Radu Alexandru Rosu

Personal Data

Place and Date of Birth:	Targoviste, Romania │ 16 September 1992
Current Address:	Rheingasse 2, 53113, Bonn, Germany
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Work Experience

Present
Dec 2018

Researcher at University of Bonn
3D Deep Learning

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 and disentangled representations of the 3D world.

Oct 2016

Tutor at University of Bonn
Computer Vision

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.

May 2015

Student research assistant at University of Bonn
Visual SLAM

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

Present
Dec 2018

PhD in 3D Deep Learning,
Rheinische Friedrich-Wilhelms-Universität Bonn, Germany.
Ongoing as part of my research work in 3D deep learning.

Sep 2018

Master's Degree in Computer Science,
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

Bachelor's Degree in Computer Science,
University of Salamanca, Spain.
Project: "Reconstruction of 3D Figures from Computerized Tomography"
Supervisor: Prof. Iván Álvarez Navia

July 2014

Student Exchange Year (ERASMUS),
University of Wolverhampton, United Kingdom.

Publications (first author)

- **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

- **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

- **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

- **Bonn Activity Maps: Dataset Description**
  Julian Tanke, Oh-Hun Kwon, Patrick Stotko, Radu Alexandru Rosu, Michael Weinmann, Hassan Errami, Sven Behnke, Maren Bennewitz, Reinhard Klein, Andreas Weber, Angela Yao, Juergen Gall

- **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

- **Collaborative Object Picking and Delivery with a Team of Micro Aerial Vehicles at MBZIRC**
  Matthias Nieuwenhuisen, Marius Beul, Radu Alexandru Rosu, Jan Quenzel, Dmytro Pavlichenko, Sebastian Houben, and Sven Behnke
  European Conference on Mobile Robotics (ECMR), Paris, France, September 2017

Computer Skills

Proficient Knowledge:	C++, CUDA, Python, Halide, PyTorch, LaTeX
Intermediate Knowledge:	Java, Scala, Linux Administration
Miscellaneous:	Autodesk 3ds Max, Zbrush

Languages

Romanian:	Mother tongue
English:	Fluent
Spanish:	Fluent
German:	Intermediate Knowledge (B1)

Interests and Activities

Robotics, 3D Deep Learning, HPC, Artificial Intelligence
Travelling and backpacking