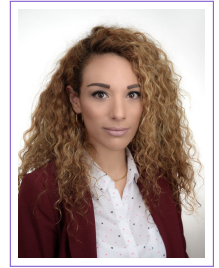


Georgia Chalvatzaki

Curriculum Vitae

Franklinstraße 16
64285, Darmstadt
☎ +49-6151-16-21814
✉ georgia@robot-learning.de
🌐 <https://irosalab.com>



Personal Data

Current position **Assistant Professor (W1)**, *Technische Universität Darmstadt*, Computer Science Department, Intelligent Robotic Systems for Assistance Group.
Birthdate 06-05-1988 Birthplace Athens (Greece)

Research Interests

- **Autonomous Robots:** Grasping, Manipulation, Mobile Manipulation, Motion Planning, Task Planning, Assistive Robotics, Mobile Robotics, Robotic Perception, Optimal Control, Hierarchical Control, Adaptive Control, Detection and Tracking
- **Machine Learning:** Supervised, Unsupervised, and Reinforcement Learning, Deep Learning, Imitation Learning, Model Learning, Regression, Attention-based learning, Few-shot/One-shot Learning, Transfer Learning, Multi-task Learning, Multi-modal Learning
- **Human-Robot Interaction:** Human motion modelling, Intention prediction, Human attention modelling, Human activity recognition, Human-centered systems, Shared Control/Autonomy, Collaborative/Cooperative interaction

Educational Background

- 2012 – 2019 **Ph.D. in Engineering**, *National Technical University of Athens (NTUA), Greece*,
Thesis: *Human-Centered Modeling for Assistive Robotics: Stochastic Estimation and Robot Learning in Decision Making*, Advisor: Costas Tzafestas – Defended: 23-12-2019
Committee: Costas Tzafestas (NTUA), Petros Maragos (NTUA), Konstantinos Kyriakopoulos (NTUA), Stefanos Kollias (NTUA), Andreas Stafylopatis (NTUA), Antonios Argyros (University of Crete), Antonios Tzes (NYU Abu Dhabi).
GPA: 9.5 /10, first in class of the 2020 graduation.
- 2006 – 2012 **Diploma in Electrical and Computer Engineering**, *National Technical University of Athens (NTUA), Greece*,
Thesis: *A system for recognizing and segmenting simple radiographic images of hands for detecting their geometric characteristics and functional parts*,
Committee: Elias Koukoutsis (NTUA), Konstantinos Papaodysseas (NTUA), Vasilios Loumos (NTUA).
GPA: 8.1/10, top 10% of 2012 graduation class.

Professional Experience

Academic

- 02/2022 – **Assistant Professor**, *Dept. of Computer Science, Technische Universität Darmstadt, Darmstadt, Germany*, now Head of the intelligent Robotic Systems for Assistance Group.
03/2021 – **Independent Research Group Leader**, *Dept. of Computer Science, Technische Universität Darmstadt, Darmstadt, Germany*, Head of the intelligent Robotic Systems for Assistance Group.
01/2022

- 03/2021 – **Research Associate**, *Projects Aristotle, CHIRON and RoboTrust*, Dept. of Computer Science, now Technische Universität Darmstadt, Darmstadt, Germany, Scientific collaboration with Intelligent Autonomous Systems Group.
- 10/2019 – **Postdoctoral Researcher**, *Intelligent Autonomous Systems Group*, Dept. of Computer Science, 02/2021 Technische Universität Darmstadt, Darmstadt, Germany, Scientific Projects: Skills4Robots (ERC project No. 640554), KoBo (BMBF), RoboTrust (Hessian state funding).
- 02/2013 – **Research Assistant**, *Institute of Communications & Computer Systems (ICCS), Athens, Greece.*, 09/2019 Scientific Projects: iWalk (National Funding, No. 5030856 National Funding), BabyRobot (Horizon2020, No. 687831), iSupport (Horizon2020, No. 643666), MOBOT (FP7 No. 600796).

