

简 历

◆ 个人概况

姓 名: 陈铭松	性 别: 男
职 称: 副教授	单 位: 华东师范大学计算机科学与软件工程学院
籍 贯: 江苏	政治面貌: 党员

◆ 主要研究方向

软硬件测试与建模, 可靠性系统验证, 硬件体系结构, 嵌入式系统, 软件工程

◆ 教育背景

2006.8-2010.8	佛罗里达大学计算机系, 获博士学位 (导师: Prof. Prabhat Mishra, 研究方向, 嵌入式系统的建模验证)
2003.9-2006.7	南京大学计算机科学与技术系, 获硕士学位 (导师: 李宣东教授, 研究方向, 软件工程, 模型检验)
1999.9-2003.7	南京大学计算机科学与技术系, 获学士学位

◆ 工作经历

2010.8 -	华东师范大学软件学院 副教授
2007.2 - 2010.7	佛罗里达大学计算机嵌入式系统实验室 助研
2006.8 - 2010.5	佛罗里达大学计算机系 助教
2005.12-2006.1	深圳移动 实习
2005.7-2005.9	趋势科技 实习
2002.9-2006.6	南京大学计算机系软件工程实验室 助研

◆ 所获奖励与证书

2013	International Conference on VLSI Design 最佳论文题名
2010	Design Automation Conference Ph.D. Forum Travel Grant
2009	Design Automation Conference Summer School Travel Grant
2009	International Conference on VLSI Design 最佳论文题名
2008	Design Automation Conference Young Student Support Program Award
2007	佛罗里达大学 Achievement Award

◆ 主持与参与的项目

主持	国家自然科学基金重大计划项目 “不确定环境下可信国产城轨控制系统 (iCMTct) 构造关键技术研究” (2015-2016)
主持	国家自然科学基金 “基于高阶规约定向测试的异构系统验证研究” (2013-2015)
主持	上海教委创新重点项目 “高阶规约驱动的 CPS 系统可信构造研究” (2014-2016)
主持	教育部博士点基金 (2012-2013)
主持	华东师范大学创新基金 (2011-2012)
主持	江苏金陵科技集团有限公司 “国内 L 及 T 应用协议分析及还原” (2015-2017)
参与	863 计划 “面向信息-物理融合的系统平台” (骨干成员, 已结题)
参与	美国国家自然科学基金 “ 异构多核架构的功能验证 ” (骨干成员, 已结题)
参与	Intel 资助研究项目 “ 基于 SystemC TLM 的 SoC 验证 ” (骨干成员, 已结题)

参与 中国国家自然科学基金“实时系统可靠性的测试验证”（已结题）
参与 中国国家自然科学基金“并发时间自动机检验算法中的空间压缩技术”（已结题）
参与 863 计划“基于 MDA 的 UML 模型转换技术以及支撑工具的研究”（已结题）

◆ 所教课程

研究生课程（华师大）

信息物理融合系统理论与时间 2011 秋，2012 秋，2013 秋，2014 秋

计算机体系结构 2013 秋，2014 秋，2015 秋

本科课程（华师大）

自动机理论 2015 秋

并发程序语言设计 2013 春，2014 春，2015 春，2015 秋

软件质量保证 2013 秋

专业英语 2011 秋，2012 春，2012 秋

本科生、研究生课程（佛罗里达大学）

CDA5725 数据库管理系统 2008 秋

CIS6930 嵌入式系统 2008 春

COP3530 数据结构与算法 2006 秋，2007 春，2007 夏

CDA3101 计算机体系结构 2009 春，2009 秋，2010 春

◆ 发表论文

专著

[1.1] **Mingsong Chen**, Xiaoke Qin, Heon-mo Koo and Prabhat Mishra. System-Level Validation: High-Level Modeling and Directed Test Generation Techniques. Springer, 2012. ISBN: 978-1-4614-1358-5（英文版）

