

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 Learning

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, Baiming 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

Interspeech 2018

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

Machine Learning Research Intern

May 2021 - Aug 2021

Tsinghua University, Beijing, China

Research Engineer

July 2018 - Aug 2019

HongKong University of Science and Technology, HongKong, China

Research Assitant

Jan 2018 - Mar 2018

Chinese University of HongKong, HongKong, China

Research Assitant

July 2017 - Sep 2017

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)