Industrial

- 2018 – 2019 **Consultant**, *Vertliner Start-up company*, Athens, Greece, Development of 3D SLAM module for UAVs.
- 2008 – 2012 **Office Administrator**, *Nakis, Koukas, Dimitriou and Associates Law Firm*, Athens, Greece.
- 2007 – 2008 **Telecommunications Engineer**, *Hellenic Telecommunications Organization*, Athens, Greece.

External Funding

- 2021 – 2027 **Emmy Noether DFG**, *Project: Robot Learning of Mobile Manipulation for Intelligent Assistance*, TUDa:€1,714,498, Grant. No. 448644653.
- 2021 **Hessian AI Connectom Fund**, *Project: Robot Learning of Long-Horizon Manipulation bridging Object-centric Representations to Knowledge Graphs*, TUDa:€40,000.
- 2021 **EU - Forschungsförderung – EU for You!**, *EU start-up fund for Horizon-Europe*, TUDa: €19,000.
- 2021 **BMBF**, *Project*: Aristotle – See, Touch and Manipulate: Robot Learning for Dexterous Robot Bimanual Manipulation through Vision and Touch*, TUDa: €200,000, *author of proposal – unofficial PI.
- 2022 – 2024 **Daimler and Benz Foundation Scholarship**, *Project: Intelligent Human-Robot Interaction for Bidirectional Object Handovers*, TUDa: €40,000.

Awards

- 2022 **Finalist for IROS 2022 Best Paper Award in Mobile Manipulation**, *for the paper Robot learning of mobile manipulation with reachability behavior priors.*, (to be decided).
- 2022 **Finalist for Dr. Hans Messer Foundation Prize**, (*selection in process*).
- 2022 **Junior Researcher for 2021 (top 10 applications)**, *academics.de, die ZEIT ONLINE*.
- 2022 **Daimler and Benz Foundation Scholarship**.
- 2021 **Finalist for Dr. Hans Messer Foundation Prize**.
- 2021 **AI Newcomer**, *German Informatics Society, BMBF, Germany*.
- 2020 **RSS Pioneer**, *Robotics Science and Systems Conference*.
- 2019 **IEEE RAS Travel Award**, *IROS 2019*.
- 2017 – 2019 **IEEE RAS Travel Award**, *for participating to ICRA 2019, 2018, 2017*.
- 2018 **Best short Paper Award**, *27th IEEE International Symposium on Robot and Human Interactive Communication (RoMan)*.
- 2014-2020 **Thomaidion Award**, *NTUA, Greece*, for Scientific Contributions the years 2014, 2015, 2016, 2018, 2019, 2020.
- 2015 **Best Paper Award**, *8th International Conference on Integrated Modeling and Analysis in Applied Control and Automation*.

- 2014 **Best Student Paper Finalist**, *4th IEEE International Conference on Wireless Mobile Communication and Health*.
- 2006 **Scholarship**, *from the Egyptian-Greek Association for excelling the Panhellenic competition for University admission*.

Call for a Professorship appointment

- 06/2022 **W3 Professorship on Robot Learning**, *Technical University of Nuremberg (UTN), Germany..*
- 06/2022 **W2TT Professorship on AI Planning**, *Technical University of Munich (TUM), Germany..*
- 08/2022 **W1TTW3 Professorship on Human-Robot Interaction**, *Julius-Maximilians University of Würzburg, Germany..*
- 08/2022 **W3 Professorship on Robot Perception**, *Technical University of Darmstadt (TUDa), Germany..*

