<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday, January 6th</th>
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<tbody>
<tr>
<td>7:30 PM - 8:30 PM</td>
<td>Welcome Reception</td>
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<tr>
<th>Time</th>
<th>Thursday, January 7th</th>
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<tbody>
<tr>
<td>8:00 AM - 5:00 PM</td>
<td>Registration</td>
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<tr>
<td>8:00 AM - 8:50 AM</td>
<td>Breakfast Buffet</td>
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<tr>
<td>8:50 AM - 9:00 AM</td>
<td>Welcome Note</td>
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<tr>
<td>9:00 AM - 10:00 AM</td>
<td>Keynote: Dr. Farokh B. Bastani, University of Texas at Dallas</td>
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<tr>
<td>10:00 AM - 10:30 AM</td>
<td>Morning Break</td>
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<tr>
<td>10:30 AM - 12:00 PM</td>
<td>Session 1A: Cybersecurity I</td>
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<td>Session 1B: Adaptive Systems</td>
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<tr>
<td>12:00 PM - 1:00 PM</td>
<td>Lunch</td>
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<tr>
<td>1:00 PM - 1:30 PM</td>
<td>Demo Presentation: ReMoDD Tool</td>
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<tr>
<td>1:30 PM - 3:00 PM</td>
<td>Session 2A: Testing and Quality Assurance</td>
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<td>Session 2B: Safety-Critical Systems</td>
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<tr>
<td>3:00 PM - 3:30 PM</td>
<td>Afternoon Break</td>
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<tr>
<td>3:30 PM - 5:00 PM</td>
<td>Session 3A: System Resilience and Survivability</td>
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<td></td>
<td>Session 3B: Software Analysis</td>
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<tr>
<td>7:30 PM - 9:30 PM</td>
<td>Dinner</td>
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<tr>
<th>Time</th>
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<tr>
<td>8:00 AM - 5:00 PM</td>
<td>Registration</td>
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<td>8:00 AM - 8:50 AM</td>
<td>Breakfast Buffet</td>
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<tr>
<td>8:50 AM - 9:00 AM</td>
<td>Announcements</td>
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<tr>
<td>9:00 AM - 10:00 AM</td>
<td>Keynote: Dr. Charles A. Kamhoua, Air Force Research Laboratory</td>
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<tr>
<td>10:00 AM - 10:30 AM</td>
<td>Morning Break</td>
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<tr>
<td>10:30 AM - 12:00 PM</td>
<td>Session 4A: Cybersecurity II</td>
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<td>Session 4B: Formal Development</td>
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<td>12:00 PM - 1:00 PM</td>
<td>Lunch</td>
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<td>1:00 PM - 1:30 PM</td>
<td>Demo Presentation: SPARK Tool</td>
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<td>1:30 PM - 3:00 PM</td>
<td>Session 5A: Analysis of Design Models</td>
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<td>Session 5B: Networked Systems</td>
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<td>3:00 PM - 3:30 PM</td>
<td>Afternoon Break</td>
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<tr>
<td>3:30 PM - 4:30 PM</td>
<td>Session 6A: Work in Progress - Software</td>
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<td></td>
<td>Session 6B: Work in Progress - System</td>
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<tr>
<td>4:30 PM - 5:30 PM</td>
<td>HASE Visionary Talks</td>
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<tr>
<td>7:30 PM - 9:30 PM</td>
<td>Dinner</td>
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<tr>
<th>Time</th>
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<td>8:00 AM - 1:00 PM</td>
<td>Registration</td>
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<td>8:00 AM - 8:50 AM</td>
<td>Breakfast Buffet</td>
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<tr>
<td>8:50 AM - 9:00 AM</td>
<td>Announcements</td>
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<tr>
<td>9:00 AM - 10:00 AM</td>
<td>Keynote: Dr. Gurdip Singh, National Science Foundation</td>
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<td>10:00 AM - 10:30 AM</td>
<td>Morning Break</td>
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<tr>
<td>10:30 AM - 12:00 AM</td>
<td>Session 7A: Cloud Services</td>
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<td>Session 7B: Smart Grid/CPS</td>
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<td>12:00 PM - 1:00 PM</td>
<td>Lunch</td>
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<tr>
<td>1:00 PM</td>
<td>Conference Ends</td>
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**Room Legend**
- Palms Fire Pit
- Royal Palm Foyer 3
- Royal Palm Foyer 3
- Royal Palm 3
- Royal Palm 3
- Citrus Grove - Valencia
- Zest
- Royal Palm 2
Social Events

