



CHEN SIWEI

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EDUCATION

PhD in Computer Science | 2019 – Present | National University of Singapore

Started from Aug 2019. Supervisor: Prof. David Hsu

Information System | 2015 – 2019 | National University of Singapore

Graduated with Lee Kuan Yew Gold Medal

RESEARCH INTERESTS

My research interests span robotics, artificial intelligence, and decision making in complex environments. The long-term goal of the research is to empower robots to be intelligent enough to perform everyday tasks and benefit people in various ways.

PUBLICATIONS

Ab Initio Particle-based Object Manipulation

Siwei Chen, Xiao Ma, Yunfan Lu, David Hsu, Robotics: Science and Systems, RSS 2021

DinerDash Gym: A Benchmark for Policy Learning in High-Dimensional Action Space

Siwei Chen, Xiao Ma, David Hsu, RSS Imitation Learning Workshop 2020

Contrastive Variational Model-Based Reinforcement Learning for Complex Observations

Xiao Ma, Siwei Chen, David Hsu, Wee Sun Lee, Conference on Robot Learning, CoRL 2020

Improving Layer-wise Adaptive Rate Methods using Trust Ratio Clipping

Jeffrey Fong, Siwei Chen, Kaiqi Chen (arXiv)

Imitation Learning as State Matching via Differentiable Physics

Siwei Chen, Xiao Ma, Zhongwen Xu, CVPR 2023

DaxBench: Benchmarking Deformable Object Manipulation with Differentiable Physics

Siwei Chen*, Yiqing Xu*, Cunjun Yu*, Linfeng Li, Xiao Ma, Zhongwen Xu, David Hsu, **ICLR 2023 Oral**

DiffMimic: Learning Backflip in 10 Minutes with Differentiable Physics

Jiawei Ren*, Cunjun Yu*, Siwei Chen, Xiao Ma, Liang Pan, Ziwei Liu, ICLR 2023

AWARDS AND ACKNOWLEDGEMENTS

AISG PhD Fellowship | 2021 - Present

Obtained in academic year 2021 from the AI Singapore

Research Achievement Award | 2021

Obtained in academic year 2021 from the National University of Singapore

President's Graduate Fellowship | 2019 - 2021

Obtained in academic year 2019 from the National University of Singapore

Lee Kuan Yew Gold Medal | 2019

Obtained in 2019 from the National University of Singapore

Dean's List | 17/18 Semester 2, 18/19 Semester 1

Obtained from School of Computing National University of Singapore.

Dean's List | 2016/17 Semester 1 and 2

Obtained from School of Computing National University of Singapore.

Distinction in ICT Solutioning Knowledge Area | 2017

Obtained in 2017 from School of Computing National University of Singapore.

Graduate with Silver Medal | 2015

Obtained in 2015 from Singapore Polytechnic.

EMPLOYMENT HISTORY

Research Intern, Sea AI Lab – Research Intern | 2021 Dec – 2022 May

- Research on decision making with differentiable dynamics.

Enterprise System, Jeripay – Software Engineer | 2019 Jan – 2019 July

- A smart POS system which allows fully customized transactions in shopping malls.
- Deployed in 12 malls, 1500 stores with 1 million SGD transactions per day.