Teaching

- 2022 **Lecturer**, *Statistical Machine Learning*, Elective course, Computer Science Department, Summer Term, TU Darmstadt, Germany.
- 2022 **Lecturer**, *Reinforcement Learning: From foundations to Deep Approaches*, Elective course, Computer Science Department, Summer Term, TU Darmstadt, Germany.
- 2020-now **Teaching Assistant**, *Robot Learning-Integrated project*, Elective course, Computer Science Department, Winter and Summer Term, TU Darmstadt, Germany.
- 2012 – 2018 **Teaching Assistant**, *Course Robotics I: Analysis and Control*, Fall semesters, School of Electrical & Computer Engineering, NTUA, Greece.
- 2012 – 2018 **Teaching Assistant**, *Course Robotics II: Intelligent Robotics Systems*, Summer semesters, School of Electrical & Computer Engineering, NTUA, Greece.
- 2012 – 2018 **Teaching Assistant**, *Course on Robotics Control Systems*, Summer semesters, Ms.C. Programm on Autonomous Systems, Joint programm Schools of Electrical & Computer Engineering and Mechanical Engineering, NTUA, Greece.

Ph.D. Student Supervision

Technische Universität Darmstadt

- 06/2021 – **Ph.D. Supervisor**, *Snehal Jauhri*,
now Robot Learning of Robust Mobile Manipulation of Household Tasks.
- 09/2021 – **Ph.D. Supervisor**, *Ali Younes*,
now Robot Learning for Long-horizon Planning of Manipulation Tasks.
- 06/2021 – **Ph.D. Co-advising**, *Kay Hansel*,
now Learning Shared-control for Assistive Teleoperation.
- 09/2020 – **Ph.D. Co-advising**, *Niklas Funk*,
now Learning Intelligent Robot Assembly for Architectural Construction.

Masters' and Bachelors' Student Supervision

- 2022 **M.Sc. Supervisor**, *Rickmer Krohn*,
Learning Mobile Manipulation tasks with Multisensory Transformers (ongoing).
- 2022 **M.Sc. co-Supervisor**, *Kuo Zhang*,
Learning safety constraints for Human-Robot Interaction.
- 2022 **M.Sc. co-Supervisor**, *Maximilian Tölle*,
Curriculum Adversarial Reinforcement Learning.
- 2022 **M.Sc. Supervisor**, *Maximilian Niessing*,
Learning latent object representations for grasp generation with generative-adversarial models (ongoing).

- 2022 **M.Sc. Supervisor**, *Daljeet Nandha*,
Building Task Plans from Robot Knowledge Graphs (ongoing).
- 2022 **M.Sc. Supervisor**, *Jan Schneider*,
Model Predictive Policy Optimization Amidst Inaccurate Models.
- 2022 **M.Sc. Supervisor**, *Simon Kiefhaber*,
6D Object Pose Tracking with Energy-based models.
- 2022 **M.Sc. Supervisor**, *Yannik Frisch*,
Analysis of self-supervised keypoint detection methods for robot learning.
- 2021 **M.Sc. Supervisor**, *Lei Xu*,
Integrated AI planning for general-purpose robot manipulation.
- 2021 **M.Sc. Supervisor**, *Cedric Cerstoff*,
Memory Representations for Partially Observable Reinforcement Learning.
- 2021 **M.Sc. Supervisor**, *Shrirang Satonkar*,
Benchmarking grasping algorithms for mobile manipulation, external student from HHU Heidelberg.
- 2021 **M.Sc. Supervisor**, *Axel Patzwahl*,
Multi-sensor Fusion for Target Motion Prediction with an Application to Robot Baseball.

National Technical University of Athens

- 2021 **M.Sc. Supervisor**, *Ioannis Asmanis*,
3D Visual Semantic SLAM for indoor navigation.
- 2018 **M.Sc. Supervisor**, *Theodoros Tsitsimis*,
Learning cooperative grasping of objects and adaptive robot dexterity in child-robot interaction environments.
- 2021 **M.Sc. Supervisor**, *Jack Hadfield*,
Virtual agent for object assembly assistance using object pose estimation.

Visiting Researchers' Supervision

- 2022 **DAAD-WISE**, *Ishikaa Lunawat*,
6D-GraspNERF: Single-view 6D Grasp Generation with Neural Radiance Fields, Internship.

