Jin Cheng

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EDUCATION

Doctoral student in Computer Science, ETH Zürich, Switzerland   since 10/2023
  Advisor: Prof. Dr. Stelian Coros (ETH Zürich), Prof. Dr. Guanya Shi (Carnegie Mellon University)

M.Sc. in Mechanical Engineering, ETH Zürich, Switzerland   09/2020 – 07/2023

B.E. in Vehicle Engineering, Tsinghua University, China   09/2016 – 07/2020

RESEARCH EXPERIENCE

Scientific Assistant, ETH Zürich   since 10/2023
  Computational Robotics Lab (CRL), supervised by Prof. Dr. Stelian Coros

Research Intern, Max Planck Institute for Intelligent Systems   04/2023 - 09/2023
  Autonomous Learning Group, supervised by Prof. Dr. Georg Martius

Research Assistant, ETH Zürich   11/2022 - 03/2023
  Computational Robotics Lab (CRL), supervised by Prof. Dr. Stelian Coros

Semester and Master Thesis, ETH Zürich   03/2022 - 11/2022
  Robotic Systems Lab (RSL), supervised by Prof. Dr. Marco Hutter

Research Assistant and Bachelor Thesis, Tsinghua University   09/2019 - 05/2020
  State Key Laboratory of Intelligent Green Vehicle and Mobility, supervised by Prof. Dr. Qing Zhou

PUBLICATIONS

**RAMBO: RL-augmented Model-based Optimal Control for
Whole-body Loco-manipulation (Under Review)**
  Jin Cheng, Dongho Kang, Gabriele Fadini, Guanya Shi, Stelian Coros   04/2025

**CAIMAN: Causal Action Influence Detection
for Sample Efficient Loco-manipulation (Under Review)**
  Yuanchen Yuan, Jin Cheng, Núria Armengol Urpí, Stelian Coros   02/2025

Spatio-Temporal Motion Retargeting for Quadruped Robots (Under Review)
  Taerim Yoon, Dongho Kang, Seungmin Kim, Minsung Ahn, Jin Cheng, Stelian Coros, Sungjoon Choi   02/2025

**SATA: Safe and Adaptive Torque-Based Locomotion Policies
Inspired by Animal Learning (RSS 2025)**
  Peizhuo Li, Hongyi Li, Ge Sun, Jin Cheng, Xinrong Yang, Guillaume Bellegarda, Milad Shafiee,
  Yuhong Cao, Auke Ijspeert, Guillaume Sartoretti   02/2025

DARE: Diffusion Policy for Autonomous Robot Exploration (ICRA 2025)
  Yuhong Cao, Jeric Lew, Jingsong Liang, Jin Cheng, Guillaume Sartoretti   02/2025

**RobotKeyframing: Learning Locomotion with High-Level Objectives
via Mixture of Dense and Sparse Rewards (CoRL 2024)**
  Fatemeh Zargarbashi, Jin Cheng, Dongho Kang, Robert Sumner, and Stelian Coros   09/2024

Offline Diversity Maximization Under Imitation Constraints (RLC 2024)
  Marin Vlastelica, Jin Cheng, Georg Martius, Pavel Kolev   05/2024

Learning Diverse Skills for Local Navigation under Multi-constraint Optimality (ICRA 2024)
  Jin Cheng, Marin Vlastelica, Pavel Kolev, Chenhao Li, Georg Martius   02/2024

RL + Model-based Control:
Using On-demand Optimal Control to Learn Versatile Legged Locomotion ([RA-L](RA-L))

Dongho Kang, Jin Cheng, Miguel Zamora, Fatemeh Zargarbashi, Stelian Coros   09/2023

Haptic Teleoperation of High-dimensional Robotic Systems
Using a Feedback MPC Framework (IROS 2022)

Jin Cheng, Firas Abi-Farraj, Farbod Farshidian, Marco Hutter   10/2022

INVITED TALKS

Frontier AI & Robotics (FAR) @ Amazon	05/2025
Robotics and AI Institute (RAI) @ Zurich	04/2025
Biomimetic Robotics Laboratory @ MIT	11/2023

TEACHING EXPERIENCE

Computational Models of Motion (263-5807-00)   02/2025 - 07/2025
Computational Robotics Lab (CRL) at ETH Zürich, lectured by S. Coros

Probabilistic Artificial Intelligence (263-5210-00)   08/2024 - 02/2025
Learning & Adaptive Systems Group (LAS) at ETH Zürich, lectured by A. Krause

Introduction to Machine Learning (252-0220-00)   02/2024 - 08/2024
Learning & Adaptive Systems Group (LAS) at ETH Zürich, lectured by F. Perez Cruz, F. Yang

Dynamic Programming and Optimal Control (151-0563-01)   08/2022 - 02/2023
Institute for Dynamic Systems and Control (IDSC) at ETH Zürich, lectured by R. D'Andrea

Recursive Estimation (151-0566-00)   02/2022 - 08/2022
Institute for Dynamic Systems and Control (IDSC) at ETH Zürich, lectured by R. D'Andrea

Dynamic Programming and Optimal Control (151-0563-01)   08/2021 - 02/2022
Institute for Dynamic Systems and Control (IDSC) at ETH Zürich, lectured by R. D'Andrea

SKILLS AND SERVICES

Language: Chinese (Native), English (C1), German (B2)
Programming: Python, C++, Git, Docker, LaTeX, PyTorch, ROS
Journal Reviewer: RA-L
Conference Reviewer: ICRA, CoRL, IROS, RLC, SIGGRAPH
Workshop Reviewer: EXAIT@ICML2025

SCHOLARSHIPS AND AWARDS

Outstanding Teaching Assistant Award	03/2022
ETH Zürich	*Zürich, Switzerland*
Friends of Tsinghua Scholarship – German Scholarship	10/2019
Tsinghua University	*Beijing, China*
Academic Excellence Scholarship	10/2018, 10/2019
Tsinghua University	*Beijing, China*
Volunteer Public Service Scholarship	10/2018
Tsinghua University	*Beijing, China*
Integrated Excellence Scholarship	10/2017
Tsinghua University	*Beijing, China*