

Curriculum Vitae

Xu Xian

Associate professor
Department of Computer Science and Technology
East China University of Science and Technology (ECUST)

Personal Information

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East China University of Science and Technology, 200237, P.R. China.
Nationality: Chinese
Date of birth: 16 December, 1979
Language: Chinese (native); English (lower-intermediate); Japanese (basic)

Education

09/2004 - 07/2008

PhD student

Computer Science and Technology

PhD thesis title: **On the Bisimulation Theory and Axiomatization of Higher-order Process Calculi**

Supervisor: **Fu Yuxi**

PhD degree obtained: 03/2008, Shanghai Jiao Tong University

09/2002 - 03/2005

Computer Science and Technology

Master student

Master dissertation title: **On the Integration of Grid Service and J2EE Technology**

Supervisor: **You Jinyuan**

MA degree obtained: 03/2005, Shanghai Jiao Tong University

09/1998-07/2002

Computer Science and Technology

Bachelor

BSc degree obtained: 07/2002, Shanghai Jiao Tong University

Education---Teaching

During PhD study

Working as a **teaching assistant** in each semester, assisting with courses including:

- ✧ Data Structure and Algorithm, for 3 semesters
- ✧ Theory of Programming Languages, for 1 semester
- ✧ Computer Culture Foundation, for 1 semester
- ✧ Assistant in the office of the department of Computer Science and Technology, for 2 semesters

07/2008 – 08/2011 **Lecturer**

09/2011 – now **Associate professor**

Group of Software Theory and Engineering

Department of Computer Science and Technology, East China University of Science and Technology

Teaching at ECUST:

- ✧ Discrete Mathematics, Data Structures, and Software Development Technology, for sophomores
- ✧ Software Engineering, for third-years
- ✧ Communication and Concurrency, for graduate students
- ✧ The Formal Semantics of Programming Languages, for graduate students of engineering
- ✧ Supervising averagely 4 students' undergraduate theses each year, 2008-2012

Research Interests

Main Interests:

- Concurrency Theory. Various **process models**, such as CCS, pi-calculus, higher-order process calculi. Including their *semantics, bisimulation theory, axiomatization, and comparison in expressive power*. The *logical approach* in process calculi. The relationship between process calculi and other concurrent models.
- The application of concurrency theory to various areas. Such as *distributed computing, (Web) service computing, security protocols analysis*.
- Systems Biology. Applying formal methods in modeling, analyzing and verifying biological systems.

Others:

- Distributed computing.
- Java technology, Enterprise development and related.
- P systems. Cell-like, tissue-like, neural-like and other types of P system. Including their description capabilities and computational power.

Research Projects Granted

As leader:

- ✧ The ECUST Specialized Fund for Research by Young Teachers and Scientists (Grant No. YH0157123)
“**On the Theory and Application of Higher-order Process Calculi**”, 2009 -2010

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- ✧ The Shanghai Specialized Fund for Research by Young Teachers and Scientists
“**On the Theory and Application of Higher-order Processes**”, 2010 -2011
- ✧ The National Nature Science Foundation of China (NSFC) (Grant No. 60903020)
“**On the Expressiveness of Channel-Based Higher-order Process Calculi**”, 2010 -2012
- ✧ The University Students Research Plan (USRP) of ECUST (Grant No. 20110896)
“**The Design and Realization of a Higher-order Process Compiler**”, 2011 -2012

As formal member:

- ✧ The National Nature Science Foundation of China (NSFC) (Grant No. 60903189)
“**On the Safety-provable Distributed PKI in the Network Environment**”, 2010 -2012
- ✧ The BoShiDian Research Fund (Grant No. 20090073120024)
“**On the Basic Problems of Distributed PKI in the Real Network Environment**”, 2010 -2012
- ✧ The Bio-x DNA Computer Consortium (BDCC) (Grant No. 03DZ14025)
(Sub Project) “**Formal Studying of DNA-Computing**”, 2006 -2008

As informal member:

- ✧ The BoShiDian Research Fund (Grant No. 20010248033)
“**Formal Studying of Biological Processes Using Processes Algebra**”, 2007 -2009
- ✧ The National Nature Science Foundation of China (NSFC) (Grant No. 60473006, 60573002)
“**Formal Studying E-business Protocol Using Processes Algebra**”, 2007 -2009
- ✧ The National 973 Project (A large project funded by the Chinese government) (Grant No. 2003CB317005) , 2007

Some older ones (as informal member):

