

Eric Brachmann
Senior Staff Scientist
Niantic Spatial
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Degrees:

Dr. rer. nat. (PhD equivalent) at TU Dresden, 2018
in the field of computer vision and machine learning
advised by Prof. Gumhold (TU Dresden) and Prof. Rother (University Heidelberg)
awarded with *Summa Cum Laude*

Diplom (Master equivalent) at TU Dresden, 2012
in media computer science
passed with distinction

Research Background:

Since 2025 Researcher at Niantic Spatial
2020 - 2025 Researcher at Niantic
2019 - 2020 Guest at the Leibnitz Universität Hannover in the group of Prof. Rosenhahn
2017 - 2020 Research Associate in the VL Lab of Prof. Rother at University Heidelberg
2017 - 2018 Guest at the Center for Systems Biology Dresden in the group of Florian Jug
09/2016 - Research Visit, Microsoft Research Cambridge
11/2016 (Host: Sebastian Nowozin)

2012-2017 Research associate and PhD student at TU Dresden,
 partly Computer Graphics and Visualization Lab of Prof. Gumhold,
 partly Computer Vision Lab Dresden of Prof. Rother

2006 - 2012 Studies of media and computer science at TU Dresden

Reviewing Activities:

Area Chair:

- CVPR 25/26
- ECCV 24
- WACV 24

Outstanding Reviewer:

- CVPR 19
- NeurIPS 19 (Top 400)
- ICCV 21

Reviewer:

- CVPR 18/19/20/21/22
- ICCV 19/21/23/25
- ECCV 18/22
- NeurIPS 19/25
- TPAMI 18/19/20/21/22/23/24
- IJCV 18
- JMLR 19
- ICRA 18/19/20/21/23
- IROS 17/18/19/20/21/22/23
- RA-L 17/19/20/21/23
- T-RO 20/23
- GCPR 15/17/18

Tutorials and Workshops:

Co-Organizer of Visual Localization Tutorials at

- ECCV 18,
- ICCV 19/21,
- CVPR 23

Co-Organizer of the RANSAC in 2025 Tutorial

- ICCV 25

Co-Organizer of the Intl. Workshop on Recovering 6D Object Pose (R6D), 5th-10th edition,

- ICCV 19/23/25,
- ECCV 20/22/24

Co-Organizer of the Map-free Visual Relocalization Workshop and Challenge

- ECCV 24

Talks:

"Pushing the Boundaries of Structure-from-motion with Machine Learning"

- 49th Pattern Recognition and Computer Vision Colloquium, CTU Prague, 2025
- IMAGINE Seminar, ENPC Paris, 2025
- heidelberg.ai, 2025

"Scene Coordinate Regression -

Reimagining Structure-from-Motion without Image-to-Image Matching"

- Guest Lecture in Advances in Computer Vision class, MIT 2025
- Guest Lecture in Geometry-based Methods in Vision class, CMU 2024

"Reimagining Structure-from-Motion without Image-to-Image Matching"

- DFKI Augmented Vision Workshop 2024

"Metric Depth for Instant AR"

- Third Monocular Depth Estimation Challenge, CVPR Workshop, 2024

"Learning Map Representations for Visual Relocalization"

- UIUC Vision External Speaker Series, 2023

"Pose Estimation Beyond Feature Matching"

- Image Matching: Local Features & Beyond, CVPR Workshop, 2023

"End-to-End Learning of Robust Model Fitting"

- FiveAI Vision Seminar, 2020

"Robust Pose Estimation Made Differentiable"

- International Workshop on Recovering 6D Object Pose, ICCV Workshop, 2019

"Learning Robust Model Fitting"

- Workshop on Geometry Meets Deep Learning, ECCV Workshop, 2018

"Scene Coordinate Regression: From Random Forests to End-to-End Learning"

- Workshop on Learnable Representations for Geometric Matching, CIIRC Prague, 2017

Awards:

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| 2018 | Nominated for GI Dissertation Award 2018 by the TU Dresden (each university in Germany, Austria and Switzerland nominates one computer science dissertation for the award, annually) |
| 2014 | ACCV Honorable Mention Demo Award (for our paper: Learning Analysis-by-Synthesis for 6D Pose Estimation in RGB-D Images) |
| 2012 | Enno Heidebroek Award (awarded to the best graduates of the engineering department of the TU Dresden) |
| 2008 - 2012 | Scholarship of the German National Academic Foundation (awarded based on academic performance, extracurricular interests, and social commitment) |
| 2008 | IBM Award (awarded to students with an exceptional intermediate diploma) |

Teaching Experience:

Preparation of lectures for *Computer Vision I* (Prof. Rother, TU Dresden, 2015-2017), *Reconstructing and Understanding the 3D World* (Prof. Rother, Heidelberg University, 2018); **organizing and conducting exercises** accompanying *Computer Graphics I* (Prof. Gumhold, TU Dresden, 2013-2017); **supervisor of numerous Diploma, Master and Bachelor theses** with focus on computer vision and machine learning, **conducting practical courses and seminars** with focus on computer vision and robotics

Publications:

Please see my [website](#) or [Google Scholar](#) for an up-to-date list.