

Short list of Publications by Pouya Mohammadi

For a list with abstracts please refer to pouya-moh.com/publications

Sinan Barut, Marco Boneberger, Pouya Mohammadi and Jochen J. Steil, "**Benchmarking Real-Time Capabilities of ROS2 and OROCOS for Robotics Applications**", *IEEE International Conference on Robotics and Automation (ICRA)*, June 2021, DOI: [10.1109/ICRA48506.2021.9561026](https://doi.org/10.1109/ICRA48506.2021.9561026)

Niels Dehio, Joshua Smith, Dennis Leroy Wigand, Pouya Mohammadi, Michael Mistry and Jochen J. Steil, "**Enabling Impedance-based Physical Human-Multi-Robot Collaboration**", *International Journal of Robotics Research IJRR* (Accepted, In press).

Pouya Mohammadi, Enrico Hoffman, Niels Dehio, Milad Malekzadeh, Martin Giese, Nikos Tsagarakis and Jochen Steil, "**Compliant Humanoids Moving Toward Rehabilitation Applications: Transparent Integration of Real-Time Control, Whole-Body Motion Generation, and Virtual Reality**", *IEEE Robotics & Automation Magazine (RAM)*, pp. 83-93, Dec 2019, DOI: [10.1109/MRA.2019.2940970](https://doi.org/10.1109/MRA.2019.2940970)

Mohammadi P, Hoffmann EMingo, Dehio N, Malekzadeh M, Giese M, Tsagarakis N, Steil JJ. **Compliant Humanoids Moving Toward Rehabilitation Applications: Transparent Integration of Real-Time Control, Whole-Body Motion Generation, and Virtual Reality.** *ICRA – (Honorary RAM 2019 selection for ICRA)*

Pouya Mohammadi, Daniel Kubus and Jochen Steil, "**Exploiting Environment Contacts of Serial Manipulators**", *2019 International Conference on Robotics and Automation (ICRA)*, pp. 197-203, May 2019, DOI: [10.1109/ICRA.2019.8794027](https://doi.org/10.1109/ICRA.2019.8794027)

Pouya Mohammadi, Enrico Hoffman, Luca Muratore, Nikos Tsagarakis and Jochen Steil, "**Reactive Walking Based on Upper-Body Manipulability: An application to Intention Detection and Reaction**", *2019 International Conference on Robotics and Automation (ICRA)*, pp. 4991-4997, May 2019, DOI: [10.1109/ICRA.2019.8794309](https://doi.org/10.1109/ICRA.2019.8794309)

Jindrich Kodl, Albert Mukovskiy, Pouya Mohammadi, Milad Malekzadeh, Nick Taubert, A Christensen, Tjeerd Dijkstra, Jochen Steil and Martin Giese, "**Online Planning and Control of Ball Throwing by the Humanoid Robot Coman and Validation Exploiting VR in Rehabilitation Scenarios with Ataxia Patients**", *In Proc. of CYBATHLON Symposium on Assistive and Wearable Robotics (AsWeR)*, May 2019,

Pouya Mohammadi, Milad Malekzadeh, Jindrich Kodl, Albert Mukovskiy, Dennis Wigand, Martin Giese and Jochen Steil, "**Real-Time Control of Whole-body Robot Motion and Trajectory Generation for Physiotherapeutic Juggling in VR**", *2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pp. 270-277, Oct 2018, DOI: [10.1109/IROS.2018.8593632](https://doi.org/10.1109/IROS.2018.8593632)

Dennis Wigand, Pouya Mohammadi, Enrico Hoffman, Nikos Tsagarakis, Jochen Steil and Sebastian Wrede, "**An Open-Source Architecture for Simulation, Execution and Analysis of Real-Time Robotics Systems**", *2018 IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAN)*, pp. 93-100, May 2018, DOI: [10.1109/simpar.2018.8376277](https://doi.org/10.1109/simpar.2018.8376277)

Zeeshan Shareef, Pouya Mohammadi and Jochen Steil, “**Improving the Inverse Dynamics Model of the KUKA LWR IV+ using Independent Joint Learning**”, *IFAC-PapersOnLine*, pp. 507–512, 2016, DOI: [10.1016/j.ifacol.2016.10.653](https://doi.org/10.1016/j.ifacol.2016.10.653)

Marco Cagnetti, Pouya Mohammadi, Giuseppe Oriolo and Marilena Vendittelli, “**Task-Oriented Whole-Body Planning for Humanoids Based on Hybrid Motion Generation**”, 2014 *IEEE/RSJ International Conference on Intelligent Robots and Systems*, pp. 4071-4076, Sep 2014, DOI: [10.1109/IROS.2014.6943135](https://doi.org/10.1109/IROS.2014.6943135)

Marco Cagnetti, Pouya Mohammadi and Giuseppe Oriolo, “**Whole-Body Motion Planning for Humanoids Based on CoM Movement Primitives**”, 2015 *IEEE-RAS 15th International Conference on Humanoid Robots (Humanoids)*, pp. 1090-1095, Nov 2015, DOI: [10.1109/HUMANOIDS.2015.7363504](https://doi.org/10.1109/HUMANOIDS.2015.7363504)

Sugeeth Gopinathan, Pouya Mohammadi and Jochen Steil, “**A Comprehensive Evaluation of Manipulability based Control Schemes for pHRI (to be submitted)**”, *Transactions on Human-Robot Interaction*, Dec 2020

Sugeeth Gopinathan, Pouya Mohammadi and Jochen Steil, “**Improved Human-Robot Interaction: A Manipulability Based Approach**”, pp. , 06 2018,