HASE2008 Advanced Program

December 3, 2008

8:00-8:45 Registration

8:45-9:00 Welcome Ceremony

9:00-10:00 Keynote Speech
Assurance Technology of System Test based on Operators’ Aspects
Masayuki Matsumoto

10:00-10:30 Coffee break

10:30-12:00 Network Security
On the Comparison of Network Attack Datasets: An Empirical Analysis
Robin Berthier, Dave Kormann, Michel Cukier, Matti Hiltunen, Gregg Vesonder and Dan Sheleheda.

On the Use of Security Metrics based on Intrusion Prevention System Event Data: An Empirical Analysis
Danielle Chrun, Michel Cukier and Gerry Sneeringer.

The Deployment of a Darknet on an Organization-Wide Network: An Empirical Analysis
Robin Berthier and Michel Cukier.

10:30-12:00 System Security
Security Goal Indicator Trees: A Model of Software Features that Supports Efficient Security Inspection
Holger Peine, Marek Jawurek and Stefan Mandel

Low Cost Secure Computation for the General Client-Server Computation Model
Liangliang Xiao and I-Ling Yen.

Evaluating Security Risks following a Compliance Perspective
Reinaldo de B. Correia, Luci Pirmez and Luiz F. Rust C. Carmo

14:00-16:00 Distributed Systems
A Scalable Checkpoint Encoding Algorithm for Diskless Checkpointing
Zizhong Chen and Jack Dongarra
HyperMIP: Hypervisor controlled Mobile IP for Virtual Machine Live Migration across Networks.  
Qin Li, Jinpeng Huai, Jianxin Li, Tianyu Wo and Minxiong Wen.

Towards Secure Trust Bootstrapping in Pervasive Computing Environment  
Sheikh I. Ahamed1, Endadul Hoque1, Farzana Rahman1, and Mohammad Zulkernine

Small Logs for Transactional Services: Distinction is much more accurate than (Positive) Discrimination  
Debmalya Biswas, Thomas Gazagnaire and blaze genest.

14:00-16:00 Embedded Systems

A Low Energy Soft Error-Tolerant Architecture for the Register File in Embedded Processors  
M. Fazeli, S. N. Ahmadian and S. G. Miremadi,

Randomization Based Probabilistic Approach to Detect Trojan Circuits  
Susmit Jha and Sumit Kumar Jha.

On the Integrity of Lightweight Checkpoints  
Raul Barbosa and Johan Karlsson.

A Fast Performance Analysis Tool for Multicore, Multithreaded Communication Processors  
Hun Jung, Miao Ju, Hao Che and Zhijun Wang.

16:00-16:30 Coffee break

16:30-18:00 Formal verification, specification and implementation I

Random Relaxation Abstractions for Bounded Reachability Analysis of Linear Hybrid Automata  
Sumit Kumar Jha and Susmit Jha.

Formal Support for Quantitative Analysis of Residual Risks in Safety-Critical Systems  
Jonas Elmqvist and Simin Nadjm-Tehrani.

A Few Remarks About Formal Developments of Secure Systems  
Eric Jaeger and Thérèse Hardin.

16:30-18:00 Formal verification, specification and implementation II

Verification of Exception Control Flows and Handlers Based on Architectural Scenarios  
Patrick H.S. Brito, Rogerio de Lemos and Cecilia M.F. Rubira.
Localizing Program Errors via Slicing and Reasoning

*Fei Pu and Yan Zhang.*

A Timed Extension of Property Sequence Chart

*Pengcheng Zhang, Bixin Li and Mingjie Sun.*
December 4, 2008

9:00-10:30 Keynote Speech
Transaction Calculus
   Jifeng He

10:00-10:30 Coffee break

10:30-12:00 Testing
An Interaction-Based Test Sequence Generation Approach for Web Applications
   Wenhua Wang, Sreedevi Sampath, Yu Lei and Raghu Kacker.

Automated generation of test cases from contract-oriented specifications: A CSP-based approach
   Hakim Belhaouari and Frederic Peschanski.

Mutation-based Testing of Format String Bugs
   Hossain Shahriar and Mohammad Zulkernine.

10:30-12:00 Formal verification, specification and implementation III
Formally Sound Refinement of Spi Calculus Protocol Specifications into Java Code
   Alfredo Pironti and Riccardo Sisto.

A Multi-Periodic Synchronous Data-Flow Language
   Julien Forget, Frédéric Boniol, David Lesens and Claire Pagetti.

Aiding Modular Design and Verification of Safety-Critical Time-Triggered Systems by use of Executable Formal Specifications
   Kohei Sakurai, Peter Bokor and Neeraj Suri.