Community Services

- 2021 – now **Co-Chair**, *IEEE Technical Committee on Mobile Manipulation*, with co-Chairs Nikolaus Correll (University of Colorado Boulder, USA), Kensuke Harada (AIST, Japan), Roberto Martin-Martin (Stanford, USA).
- 2022 – now **Co-Chair**, *IEEE Women in Engineering, Robotics and Automation Society*, with Chair Karinne Ramirez Amaro (Chalmers University of Technology, Sweden) and co-Chair Daniel Leidner (DLR, Germany).

Editing

- 2021 – now **Associate Editor**, for *IEEE Robotics and Automation Letters (RA-L)*.
- 2022 **Area Chair**, *Conference on Robot Learning, 2022*.
- 2022 **Associate Editor**, *Humanoids, 2022*.

Conferences/Workshops/Events Organization

- 2020 **Organizer of the "RoboTrust Workshop"**, in the *2020 International conference of Social Robotics*, <https://sites.google.com/view/robotrust-workshop/home>.
- 2021 **Co-organizer of the 2021 Mobile Manipulation Hackathon in IROS 2021**, (*cancelled due to CoVID-19 restrictions*).

- 2021 **General Co-Chair RSS Pioneers Workshop**, part of the organizing committee of RSS 2021, <https://sites.google.com/view/rsspioneers2021>.
- 2022 **Co-organizer of the 2022 IEEE RAS Women in Engineering Mentoring Dinner-Event**, ICRA 2022, May 25, 2022, Philadelphia Convention Center, USA. <https://www.icra2022.org/program/special-ras-events>
- 2022 **Co-organizer of the 2022 IEEE RAS Women in Engineering Online Mentoring Event**, RAS events, May 13, 2022, online. <https://www.icra2022.org/program/special-ras-events>
- 2022 **Co-organizer of the Workshop 'Leading a Research Group in the Field of Artificial Intelligence'**, DFG Emmy Noether Meetup 2022, July 13, 2022, Bonn, Germany.
- 2022 **Main organizer of the Workshop 'Mobile Manipulation and Embodied Intelligence: Challenges and Opportunities'**, co-organizers: Roberto Martin-Martin, Nikolaus Correll, Kensuke Harada, Tamim Asfour, Mehmet Dogar, IROS 2022, October 23, 2022, Kyoto, Japan.

Reviewing Activities

- Journals IEEE Robotics & Automation Letters, IEEE Transactions on Human-Machine Systems, Robotics and Autonomous Systems, Frontiers in Robotics & AI, Robotica.
- Conferences IEEE International Conference on Robotics and Automation (ICRA), IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Robotics Science & Systems (RSS), Conference on Robot Learning (CoRL), IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechanics (BioRob), IEEE Mediterranean Conference on Control and Automation (MED), IEEE European Control Conference (ECC), IEEE International Conference on Robot & Human Interactive Communication (ROMAN), AAAI Conference on Artificial Intelligence (AAAI), International Conference of Learning Representations (ICLR), Conference on Neural Information Processing Systems (NeurIPS).
- Proposals DFG.

Departmental Services

Ph.D. Examination Committee

- 05/2022 **Junhwa Hur**, *Joint Motion, Semantic Segmentation, Occlusion, and Depth Estimation*, Computer Science Department, TU Darmstadt.
- 06/2022 **Leonardo Filipe Rodrigues Ribeiro**, *Graph-based Approaches to Text Generation*, Computer Science Department, TU Darmstadt.

