

# Dong HUANG

+852-59312275 | dhuang@cs.hku.hk

## EDUCATION

<b>University of Hong Kong</b>	Sep 2021 - Jun 2025
Ph.D. in Computer Science	Hong Kong
<ul style="list-style-type: none"><li>Research interests: Toward Functional Correctness, Energy Efficiency, and Security Assurance in LLM-Generated Code</li><li>Advisor: Prof. Heming Cui</li></ul>	
<b>Huazhong University of Science and Technology</b>	Jun 2017 - Sep 2021
Materials Forming and Control Engineering	Wuhan

## Publications

### Adversarial Feature Map Pruning for Backdoor

**Dong Huang**, Qingwen Bu, Yuhao Qing, Yichao Fu, Heming Cui

<https://openreview.net/forum?id=IOEEDkIa96>

Accepted by **ICLR 2024**

### Neuron Sensitivity Guided Test Case Selection

**Dong Huang**, Qingwen Bu, Yichao Fu, Xiaofei Xie, Junjie Chen, Heming Cui

<https://dl.acm.org/doi/10.1145/3672454>

Accepted by **TOSEM**

### Towards Building More Robust Models with Frequency Bias

Qingwen Bu, **Dong Huang\***, Heming Cui

Accepted by **ICCV 2023**

Corresponding Author

### SOAP: Enhancing Efficiency of Generated Code via Self-Optimization

**Dong Huang**, Jianbo Dai, Han Weng, Puzhen Wu, Yuhao Qing, Jie M.Zhang, Heming Cui, Zhijiang Guo

<https://arxiv.org/pdf/2405.15189>

### EffiBench: Benchmarking the Efficiency of Automatically Generated Code

**Dong Huang**, Jie M.Zhang, Yuhao Qing, Heming Cui

Arxiv: <https://arxiv.org/abs/2402.02037>

HuggingFace: <https://huggingface.co/datasets/DONG19/EffiBench>

GitHub: <https://github.com/huangd1999/EffiBench>

Under Review

### Bias Testing and Mitigation in LLM-based Code Generation

**Dong Huang**, Qingwen Bu, Jie M.Zhang, Xiaofei Xie, Junjie Chen, Heming Cui

<https://arxiv.org/abs/2309.14345>

NeurIPS 2024 Under Review

CCF-A I Machine Learning Top-3

### AgentCoder: Multi-Agent-based Code Generation with Iterative Testing and Optimisation

**Dong Huang**, Qingwen Bu, Jie M.Zhang, Michael Luck, Heming Cui

<https://arxiv.org/pdf/2312.13010.pdf>

Under Review

### VPIPE: Transparently achieving efficient and scalable pipelined parallelism for DNN training

Shixiong Zhao, Fanxin Li, Xusheng Chen, Xiuxian Guan, Jianyu Jiang, **Dong HUANG**, Yuhao Qing, Sen Wang, Peng Wang, Gong Zhang, Cheng Li, Ping Luo, Heming Cui

IEEE Transactions on Parallel and Distributed Systems 2021 (CCF-A TPDS '21)

### Feature Map Testing for Deep Neural Networks

**Dong Huang**, Qingwen Bu, Yuhao Qing, Bocheng Xiao, Heming Cui

<https://arxiv.org/abs/2307.11563>

TOSEM In process **Major Revision**

### DAMO: Dynamic Adversarial defense with Multi-branch Orthogonality

**Dong Huang**, Qingwen Bu, Yuhao Qing, Heming Cui

<http://arxiv.org/abs/2208.08083>

Under Review

### CodeCoT: Tackling Code Syntax Errors in CoT Reasoning for Code Generation

**Dong Huang**, Qingwen Bu, Yuhao Qing, Heming Cui

<https://arxiv.org/abs/2308.08784>

Under Review

**AGRNav: Efficient and Energy-Saving Autonomous Navigation for Air-Ground Robots in Occlusion-Prone Environments**

Junming Wang, Zekai Sun, Xiuxian Guan, Tianxiang Shen, Zongyuan Zhang, Tianyang Duan, **Dong Huang**, Shixiong Zhao, Heming Cui

<https://arxiv.org/pdf/2403.11607>

**ICRA 2024**

**Fuzzing Transformer Programs**

**Dong Huang**, Qingwen Bu, Junjie Chen, Yuhao Qing, Heming Cui

TOSEM in process **Major Revision**

**Research Advisor and Collaborator**

---

**It's my honor to be working with the following Professors:**

Dr. Heming Cui, Associate Professor at the HKU (Primary Advisor)

Dr. Jie M. Zhang, Lecturer (equivalent to Assistant Professor) at KCL

Dr. Xiaofei Xie, Assistant Professor at SMU

Dr. Junjie Chen, Associate Professor at TJU

Dr. Mark Harman, Professor at UCL and Research Scientist at Meta

Dr. Michael Luck, Professor at KCL and Deputy Vice-Chancellor and Provost at the University of Sussex

Dr. Weiyi Shang, Associate Professor at the University of Waterloo

**Research Mentoring**

---

**I am fortunate to be working with the following talented students and interns:**

- Qingwen Bu: Undergrad at HUST, to PhD at SJTU
- Junming Wang: Mphil at HKU, to Horizon Robotics
- Zhiguang Han: Undergrad at NTU, to A STAR
- Weng Han: Master at BUPT
- Puzhen Wu: Undergrad at UCD

**Teaching**

---

COMP7506A/B: Smart phone apps development, Spring 2024

**Academic Services**

---

Reviewer: ICASSP 2024, NeurIPS 2024, NeurIPS Dataset and Benchmark Track 2024, ACL ARR (e.g., ACL, EMNLP, AACL)

**Media Coverage**

---

AgentCoder:

[Artificial Intelligence Index Report 2024 - Stanford University](#)

[The latest on global AI development](#)

[Build Your Own Devin!](#)

**INTERNSHIP**

---

**Huawei Technologies Co., Ltd.**

Research Intern Theory Lab, 2012

Jul 2022 - Dec 2022

Hong Kong