WENHAO DING

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EDUCATION

Carnegie Mellon University, Pittsburgh, USA   *Aug 2019 - May 2024*
Ph.D. Mechanical Engineering

Carnegie Mellon University, Pittsburgh, USA   *May 2021 - Dec 2022*
M.S. Machine Leaning

Carnegie Mellon University, Pittsburgh, USA   *Aug 2019 - May 2021*
M.Eng. Mechanical Engineering

Tsinghua University, Beijing, China   *Aug 2014 - July 2018*
B.Eng. Electronic Engineering

ACADEMIC SERVICES

Conference Reviewer:	CVPR 2022, ICLR 2022, NeurIPS 2021, ICCV 2021, ICRA 2020-2021, IROS 2020-2021, ICME 2020-2021
Journal Reviewer:	IEEE RA-L, IEEE Access, IEEE T-ITS, IEEE TII, IEEE MM

PUBLICATION

CausalAF: Causal Autoregressive Flow for Goal-Directed Safety-Critical Scenes Generation
Wenhao Ding, Haohong Lin, Bo Li, Ding Zhao
Preprint arXiv:2110.13939 (Submitted to CLeaR 2022)

Semantically Controllable Scene Generation with Guidance of Explicit Knowledge
Wenhao Ding, Bo Li, Kim Ji Eun, Ding Zhao
Preprint arXiv:2106.04066 (Submitted to ICLR 2022)

Certifiable Deep Importance Sampling for Rare-Event Simulation of Black-Box Systems
Mansur Arief, Yuanlu Bai, Wenhao Ding, Shengyi He, Zhiyuan Huang, Henry Lam, Ding Zhao
Preprint arXiv:2111.02204 (Submitted to Operation Research)

Multimodal Safety-Critical Scenarios Generation for Decision-Making Algorithms Evaluation
Wenhao Ding, Baimimng Chen, Bo Li, Kim Ji Eun, Ding Zhao
IEEE Robotics and Automation Letters (RA-L)

Context-Aware Safe Reinforcement Learning for Non-Stationary Environments
Baiming Chen, Zuxin Liu, Jiacheng Zhu, Mengdi Xu, Wenhao Ding, Liang Li, Ding Zhao
IEEE International Conference on Robotics and Automation (ICRA) 2021

Task-Agnostic Online Reinforcement Learning with an Infinite Mixture of Gaussian Processes
Mengdi Xu, Wenhao Ding, Jiacheng Zhu, Zuxin Liu, Baiming Chen, Ding Zhao
Neural Information Processing Systems (NeurIPS) 2020

Deep Probabilistic Accelerated Evaluation: A Certifiable Rare-Event Simulation Methodology for Black-Box Autonomy
Mansur Arief*, Zhiyuan Huang*, Guru Kumar, Yuanlu Bai, Wenhao Ding, Henry Lam, Ding Zhao
Artificial Intelligence and Statistics (AISTATS) 2021

Learning to Collide: An Adaptive Safety-Critical Scenarios Generating Method
Wenhao Ding, Baiming Chen, Minjun Xu and Ding Zhao
IEEE International Conference on Intelligent Robots and Systems (IROS) 2020

Adaptive Multi-scale Detection of Acoustic Events
Wenhao Ding and Liang He
IEEE/ACM Transactions on Audio, Speech, and Language Processing (T-ASLP)

CMTS: Conditional Multiple Trajectory Synthesizer for Generating Safety-critical Driving Scenarios
Wenhao Ding, Mengdi Xu and Ding Zhao
IEEE International Conference on Robotics and Automation (ICRA) 2020

A New Multi-vehicle Trajectory Generator to Simulate Vehicle-to-Vehicle Encounters
Wenhao Ding, Wenshuo Wang and Ding Zhao
IEEE International Conference on Robotics and Automation (ICRA) 2019

Prior Knowledge-based Regularization for Sound Event Localization and Detection
Wenhao Ding, Jingyang Zhang* and Liang He*
Detection and Classification of Acoustic Scenes and Events Challenge 2019 (Task 3)

Multi-Scale Time-Frequency Attention for Acoustic Event Detection
*Jingyang Zhang, **Wenhao Ding**, Jintao Kang and Liang He*
Interspeech 2019

MTGAN: Speaker Verification through Multitasking Triplet Generative Adversarial Networks
Wenhao Ding and Liang He
IEEE International Conference on Robotics and Automation (ICRA) 2019

Hierarchical Reinforcement Learning Framework towards Multi-agent Navigation
Wenhao Ding, Shuaijun Li and Huihuan Qian
IEEE International Conference on Robotics and Biomimetics (ROBIO) 2018

Vehicle Pose and Shape Estimation through Multiple Monocular Vision
Wenhao Ding, Shuaijun Li, Guilin Zhang, Xiangyu Lei and Huihuan Qian
IEEE International Conference on Robotics and Biomimetics (ROBIO) 2018

WORK EXPERIENCE

Bosch Center for Artificial Intelligence, Pittsburgh, USA *May 2021 - Aug 2021*
Machine Learning Research Intern

Tsinghua University, Beijing, China *July 2018 - Aug 2019*
Research Engineer

HongKong University of Science and Technology, HongKong, China *Jan 2018 - Mar 2018*
Research Assitant

Chinese University of HongKong, HongKong, China *July 2017 - Sep 2017*
Research Assitant

AWARD

2019 Graduate Student Assembly/Provost Conference Funds
Outstanding Undergraduate Thesis Award
34th Tsinghua University Academic Challenge Cup (*Second prize*)
Undergraduate Academic Recommendation Program Fund (2016)
10th Tsinghua University Science and Technology Innovation Training Program "Spark"
Tsinghua University Technology Innovation Excellence Award (*2016, 2017*)