Wednesday - January 6, 2016
- Welcome Reception 7:30 PM - 8:30 PM Palms Fire Pit

Thursday - January 7, 2016
- Breakfast Buffet 8:00 AM - 8:50 AM Royal Palm Foyer 3
- Morning Break 10:00 AM - 10:30 AM Royal Palm Foyer 3
- Lunch 12:00 PM - 1:00 PM Zest
- Afternoon Break 3:00 PM - 3:30 PM Royal Palm Foyer 3
- Dinner 7:30 PM - 9:30 PM Royal Palm 2

Friday - January 8, 2016
- Breakfast Buffet 8:00 AM - 8:50 AM Royal Palm Foyer 3
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Saturday - January 9, 2016
- Breakfast Buffet 8:00 AM - 8:50 AM Royal Palm Foyer 3
- Morning Break 10:00 AM - 10:30 AM Royal Palm Foyer 3
- Lunch 12:00 PM - 1:00 PM Zest
8:50 AM - 9:00 AM

Welcome Note
Royal Palm 3

9:00 AM - 10:00 AM

Keynote
Introduction: Raymond Paul (Department of Defense, USA)

- Proactive High-Assurance Operations under Adverse Conditions
  Dr. Farokh B. Bastani (University of Texas at Dallas, USA)

10:30 AM - 12:00 PM

Session 1A: Cybersecurity I
Royal Palm 3
Session Chair: Mohammad Zulkernine (Queen’s University, Canada)

- Game Theory with Learning for Cyber Security Monitoring
  Keywhan Chung (University of Illinois, USA), Charles A. Kamhoua (Air Force Research Laboratory, USA), Kevin A. Kwiat (Air Force Research Laboratory, USA), Zbigniew T. Kalbarczyk (University of Illinois, USA), and Ravishankar K. Iyer (University of Illinois, USA)

- Empirical Techniques to Detect and Mitigate the Effects of Irrevocably Evolving User Profiles in Touch-based Authentication Systems
  Nikhil Palaskar (University of Michigan-Flint, USA), Zahid Syed (University of Michigan-Flint, USA), Sean Banerjee (Clarkson University), and Charlotte Tang (University of Michigan-Flint, USA)

- Design Diversity for Mitigating Monoculture Induced Threats (Fast Abstract)
  Qi Cheng (Oklahoma State University, USA), Kevin Kwiat (Air Force Research Laboratory, USA), and Charles A. Kamhoua (Air Force Research Laboratory, USA)

- Securing a Connected Mobile System for Healthcare (Short Paper)
  Eric Reinsmidt (University of Tennessee, USA), David Schwab (University of Tennessee at Chattanooga, USA), and Li Yang (University of Tennessee at Chattanooga, USA)

Session 1B: Adaptive Systems
Citrus Grove - Valencia
Session Chair: Jean-Charles Fabre (LAAS-CNRS, France)

- Using Models to Validate Unanticipated, Fine-Grained Adaptations at Runtime
  Mohammed Al-Refai (Colorado State University, USA), Walter Cazzola (Universita degli Studi di Milano, Italy), Sudipto Ghosh (Colorado State University, USA), and Robert France (Colorado State
Correct Instantiation of a System Reconfiguration Pattern: A Proof and Refinement-based Approach
Guillaume Babin (Université de Toulouse, France), Yamine Ait Ameur (Université de Toulouse, France), and Marc Pantel (Université de Toulouse, France)

The Cost of Formal Verification in Adaptive CPS. An Example of a Virtualized Server Node
Marcello M. Bersani (Politecnico di Milano, Italy) and Marisol Garcia-Valls (University Carlos III Madrid, Spain)

1:00 PM - 1:30 PM

Demo Presentation Royal Palm 3
Introduction: Hélène Waeselynck (LAAS-CNRS, France)

- Repository for Model-Driven Development (ReMoDD)
  Mohammed Al-Refai (Colorado State University, USA)

1:30 PM - 3:00 PM

Session 2A: Testing and Quality Assurance Royal Palm 3
Session Chair: Aditya Mathur (Singapore University of Technology and Design, Singapore)

- An Extension of Category Partition Testing for Highly Constrained Systems
  Sunint Kaur Khalsa (Carleton University, Canada) and Yvan Labiche (Carleton University, Canada)