[1.2] **Mingsong Chen**, Xiaoke Qin, Heon-mo Koo and Prabhat Mishra. System-Level Validation: High-Level Modeling and Directed Test Generation Techniques. Springer, 2014. ISBN: 978-5-94836-365-3（俄文版）

中英文期刊

[1] Jingweijia Tan, Zhi Li, **Mingsong Chen**, and Xin Fu. Exploring Soft-Error Robust and Energy-Efficient Register File in GPGPUs using Resistive Memory. ACM Transactions on Design Automation of Electronic Systems (TODAES), 已录用.（SCI, EDA 顶级期刊, CCF-B 类）

[2] **Mingsong Chen**, Xiqian Zhang, Geguang Pu, Xin Fu and Prabhat Mishra. Efficient Resource Constrained Scheduling using Parallel Structure Aware Pruning Techniques. IEEE Transactions on Computers, 2015. DOI: 10.1109/TC.2015.2468230.（SCI, 计算机系统顶级期刊, CCF-A 类）

[3] **Mingsong Chen**（通讯作者）, Xiaoke Qin and Prabhat Mishra. Efficient Learning-Oriented Property Decomposition for Automated Generation of Directed Tests. Journal of Electronic Testing (JETTA), 30(3): 287-306, 2014（SCIE, 电子测试权威期刊, CCF-C 类）

[4] Zheng Wang, Geguang Pu, Jianwen Li, Yuxiang Chen, Yongxin Zhao, **Mingsong Chen**, Bin Gu, Jifeng HE. An Approach to Requirement Anaysis for Periodic Control Systems. Frontiers of Computer Science in China, 7(4): 214-235, 2013.（SCIE）

- [5] **Mingsong Chen** (通讯作者) and Prabhat Mishra. Automatic RTL Test Generation from SystemC TLM Specifications. *ACM Transaction on Embedded Computing Systems*, 11(2):38, 2012. (SCIE, 嵌入式领域顶级期刊, CCF-B 类)
- [6] **Mingsong Chen** (通讯作者) and Prabhat Mishra. Property Learning Techniques for Efficient Generation of Directed Tests. *IEEE Transactions on Computers*, 60(6), 852-864, 2011. (SCI, 计算机系统顶级期刊, CCF-A 类)
- [7] **Mingsong Chen** (通讯作者), Prabhat Mishra and Dhruvaji Kalita. Efficient Automatic Test Generation for Validation of UML Activity Diagram. *Design Automation for Embedded Systems*, vol. 14(2), 105-130, 2010. (SCIE, CCF-C 类)
- [8] **Mingsong Chen** (通讯作者) and Prabhat Mishra. Efficient SAT-based Test Generation using Property Clustering. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol. 29(3), 396-404, 2010. (SCI, EDA 领域顶级期刊, CCF-B 类)
- [9] **Mingsong Chen**, Xiaokang Qiu, Wei Xu, Linzhang Wang, Jianhua Zhao, Xuandong Li. UML Activity Diagram Based Automatic Test Case Generation for Java Programs. In *The Computer Journal*, Oxford Press, vol 52(5), 545-556, 2009. (SCI, CCF B 类期刊)
- [10] 黄赛杰, **陈铭松** (通讯作者), 金乃咏. 一种基于约束求解的 Verilog 语言静态分析方法, *计算机应用与软件*, 2015 年第 12 期, 已录用
- [11] **陈铭松** 黄赛杰 李昂. CPS 研究热点概述. *中国计算机学会通讯*, 2013 年第 7 期.
- [12] 陈玉祥 蒲戈光 蔡艳霞 **陈铭松** 王政 陈朝晖 顾斌. 基于 SPARDL 的模型和程序一致性测试. *计算机应用研究*, 2013 年第 3 期.
- [13] **陈铭松** 赵建华 李宣东 郑国梁. 一种动态消减时间自动机可达性搜索空间的方法. *计算机科学*, 2007, 34 (01): 213-218
- [14] 邱晓康 **陈铭松** 王林章 李宣东 郑国梁. 行为图驱动的 Java 程序运行时验证工具. *计算机科学*, 2007, 34 (12): 273-277
- [15] **陈铭松** 赵建华 李宣东 郑国梁. 时间自动机可达性分析中的状态空间约减技术综述. *计算机科学*, 2006, 33 (06): 1-7

