

CRITIS'08

3rd International Workshop on Critical Information Infrastructures Security

October 13-15, 2008, Frascati (Rome), Italy

Program

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28 July. 2008

Monday 13 October

12:00	Open registration desk
14:15	Welcome address Dr. Mauro Masi Prime Minister's Chief of Staff, Italy Prof. Luigi Paganetto – President of ENEA Prof. Salvatore Tucci – President of AIIC & University of Roma “Tor Vergata”
14:45	Invited talk 1 <i>Modelling and Simulation of Critical Infrastructure</i> Prof. Erol Gelenbe – Imperial College (UK)
15:30	Session 1 – Modeling and Simulation Chaired by Erol Gelenbe (Imperial College, UK) <ul style="list-style-type: none">• <i>Blackouts in power transmission networks due to spatially localized load anomalies</i><ul style="list-style-type: none">○ Carla Dionisi, Università di Roma "La Sapienza" (Italy)○ Francesca Mariani, Università di Roma "La Sapienza" (Italy)○ Maria Cristina Recchioni, Università Politecnica delle Marche (Italy)○ Francesco Zirilli, Università di Roma "La Sapienza" (Italy)• <i>Stability of a distributed generation network using the Kuramoto models</i><ul style="list-style-type: none">○ Vincenzo Fioriti, ENEA (Italy)○ Silvia Ruzzante, ENEA (Italy)○ Elisa Castorini, ENEA (Italy)○ Elena Marchei, ENEA (Italy)○ Vittorio Rosato, ENEA (Italy)• <i>Enabling System of Systems Analysis of Critical Infrastructure Behaviors</i><ul style="list-style-type: none">○ William Tolone, The University of North Carolina at Charlotte (USA)○ Wray Johnson, IntePoint, LLC (USA)○ Seok-Won Lee, The University of North Carolina at Charlotte (USA)○ Wei-Ning Xiang, The University of North Carolina at Charlotte (USA)○ Lydia Marsh, The University of North Carolina at Charlotte (USA)○ Cody Yeager, The University of North Carolina at Charlotte (USA)○ Joshua Blackwell, The University of North Carolina at Charlotte (USA)
16:45	Coffee break
17:00	Session 2 – Dependency analysis and modelling Chaired by Adrian Gheorghe (Old Dominion University, USA) <ul style="list-style-type: none">• <i>Information Modelling and Simulation in large interdependent Critical Infrastructures</i><ul style="list-style-type: none">○ Ruediger Klein, Fraunhofer IAIS (Germany)○ Rome Erich, Fraunhofer IAIS (Germany)○ Beyel Cesaire, Fraunhofer IAIS (Germany)• <i>Multi-level dependability modeling of interdependencies between the Electricity and</i>

	<p><i>Information Infrastructures</i></p> <ul style="list-style-type: none"> ○ Marco Beccuti, Università degli studi del Piemonte Orientale “A. Avogadro” (Italy) ○ Giuliana Franceschinis, Università degli studi del Piemonte Orientale “A. Avogadro” (Italy) ○ Mohamed Kaaniche, LAAS-CNRS (France) ○ Karama Kanoun, LAAS-CNRS (France) <ul style="list-style-type: none"> ● <i>Interdependency Analysis in Electric Power Systems</i> <ul style="list-style-type: none"> ○ Silvano Chiaradonna, Istituto di Scienza e Tecnologie dell'Informazione "A. Faedo" (Italy) ○ Felicità Di Giandomenico, Istituto di Scienza e Tecnologie dell'Informazione "A. Faedo" (Italy) ○ Paolo Lollini, University of Firenze (Italy) ● <i>Modeling and simulation of Complex Interdependent Systems: a federated agent-based approach</i> <ul style="list-style-type: none"> ○ Emiliano Casalicchio, University of Roma – Tor Vergata (Italy) ○ Emanuele Galli, University of Roma – Tor Vergata (Italy) ○ Salvatore Tucci, University of Roma – Tor Vergata (Italy)
18:30	End of day 1
19:00	Welcome cocktail