- Software Defect Prediction using Exception Handling Call Graphs: A Case Study
  Puntitra Sawadpong (Mississippi State University, USA) and Edward B. Allen (Mississippi State University, USA)

- Task Characterization For An Effective Worker Targeting In Crowdsourcing (Fast Abstract)
  Tarek Awwad (INSA Lyon, France), Nadia Bennani (INSA Lyon, France), Lionel Brunie (INSA Lyon, France), David Coquil (University of Passau, Germany), Harald Kosch (University of Passau, Germany), and Veronika Rehn-Sonigo (FEMTO-ST Institute, UTBM, France)

- World Model for Testing Autonomous Systems Using Petri Nets (Short Paper)
  Anneliese Andrews (University of Denver, USA), Mahmoud Abdelgawad (University of Denver, USA), and Ahmed Gario (University of Denver, USA)

Session 2B: Safety-Critical Systems Citrus Grove - Valencia
Session Chair: Elena Troubitsyna (Åbo Akademi University, Finland)

- Formal Analysis of Railway Signaling Data
  Alexei Iliasov (Newcastle University, UK) and Alexander Romanovsky (Newcastle University, UK)
• Safe Multi-objective Planning With A Posteriori Preferences
  Ralph Eastwood (University of York, UK), Rob Alexander (University of York, UK), and Tim Kelly (University of York, UK)

• Representation of Confidence in Assurance Cases using the Beta Distribution
  Lian Duan (University of Minnesota, USA), Sanjai Rayadurgam (University of Minnesota, USA), Mats Heimdahl (University of Minnesota, USA), Oleg Sokolsky (University of Pennsylvania, USA), and Insup Lee (University of Pennsylvania, USA)

3:30 PM - 5:00 PM

Session 3A: System Resilience and Survivability
  Royal Palm 3
  Session Chair: Farokh Bastani (University of Texas at Dallas, USA)

  • Engineering Adaptive Fault-Tolerance Mechanisms for Resilient Computing on ROS
    Michael Lauer (University of Toulouse/LAAS-CNRS, France), Matthieu Amy (LAAS-CNRS, France), Jean-Charles Fabre (LAAS-CNRS, France), Matthieu Roy (LAAS-CNRS, France), William Excoffon (LAAS-CNRS, France), and Miruna Stoicescu (LAAS-CNRS, France)

  • Runtime Adjustment of Configuration Models for Consistency Preservation
    Azadeh Jahanbanifar (Concordia University, Canada), Ferhat Khendek, (Concordia University, Canada) and Maria Toeroe (Ericsson, Canada)

  • CSRS: Cyber Survive and Recover Simulator (Short Paper)
    Swastik Brahma (Syracuse University), Kevin Kwiat (Air Force Research Laboratory, USA), Pramod K. Varshney (Syracuse University), and Charles Kamhoua (Air Force Research Laboratory, USA)

Session 3B: Software Analysis
  Citrus Grove - Valencia
  Session Chair: Bojan Cukic (University of North Carolina at Charlotte, USA)

  • Synthesis of Logic Interpretations
    Jian Xiang (University of Virginia, USA), John Knight (University of Virginia, USA), and Kevin Sullivan (University of Virginia, USA)

  • Feature-based Software Customization: Preliminary Analysis, Formalization, and Methods
    Yufei Jiang (Pennsylvania State University, USA), Can Zhang (Pennsylvania State University, USA), Dinghao Wu (Pennsylvania State University, USA), and Peng Liu (Pennsylvania State University, USA)

  • Comparative Modeling and Verification of Pthreads and Dthreads
    Yuan Fei (East China Normal University, China), Huibiao Zhu (East China Normal University, China), Xi Wu (East China Normal University, China), and Huixing Fang (East China Normal University, China)
Friday - January 8, 2016

9:00 AM - 10:00 AM

Keynote
Royal Palm 3

Introduction: Hélène Waeselynck (LAAS-CNRS, France)

- Application of Game Theory to High Assurance Cloud Computing
  Dr. Charles A. Kamhoua (Air Force Research Laboratory, USA)

10:30 AM - 12:00 PM

Session 4A: Cybersecurity II
Royal Palm 3

Session Chair: Remzi Seker (Embry-Riddle Aeronautical University, USA)