国际会议

- [C1] Xiaohong Chen, Fan Gu, **Mingsong Chen** (通讯作者), Dehui Du, Jing Liu, Haiying Sun. Evaluating Energy Consumption for Cyber-Physical Energy System: an Environment Ontology based Approach. *IEEE Computer Software and Applications Conference (COMPSAC)*, 2015.. (EI, CCF-C 类)
- [C2] **Mingsong Chen** (通讯作者), Daian Yue, Xiaoke Qin, Xin Fu and Prabhat Mishra. Variation-Aware Evaluation for MPSoC Task Allocation and Scheduling Strategies using Statistical Model Checking. *Design, Automation and Test in Europe (DATE)*, Grenoble, France, 2015. (EI, EDA 顶级会议, CCF-B 类)
- [C3] Saijie Huang, **Mingsong Chen** (通讯作者), Xiao Liu, Dehui Du, Xiaohong Chen. Variation-Aware Resource Allocation Evaluation for Cloud Workflows using Statistical Model Checking. *IEEE International Conf. on Big Data and Cloud Computing (BDCloud)*, 2014.. (EI)
- [C4] Ang Li, Zishan Qin, **Mingsong Chen** (通讯作者), Jing Liu. ADAutomation: An Activity Diagram Based Automated GUI Testing Framework for Smartphone Applications. *IEEE International Conference on Software Security and Reliability*, San Francisco, 2014

(EI, CCF-C类)

[C5] Dehui Du, **Mingsong Chen**, Xiao Liu, Yun Yang. A Novel Quantitative Evaluation Approach for Software Project Schedules using Statistical Model Checking. International Conference on Software Engineering (ICSE) NIER Track, India, 2014. (EI, CCF-A类)

[C6] **Mingsong Chen**, Fan Gu, Lei Zhou, Geguang Pu and Xiao Liu. Efficient Two-Phase Approaches for Branch-and-Bound Style Resource Constrained Scheduling. International Conference on VLSI Design, Bombay, India, 2014. (EI, 电子类权威会议)

[C7] Zhucheng Shao, Jing Liu, Zuohua Ding, **Mingsong Chen**, Ning kang Jiang. Spatio-temporal Properties Analysis for Cyber-physical Systems. International Conference on Engineering of Complex Computer Systems (ICECCS) 2013 (EI, CCF-C类)

[C8] **Mingsong Chen** (通讯作者), Lei Zhou, Geguang Pu and Jifeng HE. Bound-Oriented Parallel Pruning Approaches for Efficient Resource Constrained Scheduling of High-Level Synthesis. International Conference on Hardware/Software Codesign and System Synthesis Design (CODES+ISSS), 2013. (EI, 嵌入式顶级会议, CCF-C类)

[C9] **Mingsong Chen** (通讯作者), Saijie Huang, Geguang Pu and Prabhat Mishra, Branch-and-Bound Style Resource Constrained Scheduling using Efficient Structure-Aware Pruning, International Symposium on VLSI (ISVLSI), 2013. (EI, 电子类权威会议)

[C10] **Mingsong Chen** (通讯作者) and Prabhat Mishra. Assertion-Based Functional Consistency Checking between TLM and RTL Models. International Conference on VLSI Design, Pune, India, 2013. (EI, 电子类权威会议, 最佳论文提名)