Tuesday 14 October

9:00	<p>Invited talk 2 <i>Resilience and Self-healing challenges</i> Prof. Massoud Amin – University of Minnesota (USA)</p>
9:45	<p>Session 3 – Increasing resilience and self-healing Chaired by Massoud Amin (University of Minnesota, USA)</p> <ul style="list-style-type: none"> ● <i>Selfhealing and resilient critical infrastructures</i> <ul style="list-style-type: none"> ○ Rune Gustavsson, Blekinge Institute of Technology (Sweden) ○ Björn Ståhl, Blekinge Institute of Technology (Sweden) ● <i>Critical Infrastructures Security Modeling, Enforcement and Runtime Checking</i> <ul style="list-style-type: none"> ○ Anas Abou El Kalam, IRT – INP (France) ○ Yves Deswarte, LAAS – CNRS (France) ● <i>Increasing Security and Protection through Infrastructure RESilience: the INSPIRE Project</i> <ul style="list-style-type: none"> ○ Salvatore D'Antonio, Consorzio Interuniversitario Nazionale per l'Informatica (Italy) ○ Abdelmajid Khelil, TU Darmstadt (Germany) ○ Luigi Romano, University of Naples “Parthenope” (Italy) ○ Neeraj Suri, TUD (Germany) ● <i>Increase of power system survivability with the Decision Support Tool CRIPS based on Network Planning</i> <ul style="list-style-type: none"> ○ Christine Schwaegerl, Siemens AG (Germany) ○ Olaf Seifert, Siemens AG (Germany) ○ Robert Buschmann, IABG (Germany) ○ Hermann Dellwing, IABG (Germany) ○ Stefan Geretshuber, IABG (Germany) ○ Claus Leick, IABG (Germany)
11:15	Coffee break
11:30	<p>Special IRRIS Session Chaired by Ruediger Klein (Fraunhofer IAIS, Germany)</p> <ul style="list-style-type: none"> ● <i>Simulation and Management of Interdependent Critical Infrastructures - an Overview on the European Integrated Project IRRIS</i> <ul style="list-style-type: none"> ○ Rüdiger Klein, Fraunhofer IAIS (Germany) ● <i>Analysis of Critical Infrastructure dependence - An IRRIS perspective</i> <ul style="list-style-type: none"> ○ Robin Bloomfield, City Univ. London (England) ○ Peter Popov, City Univ. London (England) ○ Kizito Salako, City Univ. London (England) ○ David Wright, City Univ. London (England) ○ Lubos Buzna, ETH Zürich (Switzerland)