Keynotes – Panels

- 10/2021 **How can multi-sensory data help us obtain better assistive robots?**, Keynote speaker the ACM ICMI Workshop: Interactive Multimodal Learning'21 (online), <https://sites.google.com/view/interactivemultimodallearning>.
- 03/2022 **Academic Panel**, HRI Pioneers Workshop of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (online), <https://hripioneers.org/speakers>.
- 06/2022 **Towards Intelligent Robotic Assistants**, Keynote speech at the Robotics, Perception, and Learning International Summer School, KTH, 12-15 June, 2022, Sweden. <https://www.summer-school.rpl.eecs.kth.se/>
- 06/2022 **Why “real” robots like priors and structure? –tentative**, Keynote at Workshop: Robot Learning at Scale, RSS 2022, June 27, 2022, Columbia University, USA. <https://sites.google.com/view/rss22-srl/home>

- 07/2022 **Towards AI robotic assistants that learn from and for humans.**, *Keynote at Workshop: Social Intelligence in Humans and Robots, RSS 2022*, July 1, 2022, Columbia University, USA.
<https://social-intelligence-human-ai.github.io>
- 10/2022 **Shaping Robotic Assistance through Structured Robot Learning –tentative**, *Keynote speaker at IEEE IROS Conference 2022*, October 26, 2022, Kyoto, Japan.
<https://iros2022.org/>
- 10/2022 **Structured and safe robot learning for intelligent assistants –tentative**, *Keynote at Workshop: 2nd RL-CONFIRM: Reinforcement Learning meets HRI, Control, and Formal Methods, IROS 2022*, October 23, 2022, Kyoto, Japan.
<https://rlconform-workshop.github.io/>
- 12/2022 **Towards AI robotic assistants that learn from and for humans.–tentative**, *5th Robot Learning Workshop: Trustworthy Robotics*, <http://www.robot-learning.ml/2022/>.

Talks

- 02/2021 **Robot learning for intelligent robotic assistants**, *at the Robotic Learning Seminar series of The Robotics and Embodied AI Lab and Mila, Montreal*, (online).
- 02/2021 **Robot learning of Mobile Manipulation**, *at the Group on Failure and Uncertainty Tolerant Universal Robot Operation, DLR*, (online).
- 03/2021 **Towards intelligent robotic assistants: human perception, accelerated skill learning, and adaptive planning**, *at the Learning and Intelligent Systems group, TU Berlin*, (online).
- 04/2021 **Accelerated reinforcement learning of manipulation tasks**, *at the seminar on AI in Robotics, University of Toronto*, (online).
- 05/2021 **Towards intelligent robotic assistants: human perception, accelerated skill learning, and adaptive planning**, *, at the IEEE RAS NTUA student branch*, (online).
- 06/2021 **Towards intelligent robotic assistants**, *TU Darmstadt, Germany*, (online).
- 07/2021 **Robot Learning for intelligent Robotic Assistants**, *at the Monash Robotics Seminar, Monash University*, (online).
- 12/2021 **Towards intelligent robotic assistants: learning, planning and control**, *TUM, Germany*, (online).
- 03/2022 **Intelligent human-centered robotic assistants**, *University of Würzburg, Germany*, (online).
- 06/2022 **Robot learning for intelligent assistants**, *University of Technology Nuremberg, Germany*.
- 06/2022 **Towards intelligent robotic assistants: learning, planning and control**, *invited talk at Bristol Robotics Laboratory, UK*.
- 11/2022 **Towards intelligent robotic assistants: learning, planning and control**, *Autonomy talks by Frazzoli's group, ETH, Zurich*, online–scheduled.

Mentoring Events

- 04/2022 **Girls Day: Artificial Intelligence and Medicine**, *Organized by Department of Computer Science, TU Darmstadt and hessian.AI*, online.
- 05/2022 **Women in Engineering, Science and Tech**, *Organized by IEEE Women in Engineering German section*, online.
- 07/2022 **Increasing Access to Robotics**, *Organized by CMU RISS RobotLaunch*, online.
- 04/2019 **Athens Science Festival**, *Robotics workshop for children aged 8-12*, Athens, Greece.
- 2013-2019 **European Researcher's night**, *Representing the Intelligent Robotics and Automation Lab, Historic Building of NTUA*, (once a year) Athens, Greece.