- An Investigation into the Response of a Water Treatment System to Cyber Attacks
  Sridhar Adepu (Singapore University of Technology and Design, Singapore) and Aditya Mathur
  (Singapore University of Technology and Design, Singapore)

- Characterization of Cyberattacks Aimed at Integrated Industrial Control and Enterprise Systems: A Case Study
  Raymond C. Borges Hink (West Virginia University, USA) and Katerina Goseva-Popstojanova (West Virginia University, USA)

- FCFraud: Fighting Click-Fraud from User Side
  Md Shahre Iqbal (Queen’s University, Canada), Mohammad Zulkernine (Queen’s University, Canada), Fehmi Jaafar (Queen’s University, Canada), and Yuan Gu (Irdeto, Canada)

Session 4B: Formal Development
Citrus Grove - Valencia

Session Chair: John Knight (University of Virginia, USA)

- Formalisation-Driven Development of Safety-Critical Systems
  Alexei Iliasov (Newcastle University, UK), Alexander Romanovsky (Newcastle University, UK), Elena Troubitsyna (Åbo Akademi University, Finland), and Linas Laibinis (Åbo Akademi University, Finland)

- Formal Development of a Secure Access Control Filter
  Amel Mammar (Télécom SudParis, France), Thi Mai Nguyen (Telecom SudParis, France), and Regine Laleau (Université Paris-Est, France)

- Incremental Formal Methods Based Design Approach Demonstrated on a Coupled Tanks Control System
  Kerianne H. Gross (Air Force Research Laboratory, USA), Aaron W. Fifarek (LinQuest Corporation,
1:00 PM - 1:30 PM

Demo Presentation
Introduction: Radu Babiceanu (Embry-Riddle Aeronautical University, USA)

- High-Integrity Multitasking in SPARK
  S. Tucker Taft (AdaCore, USA)

1:30 PM - 3:00 PM

Session 5A: Analysis of Design Models
Session Chair: Hélène Waeselynck (LAAS-CNRS, France)

- Proving Critical Properties of Simulink Models
  Ashlie B. Hocking (Dependable Computing, USA), M. Anthony Aiello (Dependable Computing, LLC, USA), John C. Knight (Dependable Computing, USA), and Nikos Aréchiga (Toyota InfoTechnology Center, USA)

- Statistical Model Checking for SystemC Models
  Van Chan Ngo (INRIA, France), Axel Legay (IRISA/INRIA, France), and Jean Quilbeuf (INRIA, France)

- Compositional Architecture Design for Fuel Tank Thermal Systems
  Sean J. S. Regisford (Air Force Research Laboratory, USA), Brian K. Hulbert (LinQuest Corporation, USA), and Aaron W. Fifarek (LinQuest Corporation, USA)

Session 5B: Networked Systems
Session Chair: Tianyu Yang (Embry-Riddle Aeronautical University, USA)

- Using Network Topology to Supplement High Assurance Systems
  Paul Hyden (U.S. Naval Research Laboratory, USA), Ira Moskowitz (U.S. Naval Research Laboratory, USA), and Stephen Russell (U.S. Naval Research Laboratory, USA)

- Integrating a Calculus with Mobility and Quality for Wireless Sensor Networks
  Xi Wu (East China Normal University, China), Yongxin Zhao (East China Normal University, China), and Huibiao Zhu (East China Normal University, China)

- Presenting the Proper Data to the Crisis Management Operator: A Relevance Labelling Strategy
  Tommaso Zoppi (University of Florence, Italy), Andrea Ceccarelli (University of Florence, Italy), Paolo Lollini (University of Florence, Italy), Andrea Bondavalli (University of Florence, Italy), Francesco Lo Piccolo (Ingegneria Informatica, Italy), Gabriele Giunta (Ingegneria Informatica, Italy), and Vito Morreale (Ingegneria Informatica, Italy)
3:30 PM - 4:30 PM

Session 6A: Work in Progress - Software
Royal Palm 3
Session Chair: Hélène Waeselynck (LAAS-CNRS, France)

- **Modeling Negative User Stories is Risky Business (Fast Abstract)**
  
  *Pankaj Kamthan* (Concordia University, Canada) and *Nazlie Shahmir* (WestJet Airlines, Canada)

- **High-Integrity Multitasking in SPARK: Static Detection of Data Races and Locking Cycles (Fast Abstract)**
  