[C11] Ang Li and **Mingsong Chen** (通讯作者). Efficient Self-learning Techniques for SAT-based Test Generation. International Conference on Hardware/Software Codesign and System Synthesis Design (CODES+ISSS). 2012. (EI, 嵌入式顶级会议, CCF-C类)

[C12] Xiaohong Chen and **Mingsong Chen** (通讯作者). Extending the Four-Variable Model for Cyber-Physical Systems. ISORC workshop, 31-36, 2012. (EI)

[C14] **Mingsong Chen** (通讯作者) and Prabhat Mishra. **Decision Ordering Based Property Decomposition for Functional Test Generation**. Design, Automation and Test in Europe, DATE, pages 167-172, 2011. (EI, EDA顶级会议, CCF-B类)

[C15] **Mingsong Chen** (通讯作者). Efficient Approaches For Functional Validation of SOC Designs Using High-Level Specifications, PHD Forum in Design Automation Conference (DAC), 2010 (EI, EDA顶级会议)

[C16] **Mingsong Chen** (通讯作者), Xiaoke Qin and Prabhat Mishra, **Efficient Decision Ordering Techniques for SAT-based Test Generation**, Design Automation and Test in Europe, pages 495-490, Dresden, Germany, 2010. (EI, EDA顶级会议, CCF-B类)

[C17] Xiaoke Qin, **Mingsong Chen** and Prabhat Mishra, **Synchronized Generation of Directed Tests using Satisfiability Solving**, *International Conference on VLSI Design, Bangalore, India, January 3-7, 2010*.

[C18] Prabhat Mishra and **Mingsong Chen** (通讯作者). **Efficient Techniques for Directed Test Generation using Incremental Satisfiability**. Accepted by 22nd International Conference on VLSI Design ([VLSI 2009](#)), New Delhi, India, Jan. 5-9, 2009. (EI, 电子类权威会议, 最佳论文提名)

[C19] **Mingsong Chen** (通讯作者), Prabhat Mishra and Dhrubajyoti Kalita. **Coverage-driven Automatic Test Generation for UML Activity Diagrams**. *ACM Great Lakes Symposium on VLSI (GLSVLSI)*. Orlando, USA, May 4 - 6, 2008. (EI, 电子类权威会议)

议, CCF-C 类)

[C20] **Mingsong Chen** (通讯作者), Prabhat Mishra and Dhruvajyoti Kalita. **Towards RTL Test Generation from SystemC TLM Specifications**. *IEEE International High Level Design Validation and Test Workshop (HLDVT)*. California, November 7-9, 2007 (EI)

[C21] Jeeyoung Kim, Yi Du, **Mingsong Chen**, Ahmed Helmy. **Comparing Mobility and Predictability of VoIP and WLAN Traces**. *CRAWDAD Workshop 2007 (Co-located with MobiCom)*. Montréal, Canada, September, 2007 (EI)

[C22] **Mingsong Chen**, Xiaokang Qiu, Xuandong Li. **Automatic Test Case Generation for UML Activity Diagrams**. *First International Workshop on Automation on Software Test (AST)*. pages 2-8, Shanghai, May, 2006 (EI)

◆ 学位论文

[1] "**Efficient Approaches for Functional Validation of SoC Design using High Level Specifications**". Ph.D. Dissertation in University of Florida. Advisor: Prof. Prabhat Msirha

[2] "**Dynamic Optimization Techniques for State Space in Timed Automata during Reachability Analysis**". Thesis for the Degree of Master in Nanjing University, China. Advisor: Prof. Xuandong Li and Prof. Jianhua Zhao

[3] "**Checking the time consistence of Message Sequence Chart**". Thesis for the Degree of Bachelor in Nanjing University, China. Advisor: Prof. Xuandong Li

