## Conference Events Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday, Jan. 7th</th>
<th>Thursday, Jan. 8th</th>
<th>Friday, Jan. 9th</th>
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<tbody>
<tr>
<td>6:00 PM - 8:00 PM</td>
<td><em>Welcome Reception</em></td>
<td>Registration</td>
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<td>3:00 PM - 5:00 PM</td>
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<td>8:00 AM - 9:00 AM</td>
<td><em>Breakfast</em></td>
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<td>9:00 AM - 9:15 AM</td>
<td><em>Welcome</em></td>
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<td>9:15 AM - 10:15 AM</td>
<td><em>Keynote: Dr. Paul E. Black, National Institute of Standards and Technology</em></td>
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<td>10:15 AM - 10:45 AM</td>
<td><em>Break</em></td>
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<tr>
<td>10:45 AM - 12:15 PM</td>
<td>Session 1A: Security I</td>
<td>Session 1B: Model Analysis I</td>
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<tr>
<td>12:15 PM - 1:30 PM</td>
<td><em>Lunch</em></td>
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<td>Session 3A: Reliability</td>
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<td>1:30 - 3:00 PM</td>
<td>Session 2A: Testing I</td>
<td>Session 2B: Formal Methods I</td>
<td>Session 3B: Safety</td>
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<td>7:00 PM - 9:00 PM</td>
<td><em>Conference Banquet</em></td>
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<td><em>Announcements</em></td>
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<td><em>Keynote: Dr. Masayuki Matsumoto, East Japan Railway Company</em></td>
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<td>10:45 AM - 12:15 PM</td>
<td>Session 4A: Security II</td>
<td>Session 4B: Model Analysis II</td>
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<td>1:30 - 3:00 PM</td>
<td>Session 5A: Failure Analysis</td>
<td>Session 5B: Privacy and Safety</td>
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<td><strong>Time</strong></td>
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<td>Session 6B: Formal Methods II</td>
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<td>11:30 AM - 12:00 PM</td>
<td>Wrap-up</td>
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<td>Conference Ends</td>
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**Thursday - January 8, 2015**

**9:15 AM - 10:15 AM**

**Keynote** - *Bill France*
Dr. Paul E. Black, National Institute of Standards and Technology

**10:45 AM - 12:15 PM**

**Session 1A: Security I** - *Bill France A*
Session Chair:

- **Strategy-Aware Mitigation Using Markov Games for Dynamic Application-Layer Attacks**
  Mahsa Emami-Taba, Mehdi Amoui, and Ladan Tahvildari

- **CamAuth: Securing Web Authentication with Camera**
  Mengjun Xie, Yanyan Li, Kenji Yoshigoe, Remzi Seker, and Jiang Bian

- **Effect of User Posture and Device Size on the Performance of Touch-Based Authentication Systems**
  Zahid Syed, Jordan Helmick, Sean Banerjee, and Bojan Cukic

**Session 1B: Model Analysis I** - *Bill France B & C*
Session Chair:
• **Weaving an Assurance Case from Design: A Model-Based Approach**  
  Richard Hawkins, Ibrahim Habli, Dimitris Kolovos, Richard Paige, and Tim Kelly

• **Introducing Meta-Requirements for Describing System of Systems**  
  Andrea Ceccarelli, Marco Mori, Paolo Lollini, and Andrea Bondavalli

• **A Method for Validating Intent Model Behavior in DSVMs**  
  Karl A. Morris, Peter J. Clarke, Xudong He, Fabio M. Costa, and Mark Allison

**1:30 PM - 3:00 PM**

**Session 2A: Testing I - Bill France A**

Session Chair:

• **Verification for OAuth Using ASLan++**  
  Haixing Yan, Huixing Fang, Christian Kuka, and Huibiao Zhu

• **A Fixed-Point Algorithm for Automated Static Detection of Infinite Loops**  
  Andreas Ibing and Alexandra Mai

• **There is a Will, There is a Way: A New Mechanism for Traffic Control Based on VTL and VANET**  
  Jingmin Shi, Chao Peng, Qin Zhu, Pengfei Duan, Yu Bao, and Mengjun Xie

**Session 2B: Formal Methods I - Bill France B & C**

Session Chair:

• **Formal Foundations for Hierarchical Safety Cases**  
  Ewen Denney, Ganesh Pai, and Iain Whiteside

• **Observation-Level-Driven Formal Modeling**  
  Atif Mashkoor and Jean-Pierre Jacquot

• **Formalization and Verification of REST Architecture in Viewpoints**  
  Yiting Tang, Xi Wu, Huibiao Zhu, and Jian Guo

**3:30 PM - 5:00 PM**

**Session 3A: Reliability - Bill France A**

Session Chair:

• **A Calculus for Wireless Sensor Networks from Quality Perspective**  
  Xi Wu and Huibiao Zhu
- **Adaptive GC-Aware Load Balancing Strategy for High-Assurance Java Distributed Systems**  
  A. Omar Portillo-Dominguez, Miao Wang, John Murphy, and Damien Magoni

- **A Methodology to Efficiently Compare Operating System Stability**  
  Erik Van Der Kouwe, Cristiano Giuffriday, Razvan Ghituletez, and Andrew S. Tanenbaum

