

# Radu Alexandru Rosu

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Targoviste, Romania | 16 September 1992  
CURRENT ADDRESS: Rheingasse 2, 53113, Bonn, Germany  
PHONE: +49 1520 2702859  
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WEBPAGE: <https://radualexandru.github.io>

## WORK EXPERIENCE

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PRESENT DEC 2018	<b>Researcher at University of Bonn</b> <i>3D Deep Learning</i> Developed neural networks capable of processing and understanding the 3D world. Researched novel semantic segmentation approaches suitable for raw point clouds or triangular meshes. Interested in models that can learn implicit neural representations of the 3D world.
Nov 2021 June 2021	<b>Internship at Facebook Reality Labs</b> <i>Avatar creation</i> Researched novel methods for reconstructing realistic facial avatar to be used in AR/VR applications. The internship was focused on reconstructing hair geometry and appearance with strand-level accuracy given a series of RGB images of a person.
March 2017 Oct 2016	<b>Tutor at University of Bonn</b> <i>Computer Vision</i> Tutor for the Computer Vision course, responsible for one of the exercise groups. Responsibilities included grading, assisting the students in their learning and answering questions regarding the topics presented in the lecture.
Dec 2018 May 2015	<b>Student research assistant at University of Bonn</b> <i>Visual SLAM</i> Helped in developing fast and robust SLAM solutions for usage in MAVs (Micro Aerial Vehicles). Worked with both feature-based and direct SLAM approaches and in developing fast Bundle Adjustment methods using the Ceres Solver and g2o.

## EDUCATION

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PRESENT DEC 2018	<b>PhD in 3D Deep Learning,</b> Rheinische Friedrich-Wilhelms-Universität Bonn, Germany. Ongoing as part of my research work in 3D deep learning.
SEP 2018	<b>Master's Degree in Computer Science,</b> Rheinische Friedrich-Wilhelms-Universität Bonn, Germany. Thesis: "Semi-Supervised Semantic Mapping through Label Propagation with Semantic Texture Meshes" Supervisor: Prof. Dr. Sven BEHNKE
JULY 2015	<b>Bachelor's Degree in Computer Science,</b> University of Salamanca, Spain. Project: "Reconstruction of 3D Figures from Computerized Tomography" Supervisor: Prof. Iván Álvarez NAVIA
JULY 2014	<b>Student Exchange Year (ERASMUS),</b> University of Wolverhampton, United Kingdom.

## PUBLICATIONS (FIRST AUTHOR)

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- [PermutoSDF: Fast Multi-View Reconstruction with Implicit Surfaces using Permutohedral Lattices](#)  
Radu Alexandru Rosu and Sven Behnke  
Conference on Computer Vision and Pattern Recognition (CVPR), June 2023
- [Neural Strands: Learning Hair Geometry and Appearance from Multi-View Images](#)  
Radu Alexandru Rosu, Shunsuke Saito, Ziyang Wang, Chenglei Wu, Sven Behnke and Giljoo Nam  
European Conference on Computer Vision (ECCV), October 2022
- [NeuralMVS: Bridging Multi-View Stereo and Novel View Synthesis](#)  
Radu Alexandru Rosu and Sven Behnke  
Joint Conference on Neural Networks (IJCNN), July 2022
- [LatticeNet: Fast Point Cloud Segmentation Using Permutohedral Lattices](#)  
Radu Alexandru Rosu, Peer Schütt, Jan Quenzel, and Sven Behnke  
Robotics: Science and Systems (RSS), July 2020
- [EasyPBR: A Lightweight Physically-Based Renderer](#)  
Radu Alexandru Rosu and Sven Behnke  
International Conference on Computer Graphics Theory and Applications (GRAPP), February 2021
- [Reconstruction of Textured Meshes for Fire and Heat Source Detection](#)  
Radu Alexandru Rosu, Jan Quenzel, and Sven Behnke  
Safety, Security, and Rescue Robotics (SSRR), September 2019
- [Semi-Supervised Semantic Mapping through Label Propagation with Semantic Texture Meshes](#)  
Radu Alexandru Rosu, Jan Quenzel, and Sven Behnke  
International Journal of Computer Vision (IJCV), Springer, 2019

## FURTHER PUBLICATIONS

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- [Beyond Photometric Consistency: Gradient-based Dissimilarity for Improving Visual Odometry and Stereo Matching](#)  
Jan Quenzel, Radu Alexandru Rosu, Thomas Läbe, Cyrill Stachniss, and Sven Behnke  
IEEE International Conference on Robotics and Automation (ICRA), Paris, France, May 2020
- [Team NimbRo at MBZIRC 2017: Fast Landing on a Moving Target and Treasure Hunting with a Team of MAVs](#)  
Marius Beul, Matthias Nieuwenhuisen, Jan Quenzel, Radu Alexandru Rosu, Jannis Horn, Dmytro Pavlichenko, Sebastian Houben, and Sven Behnke  
Journal of Field Robotics (JFR), January 2019
- [Online Depth Calibration for RGB-D Cameras using Visual SLAM](#)  
Jan Quenzel, Radu Alexandru Rosu, Sebastian Houben, and Sven Behnke  
International Conference on Intelligent Robots and Systems (IROS), Vancouver, Canada, September 2017

## COMPUTER SKILLS

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Proficient Knowledge: C++, CUDA, OPENGL, PYTHON, PYTORCH, L<sup>A</sup>T<sub>E</sub>X  
Intermediate Knowledge: HALIDE, Java, Scala, LINUX ADMINISTRATION  
Miscellaneous: AUTODESK 3DS MAX, ZBRUSH

## LANGUAGES

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ROMANIAN: Mother tongue  
ENGLISH: Fluent  
SPANISH: Fluent  
GERMAN: Intermediate Knowledge (B1)