

Day 1 (November 26, 2024)		
08:30 – 08:50	Registration	
08:50 – 09:00	Opening	Session Chair: Nan Guan (City University of Hong Kong)
09:00 – 10:00	Keynote speaker 1 Wang Yi: <i>MIMOS: A New Paradigm and Tools for Embedded Systems Design and Updates</i>	Session Chair: Nan Guan (City University of Hong Kong)
10:00 – 10:30	Coffee Break	
10:30 – 12:10	Session I: Dependable CPS and concurrent systems	Session Chair: Mingsong Lv (Northeastern University, China)
10:30 – 10:55	Data-Dependent WAR Analysis for Efficient Task-Based Intermittent Computing Juxin Niu, Yunlong Yu, Wei zhang and Nan Guan	
10:55 – 11:20	Universal Construction for Linearizable but Not Strongly Linearizable Concurrent Objects Chao Wang, Peng Wu, Gustavo Petri, Qiaowen Jia, Youlin He, Yi Lv and Zhiming Liu	
11:20 – 11:45	Cache Behavior Analysis with SP-relative Addressing for WCET Estimation Shangshang Xiao, Mengxia Sun, Wei Zhang, Najun Zhan and Lei Ju	
11:45 – 12:10	Timing Analysis of Cause-Effect Chains for External Events with Finite Validity Intervals Xiantong Luo, Haochun Liang, Yue Tang, Xu Jiang, Nan Guan and Wang Yi	
12:10 – 13:30	Lunch	
13:30 – 15:10	Session II: Proving and Verification	Session Chair: Chao Wang (Southwest University, China)
13:30 – 13:55	Formal Verification of RISC-V Processor Chisel Designs Shidong Shen, Yicheng Liu, Lijun Zhang, Fu song and Zhilin Wu	
13:55 – 14:20	The Principle of Staking: Formal Verification of Staking Smart Contract Zhongyun Zhang, Kundu Chen, Weiqi Guo and Wenbo Zhang	
14:20 – 14:45	A Contract-based Framework for Formal Verification of Embedded Software Xu Lu, Cong Tian, Bin Gu, Bin Yu, Chen Chen and Zhenhua Duan	
14:45 – 15:10	Formalizing x86-64 ISA in Isabelle/HOL: A Binary Semantics for eBPF JIT Correctness Jiayi Lu, Shenghao Yuan, David Sanan and Yongwang Zhao	

15:10 – 15:40	Coffee Break	
15:40 – 16:55	Session III: Testing and Verification of Deep Learning Systems	Session Chair: Wei Zhang (Shandong University)
15:40 – 16:05	Runtime Verification of Neural-Symbolic Systems Shaojun Deng, Wanwei Liu and Miaomiao Zhang	
16:05 – 16:30	Eidos: Efficient, Imperceptible Adversarial 3D Point Clouds Hanwei Zhang, Luo Cheng, Qisong He, Wei Huang, Renjue Li, Ronan Sicre, Xiaowei Huang, Holger Hermanns and Lijun Zhang	
16:30 – 16:55	MILE: A Mutation Testing Framework of In-Context Learning Systems Zeming Wei, Yihao Zhang and Meng Sun	
17:00 – 20:00	Reception	
Day 2 (November 27, 2024)		
09:00 – 10:00	Keynote speaker 2 Shengchao Qin: <i>LLM for Program Specification Generation</i>	Session Chair: Timothy Bourke (INRIA)
10:00 – 10:30	Coffee Break	
10:30 – 12:10	Session IV: Program Analysis	Session Chair: Heqing Huang (City University of Hong Kong)
10:30 – 10:55	An Assertion-Based Separation Logic for Local Reasoning about Probabilistic Programs Huilin Wu, Anran Cui and Yuxin Deng	
10:55 – 11: 20	Extending Symbolic Heap to Support Shared Ownership Jiyang Wu and Qinxiang Cao	
11:20 – 11:45	Constraint Based Invariant Generation with Modular Operations Yuchen Li, Hongfei Fu, Haowen Long and Guoqiang Li	
11:45 – 12:10	The Design of Intelligent Temperature Control System of Smart House with MARS Yihao Yin, Hao Wu, Shuling Wang, Xiong Xu, Fanjiang Xu and Naijun Zhan	
12:10 – 13:30	Lunch	
13:30 – 14:45	Session V: Formal language and LLMs	Session Chair: Naijun Zhan (Peking University, China)
13:30 – 13:55	A Derivative-based Membership Algorithm for Enhanced Regular Expressions Mengxi Wang, Chunmei Dong, Weihao Su, Chengyao Peng and Haiming Chen	

13:55 – 14:20	Enhancing Multi-modal Regular Expression Synthesis via Large Language Models and Semantic Manipulations of Sub-Expressions Zipan Tang, Yixuan Yan, Rongchen Li, Hanze Dong, Haiming Chen and Hongyu Gao	
14:20 – 14:45	Can Language Models Pretend Solvers? Logic Code Simulation with LLMs Minyu Chen, Guoqiang Li, Ling-I Wu, Ruibang Liu, Yuxin Su, Xi Chang and Jianxin Xue	
15:00 – 18:00	Tour	
18:00 – 20:00	Banquet	
Day 3 (November 28, 2024)		
09:00 – 10:00	Keynote speaker 3 Jean-François Raskin: <i>LTL Synthesis with a Few Hints</i>	Session Chair: Amir Goharshady (HKUST)
10:00 – 10:30	Coffee Break	
10:30 – 11:45	Session VI: Anomaly Detection and Program Optimization	Session Chair: Yue Tang (Northeastern University)
10:30 – 10:55	NanoHook: An Efficient System Call Hooking Technique with One-Byte Invasive Quan Hong, Jiaqi Li, Wen Zhang and Lidong Zhai	
10:55 – 11:20	EDSLog: Efficient Log Anomaly Detection Method Based on Dataset Partitioning Feng Liang and Jing Liu	
11:20 – 11:45	Faster Lifetime-optimal Speculative Partial Redundancy Elimination for Goto-free Programs Xuran Cai and Amir Goharshady	
11:45 – 13:00	Closing & Lunch	