Media coverage

- 01/2021 **Interview at the local newspaper "Demokratiki Rodou"**, *Greece*.
- 03/2021 **Interview at the hessian magazine "Mathilde"**, *Germany*.
- 03/2021 **Interview at the TV Program "Creta today"**, *Greece*.
- 03/2021 **Interview at the blog "Tilos news"**, *Greece*.
- 03/2021 **Interview at the radio program "All World Greece"**, national radio Proto Thema, *Greece*.
- 03/2021 **Interview at the radio program "Greeks Abroad"**, national radio ERT, *Greece*.
- 03/2021 **Interview at the radio program "Dodecanese" of the local radio ERT-Dodecanese**, *Greece*.
- 04/2021 **Interview at the radio program "Good Morning with Alpha" of th national radio Alpha Radio**, *Greece*.
- 05/2021 **Interview at the Radio Darmstadt**, *Germany*.
- 05/2021 **Interview at the radio program "Künstliche Intelligenz – die Nachwuchstalente kommen aus Hessen "**, *Germany*.
- 03/2022 **Interview at the national newspaper "To Vima"**, *Greece*.
- 03/2022 **Interview at the TV Program "Creta today"**, *International Women's Day*, *Greece*.
- 04/2022 **Interview at the TV Program "Kipseli" Channel ERT2 National Greek Television**, *Greece*.

Languages

Greek	Native Speaker
English	Proficient (C2)
German	Upper Intermediate (B2)
French	Upper Intermediate (B2)

List of References

I have been interacting frequently with the following scientists, who are well-aware of my research and teaching activities. They are willing to act as references.

Prof. Dr. Jan Peters

Technische Universität Darmstadt, Department of Computer Science, Intelligent Autonomous Systems group
Hochschulstr. 10, 64289 Darmstadt
Phone: +49-6151-16-25374, Fax: +49-6151-16-25375
email: jan.peters@tu-darmstadt.de

Prof. Dr. Costas Tzafestas

National Technical University of Athens, School of Electrical and Computer Engineering, Division of Signals, Control and Robotics, Intelligent Robotics and Automation Lab
Office 2.1.11, 2nd Floor, Old Electrical and Comp. Engineering
Phone: +30 (210) 7723687, Fax: +30 (210) 7723687
email: ktzaf@cs.ntua.gr

Prof. Dr. Petros Maragos

National Technical University of Athens, School of Electrical and Computer Engineering, Division of Signals, Control and Robotics, Intelligent Robotics and Automation Lab
Office 2.1.24, 2nd Floor, Old Electrical and Comp. Engineering
Phone: +30 (210) 7722360, Fax: +30 (210) 7722360
email: maragos@cs.ntua.gr

To obtain further references, please contact me.

List of Publications

Journals

- [1] Snehal Jauhri, Jan Peters, and **Georgia Chalvatzaki**. Robot learning of mobile manipulation with reachability behavior priors. *IEEE Robotics and Automation Letters (accepted)*, 2022.
- [2] Tuan Dam, **Georgia Chalvatzaki**, Jan Peters, and Joni Pajarinen. Monte carlo robot path planning. *IEEE Robotics and Automation Letters (accepted)*, 2022.
- [3] Boris Belousov, Bastian Wibranek, Jan Schneider, Tim Schneider, **Georgia Chalvatzaki**, Jan Peters, and Oliver Tessman. Robotic architectural assembly with tactile skills: Simulation and optimization. *Automation in Construction*, 133:104006, 2022.
- [4] George Moustiris, Nikolaos Kardaris, Antigoni Tsiami, **Georgia Chalvatzaki**, Petros Koutras, Athanasios Dometios, Paris Oikonomou, Costas Tzafestas, Petros Maragos, Eleni Efthimiou, Xanthi Papageorgiou, Stavroula-Evita Fotinea, Yiannis Koumpouros, Anna Vacalopoulou, Effie Papageorgiou, Alexandra Karavasili, Foteini Koureta, Dimitris Dimou, Alexandros Nikolakakis, Konstantinos Karaiskos, and Panagiotis Mavridis. The i-walk lightweight assistive rollator: First evaluation study. *Frontiers in Robotics and AI*, 8:272, 2021.
- [5] Christian Werner, **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Costas S Tzafestas, Jürgen M Bauer, and Klaus Hauer. Assessing the concurrent validity of a gait analysis system integrated into a smart walker in older adults with gait impairments. *Clinical Rehabilitation*, 33(10):1682–1687, 2019. PMID: 31131630.
- [6] **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Petros Maragos, and Costas S Tzafestas. Learn to adapt to human walking: A model-based reinforcement learning approach for a robotic assistant rollator. *IEEE Robotics and Automation Letters*, 4(4):3774–3781, 2019.
- [7] **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Costas S Tzafestas, and Petros Maragos. Augmented human state estimation using interacting multiple model particle filters with probabilistic data association. *IEEE Robotics and Automation Letters*, 3(3):1872–1879, 2018.

