homographies". In: *International Conference on Computer Vision (ICCV)*. 2021.
- E. Brachmann, M. Humenberger, C. Rother, and T. Sattler. "On the Limits of Pseudo Ground Truth in Visual Camera Re-localisation". In: *International Conference on Computer Vision (ICCV)*. 2021.
- K. Chelani, F. Kahl, and T. Sattler. "How Privacy-Preserving are Line Clouds? Recovering Scene Details from 3D Lines". In: *The IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*. 2021.
- V. Guzov, A. Mir, T. Sattler, and G. Pons-Moll. "Human POSEitioning System (HPS): 3D Human Pose Estimation and Self-localization in Large Scenes from Body-Mounted Sensors". In: *The IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*. 2021.
- A. Jafarzadeh, M. L. Antequera, P. Gargallo, Y. Kuang, C. Toft, F. Kahl, and T. Sattler. "CrowdDriven: A New Challenging Dataset for Outdoor Visual Localization". In: *International Conference on Computer Vision (ICCV)*. 2021.
- P.-E. Sarlin, A. Unagar, M. Larsson, H. Germain, C. Toft, V. Larsson, M. Pollefeys, V. Lepetit, L. Hammarstrand, F. Kahl, and T. Sattler. "Back to the Feature: Learning Robust Camera Localization from Pixels to Pose". In: *The IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*. 2021.
- Q. Zhou, T. Sattler, and L. Leal-Taixé. "Patch2Pix: Epipolar-Guided Pixel-Level Correspondences". In: *The IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*. 2021.
- D. Barath, M. Polic, W. Förstner, T. Sattler, T. Pajdla, and Z. Kukulova. "Making Affine Correspondences Work in Camera Geometry Computation". In: *European Conference on Computer Vision (ECCV)*. 2020.
- L. Cavalli, V. Larsson, M. R. Oswald, T. Sattler, and M. Pollefeys. "Handcrafted Outlier Detection Revisited". In: *European Conference on Computer Vision (ECCV)*. 2020.

- Y. Lin, V. Larsson, M. Geppert, Z. Kukulova, M. Pollefeys, and T. Sattler. "Infrastructure-based Multi-Camera Calibration using Radial Projections". In: *European Conference on Computer Vision (ECCV)*. 2020.
- N. Pion, M. Humenberger, G. Csurka, Y. Cabon, and T. Sattler. "Benchmarking Image Retrieval for Visual Localization". In: *International Conference on 3D Vision (3DV)*. 2020.
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