- ✧ The National Distinguished Young Scientist Fund of the NSFC (Grant No. 60225012)
“**Basic Theory of Computer Science**”, 2007
- ✧ The National Software Components Management Project , 2001-2002
- ✧ J2EE Application Server Project (Shanghai Science Committee, Shanghai Distributed Computing Center) , 2002-2003
- ✧ Internet Portal Project (China Telecom), 2003
- ✧ Production Line Management System (Shanghai Lucent Fiber co. Ltd.), 2003
- ✧ Shanghai Grid Project (Shanghai Science Committee, Shanghai Jiao Tong University and IBM Grid Computing Center), 2003-2004

Honors and Awards

- ✧ Collaboration of Senior Professors and Young Teachers, Second prize, ECUST, 2010
- ✧ Hewlett-Packard Company Scholarship, 2008
- ✧ General Electric Company Scholarship, 2004
- ✧ Top 10 Student of the Department of Computer Science and Technology at Shanghai Jiao Tong University, 2002
- ✧ Sanwa Bank Scholarship, 2002
- ✧ Guanghua Scholarship, 1999
- ✧ People’s Scholarship of Shanghai Jiao Tong University, 1998-2002

Bibliography (possibly obsolete)

- *Xian Xu*.
Distinguishing and Relating Higher-order and First-order Processes by Expressiveness.
To appear. 2012.
- *Xian Xu*.
On the Canonicity of Higher-order Pi-calculus.
Working paper in preparation. 2012.
- *Xian Xu* and Qiang Yin.
On the Expressiveness of Higher-order Process with Parameterization.
Working paper in preparation. 2012.
- *Xian Xu*.
A Logical Characterization of Local Bisimulation in Linear Higher-Order Pi-Calculus.
Submitted and under revision. 2011.
- Yu Long, *Xian Xu* and Kefei Chen.
Two Identity Based Threshold Cryptosystem with Reduced Trust in the PKG (in Chinese).
Journal of Computer Research and Development, 2012(5): 932-938.
- *Xian Xu*, Yu Long and Xianping Mao.
On TPM-Based Strong ID-Authentication and its Realization (in Chinese).
Computer Engineering, 2012(4):23-27.
- *Xian Xu*.
On Bisimulation Theory in Linear Higher-Order Pi-Calculus.
Transactions on Petri Nets and Other Models of Concurrency III, Lecture Notes in Computer Science (LNCS), 5800:244-274, 2009.
- *Xian Xu*.
Expressing First-order Pi-calculus in Higher-order CCS.
Journal of Computer Science and Technology, 24(1):122-137, 2009.
- *Xian Xu*.
On Bisimulation Theory in Linear Higher-Order Pi-Calculus.
Proceedings of the Concurrency Methods: Issues and Applications (CHINA 2008), a satellite workshop of PETRI NETS 2008, Xi'an, China, 2008.
- *Xian Xu*.
On the Bisimulation Theory and Axiomatization of Higher-order Process Calculi.
PhD THESIS. BASICS lab, Shanghai Jiao Tong University, 2008.
- *Xian Xu*.
P Systems and Finite Automata.
Proceedings of the First International Conference on Complex, Intelligent and Software Intensive Systems (CISIS), 135-138, Vienna, Austria, 2007. IEEE Computer Society.
- *Xian Xu* and Yanbin Yu.
Modeling and Verifying WNT Signaling Pathway.
Proceedings of the 3rd International Conference on Natural Computation (ICNC'07), 319-323, Haikou, China, 2007. IEEE Computer Society.
- *Xian Xu*.
Tissue P Systems with Parallel Rules on Channels.

Pre-proceedings of the International Conference Bio-Inspired Computing--Theory and Applications (BIC-TA), Wuhan, China, 2006. Also in Progress in Natural Science, 17(4): 486-491, 2007.

- *Xian Xu*, Xiaoju Dong and Yuxi Fu.

A Model in kappa for DNA Addition.

Proceedings of the Workshop on Membrane Computing and Biologically Inspired Process Calculi (MeCBIC2006), a satellite workshop of ICALP 2006. Also in ENTCS (Electronic Notes in Theoretical Computer Science), 171(2):209-222, 2007.

- Zhupeng Dong, Xiaoju Dong, *Xian Xu*, Yuxi Fu, Zhizhou Zhang, and Lin He.

An Implementation for Mapping SBML to BioSPI.

Proceedings of the Second International Conference on Fuzzy Systems and Knowledge Discovery (FSKD), Changsha, China, 2005. Lecture Notes in Artificial Intelligence (LNAI) 3614, pp. 1128-1131, 2005. Springer-Verlag.

- *Xian Xu*, Ruonan Rao, Zhaoqing Jia and Jinyuan You.

Grid Service and JCA: An Effective Integration Strategy.

Proceedings of 2004 IEEE International Conference on Services Computing (SCC), 571-574, 2004. , IEEE Computer Society.