

ICFEM 2025 Program (Hangzhou, GMT+8)

Day 0 - November 10, 2025

8:30 - 17:30

Registration

9:00 - 12:00

Tutorial: Analysis (Model Checking) Techniques for Markov Decision Processes (MDPs)

Speaker: Prof. P. S. Thiagarajan

Day 1 - November 11, 2025

8:30 - 9:00

Registration & Welcome Coffee

9:00 - 10:00

Opening Keynote 1 by Prof. Jifeng He

10:00 - 10:30

Coffee Break

Session 1: Formal Verification of Security and Cryptographic Protocols

Chair: TBD

10:30 - 12:30

[3] *Formal Verification of Physical Layer Security Protocols for Next-Generation Communication Networks*

Kangfeng Ye, Roberto Metere, Jim Woodcock and Poonam Yadav

[28] *Formal Construction of Threat Detections from Attack Trees*

Dumitru Bogdan Prelipcean, Catalin Dima and Daniele Varacca

[37] *ZK-ProVer: Proving Programming Verification in Non-Interactive Zero-Knowledge Proofs*

Haoyu Wei, Jingyu Ke, Ruibang Liu and Guoqiang Li

[45] *Formal Modeling and Verification of Blockchain Consensus Protocols: A Case Study on ChainMaker*

Minfan Xu, Shuo Zhou, Xian Xu and Huan Long

12:30 - 14:00

Lunch Break

14:00 - 15:00

Keynote 2 by Prof. Jim Woodcock

15:00 - 15:30

Coffee Break

Session 2: LLMs and Formal Methods

Chair: TBD

15:30 - 17:30

[4] *Automata-Based Steering Method for Diverse Structured Generation of Large Language Models*

Xiaokun Luan, Zeming Wei, Yihao Zhang and Meng Sun

[8] *LLM-SYM: Integrating Symbolic Methods and Large Language Models for Automated Theorem Proving*

Yifan Wu, Yanhong Huang and Jianqi Shi

[11] *Formalizing Requirements into Dafny Specifications with LLMs*

Yi-Han Lu, Xue-Yang Zhu, Wenhui Zhang and Rongjie Yan

[36] *A Test-Driven Approach for Refining Use Case Descriptions of Software Requirements with LLMs*

Haibo Li, Lixiao Zheng and Qihang Cai

Day 2 - November 12, 2025	
9:00 - 10:00	Keynote 3 by Mariëlle Stoelinga
10:00 - 10:30	Coffee Break
Session 3: Runtime Verification, Control, and Robotics	
<i>Chair: TBD</i>	
10:30 - 12:00	[10] <i>Neural-Symbolic System Control Adjustment Based on Runtime Verification</i> Hongxu Zhu, Wanwei Liu and Ji Wang
	[9] <i>Modeling and Analysis of Cyber-Physical Systems in the Hybrid π-Calculus Using Extended Sequence Diagrams</i> Xiong Xu, Jixiang Miao, Shuling Wang and Jean-Pierre Talpin
	[65] <i>Formal Modelling of Fault Tolerant Robotic Missions</i> Manon Lecart and Elena Troubitsyna
12:00 - 13:30	Lunch Break
Session 4: Program Analysis and Software Reliability	
<i>Chair: TBD</i>	
13:30 - 15:30	[18] <i>Detecting Vector Container Errors in C++ Programs via Abstract Interpretation</i> Liusiyu Liu, Chen Liqian, Fan Guangsheng, Yin Banghu, Huang Chun and Wang Ji
	[41] <i>Synthesizing Loops from Linear Ranking Functions</i> Rui-Juan Jing, Yaru Yuan, Yuxing Cai, Yi Li and Changbo Chen
	[25] <i>MetaLogic: Robustness Evaluation of Text-to-Image Models Using Logically Equivalent Prompts</i> Yifan Shen, Yangyang Shu, Hye-young Paik and Yulei Sui
	[48] <i>Model-based test case generation from UML sequence diagrams using extended finite state machines</i> Maurício Rocha, Adenilso Simao and Thiago Souza
15:30 - 16:00	Coffee Break
Session 5: SMT and Quantitative Verification	
<i>Chair: TBD</i>	
16:00 - 17:50	[60] <i>Avoiding Larger Conflict Regions in CDCL-Style Methods for Solving SMT-NRA</i> Xinpeng Ni, Tianyi Ding and Bican Xia
	[61] <i>Formal Modeling of Reinforcement Learning Systems with SMT</i> Tianyi Ding, Yuxin Lin and Meng Sun
	[64] <i>Towards High-Level SMT Program Modeling: Bounded Integers, Simplified Structs, and Metaprogramming</i> Xiangyu Li
	[56] <i>Quantitative Verification for Temporal Properties of Massive Linear Systems</i> Qing Liu, Yuntao Li, Sung Woo Choi, Luan Viet Nguyen and Hoang-Dung Tran
Conference Banquet 🍷	
18:30 - 19:00	Location: Jinxi Hotel
19:00 - 20:00	Cocktail Reception
	Dinner
	Awards Ceremony
20:00 - 20:30	Best Paper Awards Presentation
	Recognition of Outstanding Contributions
	Announcement of ICFEM 2026 Location and Dates
20:30 - 21:00	Networking and Celebration

Day 3 - November 13, 2025	
9:00 - 10:00	Keynote 4 by Yongwang Zhao
10:00 - 10:30	Coffee Break
10:30 - 12:30	Session 6: Logic, Automata, and Concurrent Systems
	Chair: TBD
	[22] <i>BCCIC3: Batch Clause Construction Enhanced Generalization in IC3</i> Yi Chen, Liangze Yin, Xinyi Gong, Ji Wang and Ting Wang
	[42] <i>Modeling and Verifying Concurrent Reactive Systems Using Separation Logic</i> Huan Sun, David Sanán, Jun Sun and Wenhai Wang
12:30 - 14:00	[54] <i>A Unified Method to Efficiently Verify Opacity of Discrete-Timed Automata</i> Julian Klein, Kuize Zhang and Sabine Glesner
	[67] <i>Specification and Verification of Multi-Clock Systems Using a Temporal Logic with Clock Constraints</i> Yuanrui Zhang, Frederic Mallet, Min Zhang and Zhiming Liu
12:30 - 14:00	Lunch Break
14:00 -15:30	West Lake Hiking Tour
End	

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Legends		Keynotes	#fff0c8
		Invited Papers	#d5cfe5
		Regular Papers	#fbe3c9
		Doctoral Symposium Papers	#d5e8d0
		Journal First Papers	#cbe0f0