	<ul style="list-style-type: none"> ○ Ester Ciancamerla, ENEA (Italy) ○ Saverio Di Blasi, ENEA (Italy) ○ Michele Minichino, ENEA (Italy) ○ Vittorio Rosato, ENEA (Italy) <ul style="list-style-type: none"> ● <i>Scenario modelling in IRRIS</i> <ul style="list-style-type: none"> ○ Roberto Clemente, Telecom Italia (Italy) ● <i>Federated network simulation in IRRIS with SimCIP</i> <ul style="list-style-type: none"> ○ Cesaire Beyel, Fraunhofer IAIS (Germany) ○ Andrij Usov, Fraunhofer IAIS (Germany) ● <i>Middleware Improved Technology (MIT) to support dependability improvement in interdependent Critical Infrastructures</i> <ul style="list-style-type: none"> ○ Antonio Di Pietro, ENEA (Italy) ○ Luisa Lavallo, ENEA (Italy) ○ Mario Schembri, AIS (Malta) ○ Stefan Geretshuber, IABG (Germany)
13:15 14:30	Lunch
14:30	Invited talk 3 <i>Risk and Decision Analysis in Infrastructure Protection</i> Prof. George Apostolakis MIT (USA)
15:15	Session 4 – Vulnerability and risk analysis Chaired by George Apostolakis (MIT, USA) <ul style="list-style-type: none"> ● <i>Assessment of Structural Vulnerability for Power Grids by Network Performance Based on Complex Networks</i> <ul style="list-style-type: none"> ○ Ettore Bompard, Politecnico di Torino (Italy) ○ Marcelo Masera, Institute for the Protection and Security of the Citizen Joint Research Centre – European Commission (Italy) ○ Roberto Napoli, Politecnico di Torino (Italy) ○ Fei Xue, Politecnico di Torino (Italy) ● <i>Using centrality measures to rank the importance of the components of a complex network infrastructure</i> <ul style="list-style-type: none"> ○ Francesco Cadini, Politecnico di Milano (Italy) ○ Enrico Zio, Politecnico di Milano (Italy) ○ Cristina-Andreea Petrescu, Politecnico di Milano (Italy) ● <i>RadialNet: An Interactive Network Topology Visualization Tool with Visual Auditing Support</i> <ul style="list-style-type: none"> ○ Selan Rodrigues dos Santos, Universidade Federal do Rio Grande do Norte (Brazil) ○ Joao Paulo S. Medeiros, DCA/UFRN (Brazil) ● <i>Quantitative Security Risk Assessment and Management for Railway Transportation Infrastructures</i> <ul style="list-style-type: none"> ○ Francesco Flammini, ANSALDO STS Italy, University of Naples “Federico II” (Italy) ○ Andrea Gaglione, University of Naples “Federico II” (Italy) ○ Nicola Mazzocca, University of Naples “Federico II” (Italy) ○ Concetta Pragliola, ANSALDO STS Italy (Italy)
16:45	Coffee break
17:00	Poster Session (See list of selected papers below)
18:00	End of Poster Session
18:15	Bus transfer to Rome
20:00	Gala dinner

Wednesday 15 October

9:00	<p>Invited talk 4 <i>Cyber Threats and Vulnerabilities</i> Andrea Valboni, Microsoft (Italy)</p>