14:00-16:00 Quality, Reliability, and Safety
At What Level of Granularity Should We be Componentizing for Software Reliability?
   Atef Mohamed and Mohammad Zulkernine.

Comparative Study into Architecture-Based Safety Evaluation Methodologies using the AADL Error Annex and Failure Propagation Models
   Lars Grunske and Jun Han.

Software Quality Improvement via Pattern-Based Model Refactoring
   Dae-Kyoo Kim.
A novel model for component-based software reliability analysis
  
  *Fan Zhang, Xingshe Zhou, Junwen Chen and Yunwei Dong.*

**14:00-16:00 High assurance systems and programs**

Automotive Safety Case – A Qualitative Case Study of Drivers, Usages, and Issues
  
  *Fredrik Törner and Peter Öhman.*

Detection and Diagnosis of Recurrent Faults in Software Systems by Invariant Analysis
  

Automated Discovery of Loop Invariants for High-Assurance Programs Synthesized Using AI Planning Techniques
  
  *Jicheng Fu, Farokh Bastani and I-Ling Yen.*

Layered Memory Architecture for High IO Intensive Information Services to Achieve Timeliness.
  
  *Takahashi Hironao, Farooq Ahmad and Kinji Mori.*

**16:00-16:30 Coffee break**

**16:30-17:30 Ad hoc network**

Securing Sensor Nodes Against Side Channel Attacks
  
  *Kanthakumar Pongaliur, Zubin Abraham, Alex Liu, Li Xiao and Leo Kempel.*

Power Optimization in Fault-Tolerant Mobile Ad Hoc Networks
  
  *Oliviero Riganelli, Radu Grosu, Samir Das, C. R. Ramakrishnan and Scott A. Smolka*
December 5, 2008

9:00-10:00 Keynote Speech
Path-Sensitive Analysis for Security Flaws
Mary Lou Soffa

10:00-10:30 Coffee break

10:30-12:00 Data management systems
A Fine-grained Damage Management Scheme in a Self-Healing PostgreSQL System
Kun Bai and Peng Liu.

Secure, Highly Available, and High Performance Peer-to-Peer Storage Systems
Yunqi Ye, I-Ling Yen, Liangliang Xiao and Bhavani Thuraisingham.

Privacy, Preservation and Performance: The 3 P's of Distributed Data Management
Bobji Mungamuru and Hector Garcia-Molina.

10:30-12:00 Service-oriented Computing
A Novel Ripple-based Context-cognizant Service Discovery Method in Autonomous Decentralized Community System
Khalid Mahmood, Niki Sochi, Xiaodong Lu and Kinji Mori.

Architecture Centric System Design for Supporting Reconfiguration of Service Oriented Systems
Wang Chu and Depei Qian.

A Self-Managing Brokerage Model for Quality Assurance in Service-Oriented Systems
Daniel Robinson and Gerald Kotonya.

14:00-16:20 Short papers I
Formalize UML 2 Sequence Diagrams
Hui Shen, Aliya Virani and Jianwei Niu.

Towards the Service Composition Through Buses
Qin Li, Huibiao Zhu and Jifeng He

Designing, Modeling and Verifying a Container Terminal System Using UPPAAL
Quan Zu, Miaomiao Zhang, Jing Liu and Qingfeng Du

A Grammar-Based Reverse Engineering Framework for Behavior Verification
Chunying Zhao and Kang Zhang.
Checking Inconsistency of Rule Sets in Active Real-time Databases

Jian Zhang.

An Integrated Model to Analyze Cryptographic Protocols with Colored Petri Nets

Jin Wei, Guiping Su and Meng Xu.

14:00-16:20 Short papers II

Reliability Design for Large Scale Storage Systems

Kai Du, Huaimin Wang, Shuqiang Yang, Yingwen Chen, Yan wen

A New Fault-Tolerant Wormhole Routing Scheme in Tori with Convex Faults

Lingfu Xie, Du Xu, Qing Yao and Lei Song.

Using multi-level security annotations to improve software assurance

Eryk Kulikowski, Riccardo Scandariato and Wouter Joosen.

DPAC: A Reuse-Oriented Password Authentication Framework for Improving Password Security

Hua Wang, Yao Guo and Xiangqun Chen.

Synopsis of Evaluating Security Controls Based on Key Performance Indicators and Stakeholder Mission Value

Frederick Sheldon and Robert Abercrombie.

Methodology for service-oriented management of security assurance in communication infrastructures

Albin Zuccato, Samuel Dubus and Bulut Evren.

Jasmine----A runtime verification tool for Java program driven by UML interaction model

Zhou Zhou.

16:30-16:45 Closing