Curriculum Vitae

Dr. techn. Roland Jung

Personal Data

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Work Experience

08/2021 – 07/2025	Senior Scientist, University of Klagenfurt with the Control of Networked Systems (CNS) department, supervised by Prof. Dr. Stephan Weiss
11/2017–07/2021	Senior Scientist, University of Klagenfurt with the Karl-Popper-Kolleg of Network Autonoumous Aerial Vehicles (KPK-NAV), supervised by Prof. Dr. Stephan Weiss
03/2015–11/2017	Junior Scientist, Austrian Institute of Technology (AIT) with the Vision, Automation, and Control department, supervised by Dr. Martin Humenberger
03/2013–09/2013	Summer Research Assistant, B&R Industrial Automation with the Safety and Automation department, supervised by Dr. Stefan Schönegger

Scientific Education

10/2023	**DOCTOR TECHNICAE** University of Klagenfurt, Information and Communications Engineering Grade (in original language): **mit Auzeichnung bestanden**
11/2017 – 10/2023	Doctoral degree programme in Technical Sciences subject Information and Communications Engineering
10/2015	**MASTER OF SCIENCE** University of Applied Sciences Upper Austria, Campus Hagenberg Grade(in original language): **mit ausgezeichnetem Erfolg bestanden**
10/2013–10/2015	Studies of Embedded Systems Design
10/2013	**BACHELOR OF SCIENCE** University of Applied Sciences Upper Austria, Campus Hagenberg Grade(in original language): **mit gutem Erfolg bestanden**
10/2010–10/2013	Studies of Hardware and Software Design

Selected Publications

First author publications	[4][1][5][16][17][15][19].
Ultra-wideband Localization	[2]
Collaborative State Estimation	[4][3][19][17][15][9]
Modular Multi-Sensor Fusion	[18][16][10][20]
Vision- and Radar-based Localization	[14][13][11][7][8]
System paper	[21][12]
PhD Thesis	[6]

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[1] Roland Jung, Lukas Luft, and Stephan Weiss. Isolated kalman filtering: theory and decoupled estimator design. *Auton. Robots*, 49(1), February 2025.

[2] Giulio Delama, Igor Borowski, Roland Jung, and Stephan Weiss. Real-time initialization of unknown anchors for uwb-aided navigation, 2025.

[3] Jiri Horyna, Roland Jung, Stephan Weiss, Eliseo Ferrante, and Martin Saska. Swarming without an anchor (swa): Robot swarms adapt better to localization dropouts then a single robot. *IEEE Robotics and Automation Letters*, 10(6):6207–6214, 2025.

[4] Roland Jung, Jiri Horyna, Thomas Jantos, Saska Martin, and Stephan Weiss. A framework for the consistency analysis of relative pose sensors for unmanned aerial vehicles (uavs). In *2025 International Conference on Unmanned Aircraft Systems (ICUAS)*, pages 817–824, 2025.

[5] Roland Jung, Luca Santoro, Davide Brunelli, Daniele Fontanelli, and Stephan Weiss. Modular meshed ultra-wideband aided inertial navigation with robust anchor calibration. In *2024 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pages 5627–5634, 2024.

[6] Roland Jung. *Recursive Distributed Collaborative Aided Inertial Navigation*. PhD thesis, Faculty of Technical Sciences with the Control of Networked Systems group, University of Klagenfurt, Aug. 2023.

[7] Jan Michalczyk, Roland Jung, Christian Brommer, and Stephan Weiss. Multi-state tightly-coupled ekf-based radar-inertial odometry with persistent landmarks. In *2023 IEEE International Conference on Robotics and Automation (ICRA)*, pages 4011–4017, 2023.

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[12] Martin Scheiber, Alessandro Fornasier, Roland Jung, Christoph Böhm, Rohit Dhakate, Christian Stewart, Jan Steinbrener, Stephan Weiss, and Christian Brommer. Cns flight stack for reproducible, customizable, and fully autonomous applications. *IEEE Robotics and Automation Letters*, 2022.

[13] Alessandro Fornasier, Martin Scheiber, Alexander Hardt-Stremayr, Roland Jung, and Stephan Weiss. Vinseval: Evaluation framework for unified testing of consistency and robustness of visual-inertial navigation system algorithms. In *2021 IEEE International Conference on Robotics and Automation (ICRA)*, 2021.

[14] Samira Hayat, Roland Jung, Hermann Hellwagner, Christian Bettstetter, Driton Emini, and Dominik Schnieders. Edge computing in 5g for drone navigation: What to offload? *IEEE Robotics and Automation Letters*, 6(2):2571–2578, 2021.

[15] Roland Jung and Stephan Weiss. Distributed collaborative state estimation: Joint observations for reliable autonomous navigation in swarms. In *Proceedings of the Austrian Robotics Workshop 2021*, 2021.

[16] Roland Jung and Stephan Weiss. Modular multi-sensor fusion: A collaborative state estimation perspective. *IEEE Robotics and Automation Letters*, 6(4):6891–6898, 2021.

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[21] Matthias Schörghuber, Markus Wallner, Roland Jung, Martin Humenberger, and Margit Gelautz. Vision-based autonomous feeding robot. In *Proceedings of the OAGM Workshop 2018 Medical Image Analysis,* number DOI: 10.3217 / 978-3-85125-603-1-23, pages 111–115. https://www.ims.tuwien.ac.at/publication, 2018.