9:45	<p>Session 5 – Cyber threats & SCADA Chaired by Stefano Panzieri (Università di Roma tre, Italy)</p> <ul style="list-style-type: none"> • <i>Assessing and Improving SCADA Security in the Dutch Drinking water sector</i> <ul style="list-style-type: none"> ○ Eric Luijff, TNO Defence, Security and Safety (Netherlands) ○ Manou Ali, NICC (Netherlands) ○ Annemarie Zielstra, NICC (Netherlands) • <i>Analysis of Malicious Traffic in Modbus/TCP Communication</i> <ul style="list-style-type: none"> ○ Paulo S. Motta Pires, DCA/UFRN (Brazil) ○ Tiago H. Kobayashi, DCA/UFRN (Brazil) ○ Aguinaldo B. Batista Jr., DCA/UFRN (Brazil) ○ Joao Paulo S. Medeiros, DCA/UFRN (Brazil) ○ Jose Macedo F. Filho, DCA/UFRN (Brazil) ○ Agostinho M. Medeiros Jr., DCA/UFRN (Brazil) • <i>Scada Malware, a proof of Concept</i> <ul style="list-style-type: none"> ○ Andrea Carcano, Joint Research Centre (Italy) ○ Igor Nai Fovino, Joint Research Centre (Italy) ○ Marcelo Masera, Joint Research Centre (Italy) ○ Alberto Trombetta, Insubria University (Italy) • <i>Testbeds for assessing critical scenarios in Power Control Systems</i> <ul style="list-style-type: none"> ○ Giovanna Dondossola, CESI RICERCA (Italy) ○ Geert Deconinck, Electa Katholieke Universiteit Leuven (Belgium) ○ Fabrizio Garrone, CESI RICERCA (Italy) ○ Hakem Beitollahi, Electa Katholieke Universiteit Leuven (Belgium)
11:15	Coffee break
11:30	<p>Session 6 – Security and Crisis Management Chaired by Sujeet Shenoj (University of Tulsa, USA)</p> <ul style="list-style-type: none"> • <i>A Structured approach to Incident Response Management in the Oil and Gas Industry</i> <ul style="list-style-type: none"> ○ Maria B. Line, SINTEF (Norway) ○ Martin Gilje Jaatun, SINTEF ICT (Norway) ○ Eirik Albrechtsen, SINTEF (Norway) • <i>Information Infrastructure Protection by Technology driven Policy</i> <ul style="list-style-type: none"> ○ Sem Daskapan, DELFT TU (Netherlands) ○ Jolien Ubacht, DELFT TU (Netherlands) ○ Wim Vree, DELFT TU (Netherlands) • <i>Security Strategy Analysis for Critical Information Infrastructures</i> <ul style="list-style-type: none"> ○ Jose Torres, Tecnun - University of Navarra (Spain) ○ Finn Olav Sveen, Tecnun - University of Navarra (Spain) ○ Jose M. Sarriegi, Tecnun - University of Navarra (Spain) • <i>Emerging Information Infrastructures: Cooperation in Disasters</i> <ul style="list-style-type: none"> ○ Mikael Asplund, Linköping University (Sweden) ○ Simin Nadjm-Tehrani, Dept. of Computer & Information Science (Sweden) ○ Johan Sigholm, Swedish National Defence College (Sweden)
13:15 14:30	Lunch
14:30	<p>Invited talk 5 <i>Strategies for Securing Interconnected Critical Infrastructure Networks</i> Prof. Sujeet Shenoj University of Tulsa (USA)</p>
15:15	<p>Invited talk 6 <i>European strategy for Critical Infrastructure Protection research</i></p>