  *S. Tucker Taft* (AdaCore, USA), *Florian Schanda* (Altran, UK), and *Yannick Moy* (AdaCore, France)

- **Towards a MARTE Extension to Address Adaptation Mechanisms (Short Paper)**
  
  *Naija Mohamed* (Carthage University – INSAT, Tunisia), *Jean-Michel Bruel* (Université de Toulouse – IRIT, France), and *Samir Ben Ahmed* (Carthage University – INSAT, Tunisia)

Session 6B: Work in Progress - System
Citrus Grove - Valencia
Session Chair: Radu Babiceanu (Embry-Riddle Aeronautical University, USA)

- **Model Checking for the Fault Tolerance of Collaborative AUVs (Fast Abstract)**
  
  *Hong Liu* (Embry-Riddle Aeronautical University, USA), *Tianyu Yang* (Embry-Riddle Aeronautical University, USA), and *Jing Wang* (Bradley University, USA)

- **An Analysis Platform for Execution-based Model Generation (Fast Abstract)**
  
  *Jaime C. Acosta* (U.S. Army Research Laboratory, USA) and *Salamah Salamah* (University of Texas at El Paso, USA)

- **Empirical Assessment of Methods to Detect Cyber Attacks on a Robot (Short Paper)**
  
  *Giedre Sabaliauskaite* (Singapore University of Technology and Design, Singapore), *Geok See Ng* (Singapore University of Technology and Design, Singapore), *Justin Ruths* (Singapore University of Technology and Design, Singapore), and *Aditya P. Mathur* (Singapore University of Technology and Design, Singapore)

4:30 PM - 5:30 PM

HASE Visionary Talks
Royal Palm 3
Introduction: Bojan Cukic (University of North Carolina at Charlotte, USA)

- **IBM Watson: Solving a Reliability Paradox**
  
  *Wlodek Zadrozny* (University of North Carolina at Charlotte, USA)

- **Fault Tolerance for Fight Through (FTFT)**
  
  *Kevin A. Kwiat* (Air Force Research Laboratory, USA)
Saturday - January 9, 2016

9:00 AM - 10:00 AM

Keynote
Introduction: Radu Babiceanu (Embry-Riddle Aeronautical University, USA)

- Perspectives on Smart and Connected Communities and Cyber-Physical Systems
  Dr. Gurdip Singh (National Science Foundation, USA)

10:30 AM - 12:00 PM

Session 7A: Cloud Services
Session Chair: Radu Babiceanu (Embry-Riddle Aeronautical University, USA)

- D²PS: A Dependable Data Provisioning Service in Multi-Tenant Cloud Environment
  Renyu Yang (Beihang University, China), Tianyu Wo (Beihang University, China), Chunming Hu (Beihang University, China), Jie Xu (University of Leeds, UK), and Mingming Zhang (Beihang University, China)

- Generating Threat Profiles for Cloud Service Certification Systems
  Philipp Stephanow (Fraunhofer AISEC, Germany), Christian Banse (Fraunhofer AISEC, Germany), and Julian Schütte (Fraunhofer AISEC, Germany)

- CLOUBEX: A Cloud-based Security Analysis Framework for Browser Extensions
  Saikat Das (Queen’s University, Canada) and Mohammad Zulkernine (Queen’s University, Canada)

Session 7B: Smart Grid and Cyber-Physical Systems
Session Chair: Wlodek Zadrozny (University of North Carolina at Charlotte, USA)

- A Holistic Viewpoint-based SysML Profile to Design Systems-of-Systems
  Marco Mori (University of Florence, Italy), Andrea Ceccarelli (University of Florence, Italy), Paolo Lollini (University of Florence, Italy), Andrea Bondavalli (University of Florence, Italy), and Bernhard Frömel (Vienna University of Technology, Austria)

- Quantification of the Effectiveness of Medium Voltage Control Policies in Smart Grids
  Silvano Chiaradonna (ISTI-CNR, Italy), Felicita Di Giandomenico (ISTI-CNR, Italy), and Jun Xiao (University of Amsterdam, The Netherlands)

- Preventing and Unifying Threats in Cyberphysical Systems (Fast Abstract)
  Eduardo B. Fernandez (Florida Atlantic University, USA)

- High Assurance Smart Metering (Short Paper)
  Sara Cleemput (KU Leuven, Belgium), Mustafa A. Mustafa (KU Leuven, Belgium), and Bart Preneel (KU Leuven, Belgium)