

List of publications

Prof. Dr.-Ing. Alen Turnwald

K. Lakatos, N. Baldauf and A. Turnwald, "Towards learning-based trajectory tracking control for a planetary exploration rover: Development and testing," 2024 International Conference on Space Robotics (iSpaRo), Luxembourg, Luxembourg, 2024, pp. 299-306, doi: 10.1109/iSpaRo60631.2024.10687897.

A. Meinert, N. Baldauf and A. Turnwald, "Robust Spacecraft Attitude Reference Tracking using Tube-Based Model Predictive Control," 2024 28th International Conference on System Theory, Control and Computing (ICSTCC), Sinaia, Romania, 2024, pp. 229-234, doi: 10.1109/ICSTCC62912.2024.10744677.

N. Baldauf, K. Lakatos, A. Meinert and A. Turnwald, "Towards learning-based trajectory tracking control for a planetary exploration rover: Adaptive model predictive control," 2024 28th International Conference on System Theory, Control and Computing (ICSTCC), Sinaia, Romania, 2024, pp. 1-6, doi: 10.1109/ICSTCC62912.2024.10744714.

K. Lakatos, N. Baldauf, and A. Turnwald: Towards learning-based trajectory tracking control for a planetary exploration rover: Development and Testing, IEEE International Conference on Space Robotics (iSpaRo), Luxembourg

A. Turnwald and N. Baldauf: Constraints-Aware Trajectory Tracking Control of Spacecraft Attitude using LPV and MPC, 2023 27th International Conference on Methods and Models in Automation and Robotics (MMAR), Międzyzdroje, Poland, 2023, pp. 139-144, doi: 10.1109/MMAR58394.2023.10242430.

N. Baldauf and A. Turnwald: Iterative learning-based model predictive control for mobile robots in space applications, 2023 27th International Conference on Methods and Models in Automation and Robotics (MMAR), Międzyzdroje, Poland, 2023, pp. 434-439, doi: 10.1109/MMAR58394.2023.10242548.

N. Baldauf, A. Turnwald et. al.: Learning-based motion control of a rover on unknown ground, 12th International Conference on Guidance, Navigation & Control Systems (GNC) by ESA 2023

N. Panagiotopoulos, T. Lubiniecki, A. Turnwald and N. Baldauf, "Robust Machine Learning Systems For Dependable Space Applications," 2023 European Data Handling & Data Processing Conference (EDHPC), Juan Les Pins, France, 2023, pp. 1-5, doi: 10.23919/EDHPC59100.2023.10396116.

A. Turnwald et. al.: Motion Planning and Experimental Validation for an Autonomous Bicycle, 45th Conference of the IEEE Industrial Electronics Society (IECON19), Lissabon, Portugal 2019

A. Turnwald et. al.: Passivity-Based Trajectory Tracking Control for an Autonomous Bicycle, 44th Conference of the IEEE Industrial Electronics Society (IECON18), Washington DC (2018)

A. Turnwald & S. Liu: Adaptive Trajectory Tracking for a Planar Two-Wheeled Vehicle with Positive Trail, 2018 IEEE Conference on Control Technology and Applications (CCTA2018), Copenhagen/Denmark

A. Turnwald & S. Liu, A Nonlinear Bike Model for Purposes of Controller and Observer Design, 9th International Conference on Mathematical Modelling (MATHMOD18), Wien (2018)

A. Turnwald et. al.: A Platform for Experimental Education of Control Science, IFAC World Congress, Toulouse, France (2017)

A. Turnwald & T. Oehlschlägel : Passivity-Based Control of a Cryogenic Upper Stage to Minimize Fuel Sloshing, Journal of Guidance Control and Dynamics, 40(5) , AIAA DOI: 10.2514/1.G001591 (2017)

A. Turnwald et. al. : Robust distributed control for a mechanical-electrical demonstrator considering communication constraints, IFAC-PapersOnLine, DOI: 10.1016/j.ifacol.2015.08.139

A. Turnwald et. al.: Networked Control Systems with Application in the Industrial Tele-Robotics, IFAC-PapersOnLine, DOI: 10.1016/j.ifacol.2015.08.123

A. Turnwald et. al.: OPS-SAT: An ESA CubeSat as an In-Orbit Laboratory, Deutscher Luft- und Raumfahrtkongress 2014, Augsburg