**Session 3B: Safety** - Bill France B & C  
Session Chair:

- **Model-Checking and Game theory for Synthesis of Safety Rules**  
  Mathilde Machin, Fanny Dufossé, Jérémie Guiochet, David Powell, Matthieu Roy, and Hélène Waeslynck

- **Extending Contract theory with Safety Integrity Levels**  
  Jonas Westman and Mattias Nyberg

- **Applying Safety Case Pattern to Generate Assurance Cases for Safety-Critical Systems**  
  Chung-Ling Lin and Wuwei Shen

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**Friday - January 9, 2015**

**9:15 AM - 10:15 AM**

**Keynote** - Bill France  
Dr. Masayuki Matsumoto, East Japan Railway Company

**10:45 AM - 12:15 PM**

**Session 4A: Security II** - Bill France A  
Session Chair:

- **A Game-Theoretical Model for Security Risk Management of Interdependent ICT and Electrical Infrastructures**  
  Ziad Ismail, Jean Leneutre, David Bateman, and Lin Chen

- **Ontology of Secure Service Level Agreement**  
  Chen-Yu Lee, Krishna M. Kavi, Raymond A. Paul, and Mahadevan Gomathisankaran

- **A Diversity-Based Approach for Communication Integrity in Critical Embedded Systems**
Amira Zammali, Agnan de Bonneval, and Yves Crouzet

**Session 4B: Model Analysis II - Bill France B & C**

Session Chair:

- **Enabling Decision Support for the Delivery of Real-Time Services**
  David McKee, David Webster, and Jie Xu
- **Fidelity and Complexity in Passive Radar Simulations**
  William C. Barott, Ted Dabrowski, and Braham Himed
- **A Proxy Identifier Based on Patterns in Traffic Flows**
  Vahid Aghaei-Foroushani and A. Nur Zincir-Heywood

**1:30 PM - 3:00 PM**

**Session 5A: Failure Analysis - Bill France A**

Session Chair:

- **Adaptive Failure Prediction for Computer Systems: A Framework and a Case Study**
  Ivano Irrera, Marco Vieira, and Joao Duraes
- **Executable Models to Support Automated Software FMEA**
  Valentina Bonfiglio, Leonardo Montecchi, Francesco Rossi, Paolo Lollini, András Pataricza, and Andrea Bondavalli
- **Eclipse vs. Mozilla: A Comparison of Two Large-Scale Open Source Problem Report Repositories**
  Sean Banerjee, Jordan Helmick, Zahid Syed, and Bojan Cukic

**Session 5B: Privacy and Safety - Bill France B & C**

Session Chair:

- **Signal Processing Oriented Approach for Big Data Privacy**
  Xiaohua Li and Thomas Yang
- **The Need for a Confidence View of CPS Support Environments**
  Fredrik Asplund, Martin Törngren, Richard Hawkins, and John A. McDermid
- **Deriving Safety Contracts to Support Architecture Design of Safety Critical Systems**
  Irfan Sljivo, Omar Jaradat, Iain Bate, and Patrick Graydon

**3:30 PM - 5:00 PM**

**HASE 2015 Panel - Bill France**

Panel Chair: Victor Winter, University of Nebraska at Omaha
- **Model-based Integrated Approach to Architecting High Assurance Systems**  
  Anneliese Andrews, University of Denver  
  Declan Byrne, WiMAX Forum  
  Ewen Denney, NASA Ames Research Center  
  Ann Gates, University of Texas at El Paso  
  Richard Hawkins, University of York  
  Ray Paul, Department of Defense

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**Saturday - January 10, 2015**

**9:00 AM - 11:00 AM**

**Session 6A: Testing II - Bill France A**  
Session Chair:

- **Using Pairwise Testing to Verify Automatically-Generated Formal Specifications**  
  Salamah Salamah, Omar Ochoa, and Yadira Jacquez

- **Modeling and Verifying Google File System**  
  Bo Li, Mengdi Wang, Yongxin Zhao, Geguang Pu, Huibiao Zhu, and Fu Song

- **Modeling and Verification for Probabilistic Properties in Software Product Lines**  

- **MPISE: Symbolic Execution of MPI Programs**  
  Xianjin Fu, Zhenbang Chen, Yufeng Zhang, Chun Huang, Wei Dong, and Ji Wang
Session 6B: Formal Methods II - Bill France B & C
Session Chair:

- **An Object-Oriented Language for Modeling of Hybrid Systems**
  Huixing Fang, Huibiao Zhu, and Jianqi Shi

- **Modeling and Verifying the Ballooning in Xen with CSP**
  Luyao Wang, Fengwei Sui, Yanhong Huang, and Huibiao Zhu

- **HCPN Modeling for ERTMS Requirements Specification**
  Zakaryae Boudi, El Miloudi El Koursi, and Simon Collart-Dutilleul

- **Verilog Synthesis in the Higher-Order Transformation Framework of TL**
  Victor Winter and Shiraz Hussain

**11:30 AM - 12:00 PM**

Wrap-up - Bill France

**Social Events**

**Welcome Reception** - Ocean Terrace
Wednesday, January 7, 2015 @ 6:00 PM

**Conference Banquet** - River Room
Thursday, January 8, 2015 @ 6:00 PM