Conferences

- [8] Julen Urain, Niklas Funk, **Georgia Chalvatzaki**, and Jan Peters. Se(3)-diffusionfields: Learning cost functions for joint grasp and motion optimization through diffusion. *Under review*, 2022.
- [9] Ali Younes, Simone Schaub-Meyer, and **Georgia Chalvatzaki**. More information, better transportation: Unsupervised keypoint detection and tracking. *Under review*, 2022.
- [10] Vignesh Prasad, Dorothea Koert, Ruth Stock-Homburg, Jan Peters, and **Georgia Chalvatzaki**. Multimodal interactive latent dynamics for learning human-robot interaction. *Under review*, 2022.
- [11] Snehal Jauhri, Jan Peters, and **Georgia Chalvatzaki**. Robot learning of mobile manipulation with reachability behavior priors. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted) – Best paper award in Mobile Manipulation, finalist*, 2022.
- [12] Tuan Dam, **Georgia Chalvatzaki**, Jan Peters, and Joni Pajarinen. Monte carlo robot path planning. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted)*, 2022.
- [13] Puze Liu, Kuo Zhang, Davide Tateo, Snehal Jauhri, Jan Peters, and **Georgia Chalvatzaki**. Regularized deep signed distance fields for reactive motion generation. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted)*, 2022.

