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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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

Xu Xian

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 Trusted Computing and Privacy Protection; Software Theory and Engineering; Concurrency
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, Theory of Computation, for graduate students
- ✧ The Formal Semantics of Programming Languages, for graduate students of engineering
- ✧ Supervising undergraduate and graduate students theses each year, 2008-2019

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*.
- Cryptography and its application in industries. In particular, the research topics pertaining to the foundation of cryptography, such as the complexity problems that underlie the modern cryptography. Also the real and effective applications of cryptography to the industry, such as hash functions and fully homomorphic encryption.

Others：
- Distributed computing.
- Java technology, Enterprise development and related.
- Systems Biology. Applying formal methods in modeling, analyzing and verifying biological systems.
- P systems. Cell-like, tissue-like, neural-like and other types of P system. Including their description capabilities and computational power.

Xu Xian

Research Projects

As leader:

✧ The National Nature Science Foundation of China (NSFC) (Grant No. 61872142)
   "**On Higher-order Processes with Parameterization**", 2019 -2022

✧ Scientific Research Foundation for the Returned Overseas Chinese Scholars, State Education Ministry
   "**On the Bisimulation Characterization and Completeness of Higher-order Processes with the Abstraction Operation**", 2015 -2017

✧ 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

✧ 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 co-leader / formal member:

✧ International Cooperation and Exchanges by the the National Nature Science Foundation of China and ANR by French Government (Grant No. 61261130589 and ANR 12IS02001 PACE)
   "**PACE beyond plain Processes: Analysis techniques, Coinduction and Expressiveness**", 2013 -2017

✧ 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 Information Development Special Funds of Shanghai Economic and Information Commission, (Grant No. 201602008), 2016-2020
   "**Formal Studying E-business Protocol Using Processes Algebra**", 2007 -2009

✧ 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

Awards

- Best Paper Award of FSEN 2015, with D. Hirschkoff and J.-M. Madiot, for the paper "A Behavioural Theory for a Pi-calculus with Preorders", 2015
- 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

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