◆ 专利

[1]陈铭松, 顾璠, 张心潜. 不确定环境下只能大厦空调系统的调度策略评估方法, 2015.9 中国, 201510551875.5

[2]陈铭松, 张心潜, 黄赛杰. 基于机器学习和统计模型检验的工作流最优配置寻优方法, 2015.9, 中国, 201510551452.3

[3] 陈铭松, 顾璠. 制程变异下基于 UPPAAL-SMC 的 MPSoC 任务调度建模与评估方法, 2015.1, 中国, 201510005475.4

[4] 陈铭松, 黄赛杰. 一种基于统计模型检验的 UML 活动图评估方法, 2015.1, 中国, 201510005356.9,

[5] 陈铭松, 黄赛杰. 一种云计算中资源分配策略的评估方法, 2014.5, 中国, 201410189197.8,

[6] 陈铭松, 黄赛杰, 浦戈光. 一种基于时间自动机的软硬件最优划分的可视化方法, 中国, 201410350399.6

[7] 陈铭松, 李昂. 一种基于 UML 活动图的 GUI 测试方法, 2013.12, 中国, 201310746056.7

◆ 软件著作权

[1]陈铭松, 顾璠. 不确定环境下智能大厦空调系统的调度策略评估工具软件, 受理号: 2015R11S188075

[2]陈铭松, 张心潜. UML 活动图至 UPPAAL-SMC 时间自动机网络转换工具软件, 受理号: 2015R11S188074

◆ 国际期刊编委

[1] Associate Editor of Journal of Circuits, Systems and Computers (JCSC), 2013 – present

◆ 国际会议组织

- [1] Microsoft Research Asia Verified Software Workshop, 组织主席, 2012
- [2] International Conference on Hardware/Software Codesign and System Synthesis, 高级仿真分会主席, 2012
- [3] International Conference, on Software Security and Reliability, 分会主席, 2014

◆ 国际会议程序委员

- [1] Design Automation and Test in Europe (DATE'14-16)
- [2] International Conference on VLSI Design (VLSID'14-16)
- [3] International Conference on Contemporary Computing ([IC3](#)), 2010 .
- [4] ACM Symposium on Applied Computing ([SAC](#)), 2011-2016.
- [5] International Conference on Formal Engineering Methods ([ICFEM](#)), 2010.
- [6] International Workshop on Formal Methods for Real-time Distributed Systems, 2012

◆ 会议与期刊审稿人

- [1] International Conference on (CODES+ISSS), 2007, 2008, 2009, 2012
- [2] Design Automation Conference (DAC), 2009-2016
- [3] The International Conference on Computer-Aided Design (ICCAD), 2012
- [4] Design Automation & Test in Europe (DATE), 2010, 2014-2016
- [5] International Conference on VLSI Design (VLSI Design), 2007-2016
- [6] ACM Great Lakes Symposium on VLSI (GLSVLSI), 2009
- [7] IEEE Computer Society Annual Symposium on VLSI (ISVLSI), 2009
- [8] Asia and South Pacific Design Automation Conference (ASP-DAC), 2010.
- [9] ACM Transactions on Design Automation of Electronic System (TODAES)
- [10] IEEE Transactions on Computers (TC)
- [11] IEEE Transactions on CAD of Integrated Circuits and Systems (TCAD)
- [12] IEEE Transactions on Very Large Scale Integration Systems (TVLSI)
- [12] IEEE Transactions on Cloud Computing (TCC)
- [13] Journal of Electronic Testing (JETTA)
- [14] VLSI Design
- [15] IEEE Design & Test of Computers
- [16] Frontiers of Computer Science in China
- [17] Journal of Systems and Software
- [18] Journal of Circuits, Systems and Computers
- [19] 软件学报
- [20] 计算机学报

◆ 学术组织

- [1] 中国计算机协会微机专委会委员
- [2] 中国计算机学会青年计算机科技论坛 CCF YOCCEF 上海地区委员
- [3] IEEE Member
- [4] 中国计算机学会上海体系架构分委会委员
- [5] 中国计算机学会上海协同计算分委会委员
- [6] 中国计算机学会上海嵌入式系统分委会委员