- [14] Tim Schneider, Boris Belousov, **Georgia Chalvatzaki**, Diego Romeres, Devesh Jha, and Jan Peters. Active exploration for robotic manipulation. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted)*, 2022.
- [15] Alexander Lambert, Julen Urain, An Thai Lee, **Georgia Chalvatzaki**, Byron Boots, and Jan Peters. Learning implicit priors for motion optimization. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted)*, 2022.
- [16] Niklas Funk, Svenja Menzenbach, **Georgia Chalvatzaki**, and Jan Peters. Graph-based reinforcement learning meets mixed integer programs: An application to 3d robot assembly discovery. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (accepted)*, 2022.
- [17] Carlo D'Eramo and **Georgia Chalvatzaki**. Prioritized sampling with intrinsic motivation in multi-task reinforcement learning. *IEEE International Joint Conference on Neural Networks (IJCNN)*, 2022.
- [18] Niklas Funk, **Georgia Chalvatzaki**, Boris Belousov, and Jan Peters. Learn2assemble with structured representations and search for robotic architectural construction. *Conference on Robot Learning (CoRL)*, 2021.
- [19] Danai Efstathiou, **Georgia Chalvatzaki**, Athanasios Dometios, Dionisios Spiliopoulos, and Costas S. Tzafestas. Deep leg tracking by detection and gait analysis in 2d range data for intelligent robotic assistants. In *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021.
- [20] Samuele Tosatto, **Georgia Chalvatzaki**, and Jan Peters. Contextual latent-movements off-policy optimization for robotic manipulation skills. *IEEE International Conference on Robotics and Automation (ICRA)*, 2021.
- [21] Andrew S Morgan, Daljeet Nandha, **Georgia Chalvatzaki**, Carlo D'Eramo, Aaron M Dollar, and Jan Peters. Model predictive actor-critic: Accelerating robot skill acquisition with deep reinforcement learning. *IEEE International Conference on Robotics and Automation (ICRA)*, 2021.
- [22] Qin Li, **Georgia Chalvatzaki**, Jan Peters, and Yong Wang. Directed acyclic graph neural network for human motion prediction. *IEEE International Conference on Robotics and Automation (ICRA)*, 2021.
- [23] Nikolaos Gkanatsios, **Georgia Chalvatzaki**, Petros Maragos, and Jan Peters. Revisiting grasp map representation with a focus on orientation in grasp synthesis. In *Workshop on Visual Learning and Reasoning for Robotic Manipulation, Robotics Science and Systems (RSS)*, 2020.
- [24] **Georgia Chalvatzaki**, Petros Koutras, Antigoni Tsiami, Costas S. Tzafestas, and Petros Maragos. i-walk intelligent assessment system: Activity, mobility, intention, communication. In Adrien Bartoli and Andrea Fusiello, editors, *Computer Vision – ECCV 2020 Workshops*, pages 500–517, Cham, 2020. Springer International Publishing.
- [25] Isidoros Marougkas, Petros Koutras, Nikos Kardaris, Georgios Retsinas, **Georgia Chalvatzaki**, and Petros Maragos. How to track your dragon: A multi-attentional framework for real-time rgb-d 6-dof object pose tracking. In Adrien Bartoli and Andrea Fusiello, editors, *Computer Vision – ECCV 2020 Workshops*, pages 682–699, Cham, 2020. Springer International Publishing.
- [26] Jack Hadfield, **Georgia Chalvatzaki**, Petros Koutras, Mehdi Khamassi, Costas S Tzafestas, and Petros Maragos. A deep learning approach for multi-view engagement estimation of children in a child-robot joint attention task. In *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2019.

- [27] **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Petros Maragos, and Costas S Tzafestas. Learn to adapt to human walking: A model-based reinforcement learning approach for a robotic assistant rollator. In *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2019.
- [28] Petros Koutras, **Georgia Chalvatzaki**, Antigoni Tsiami, Alexandros Nikolakakis, Costas S. Tzafestas, and Petros Maragos. Video processing and learning in assistive robotic applications. In *2019 IEEE International Conference on Image Processing (ICIP)*, pages 2457–2457, 2019.
- [29] **Georgia Chalvatzaki**, Petros Koutras, Jack Hadfield, Xanthi S Papageorgiou, Costas S Tzafestas, and Petros Maragos. Lstm-based network for human gait stability prediction in an intelligent robotic rollator. In *2019 International Conference on Robotics and Automation (ICRA)*, 2019.
- [30] **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Costas S Tzafestas, and Petros Maragos. Comparing the impact of robotic rollator control schemes on elderly gait using on-line lrf-based gait analysis. In *A Workshop on Mobile Robot Assistants for the Elderly (MoRobAE) in 2019 IEEE International Conference on Robotics and Automation (ICRA)*, 2019.
- [31] Xanthi S Papageorgiou, **Georgia Chalvatzaki**, Eleni Efthimiou, Stavroula-Evita Fotinea, Alexandra Karavasili, Costas S Tzafestas, Petros Maragos, Anna Vacalopoulou, and Theodore Goulas. User centered hri design for an intelligent robotic rollator. In *A Workshop on Mobile Robot Assistants for the Elderly (MoRobAE) in 2019 IEEE International Conference on Robotics and Automation (ICRA)*, 2019.
- [32] **Georgia Chalvatzaki**, Xanthi S Papageorgiou, Costas S Tzafestas, and Petros Maragos. Augmented human state estimation using interacting multiple model particle filters with probabilistic data association. In *2018 IEEE International Conference on Robotics and Automation (ICRA)*. IEEE, 2018.
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