	Angelo Marino, DG Information Society and Media (European Commission)
16:00	Coffee break
16:15	<p>Round table – Critical (Information) Infrastructure Protection: the challenges</p> <p><i>Moderator</i> Roberto Vacca</p> <ul style="list-style-type: none"> • Angelo Marino – DG Information Society and Media (European Commission) • Claudia Eckert – Fraunhofer SIT (Germany) • Luisa Franchina – Italian Civil Protection Department (Italy) • Marc-Alexandre Graf - Swiss Federal Office for Civil Protection (Switzerland) • Adrian Gheorghe – Old Dominion University (USA) • Rainer Krebs – Siemens (Germany) • Eric Luijff –TNO (The Netherland) • TBD, Telecom Italia (Italy)
17:30	End of workshop

List of the papers selected for the Poster session:

- *ESSAM: A Method for Security Assessments by Embedded Systems Manufacturers*
 - Friedrich Köster, University of St. Gallen (Switzerland)
 - Hanh Quyen Nguyen, University of St. Gallen (Switzerland)
 - Markus Brändle, ABB Corporate Research (Switzerland)
 - Martin Naedele, ABB Corporate Research (Switzerland)
 - Michael Klaas, University of St. Gallen (Switzerland)
 - Walter Brenner, University of St. Gallen (Switzerland)
- *Service Modeling Language applied to Critical Infrastructure*
 - Gianmarco Baldini, Research Institution (Italy)
- *Graded Security Expert System*
 - Jüri Kivimaa, Estonian Defence Forces Training and Development Centre of Communication and Information Systems (Estonia)
 - Andreas Ojamaa, Institute of Cybernetics at TUT (Estonia)
 - Enn Tyugu, Institute of Cybernetics at TUT (Estonia)
- *Protection of mobile agents execution using a modified Self-Validating Branch-Based Software Watermarking with external sentinel*
 - Joan Tomàs-Buliart, Department of Telematics Engineering. Universitat Politècnica de Catalunya (Spain)
 - Marcel Fernández, Department of Telematics Engineering. Universitat Politècnica de Catalunya (Spain)
 - Miguel Soriano, Department of Telematics Engineering. Universitat Politècnica de Catalunya (Spain)
- *Adaptation of modelling paradigms to the CIs interdependencies problem*
 - Jose M. Sarriegi, Tecnun – University of Navarra (Spain)
 - Finn Olav Sveen, Tecnun – University of Navarra (Spain)
 - Jose Torres, Tecnun – University of Navarra (Spain)
 - Jose J. Gonzalez, University of Agder (Norway)
- *Empirical findings on Critical Infrastructure Dependencies in Europe*
 - Eric Luijff, TNO Defence, Security and Safety (Netherlands)
 - Albert Nieuwenhuijs, TNO Defence, Security and Safety (Netherlands)
 - Marieke Klaver, TNO Defence, Security and Safety (Netherlands)
 - Michel van Eeten, TU Delft (Netherlands)
 - Edite Cruz, TU Delft (Netherlands)
- *Modelling infrastructure interdependencies using Dependent Automata*
 - Susanna Donatelli, Dipartimento di Informatica, Università di Torino (Italy)
- *Precautionary Principle in Managerial Decision-Making: a Socio-Cognitive Engineering Perspective*
 - Adam Maria Gadowski, ENEA (Italy)
 - Tomasz Adam Zimny, freelancer (Poland)
- *Disaster Propagation in Inhomogeneous Media via Markovian Agents*
 - Davide Cerotti, Università di Torino (Italy)
 - Marco Gribaudo, Università di Torino (Italy)
 - Andrea Bobbio, Dipartimento di Informatica, Università del Piemonte Orientale (Italy)
- *A Study on Multiformalism Modeling of Critical Infrastructures*
 - Francesco Flammioni, ANSALDO STS Italy, University of Naples “Federico II” (Italy)
 - Nicola Mazzocca, University of Naples “Federico II” (Italy)
 - Concetta Pragliola, ANSALDO STS Italy (Italy)
 - Valeria Vittorini, University of Naples “Federico II” (Italy)
- *Simulation of Critical ICT Infrastructure for Municipal Crisis Management (,)*
 - Adam Kozakiewicz, NASK – Research and Academic Computer Network (Poland)
 - Anna Felkner, NASK – Research and Academic Computer Network (Poland)
 - Tomasz Kruk, NASK – Research and Academic Computer Network (Poland)
- *An Ontology-Based Approach to Blind Spot Revelation in Critical Infrastructure Protection Planning*
 - William Tolone, The University of North Carolina at Charlotte (USA)
 - Joshua Blackwell, The University of North Carolina at Charlotte (USA)
 - Seok-Won Lee, The University of North Carolina at Charlotte (USA)
 - Wei-Ning Xiang, The University of North Carolina at Charlotte (USA)
 - Lydia Marsh, The University of North Carolina at Charlotte (USA)
- *Security of Water Infrastructure Systems*
 - Demetrios Eliades, University of Cyprus (Cyprus)

- Marios Polycarpou, University of Cyprus (Cyprus)
- *Critical infrastructures as complex systems: a multi-level protection architecture*
 - Pierluigi Assogna, Teorematica spa, Rome (Italy)
 - Glauco Bertocchi, Master on Security and Protection, University of Rome “La Sapienza” (Italy)
 - Antonio Di Carlo, Department of Studies on Structures, University “Roma Tre” (Italy)
 - Franco Milicchio, Department of Informatics and Automation, University “Roma Tre” (Italy)
 - Alberto Paoluzzi, Department of Informatics and Automation, University “Roma Tre” (Italy), Technology and Research for Security srl, Rome (Italy)
 - Giorgio Scorzelli, Department of Informatics and Automation, University “Roma Tre” (Italy), Technology and Research for Security srl, Rome (Italy)
 - Michele Vicentino, Technology and Research for Security srl, Rome (Italy)
 - Roberto Zollo, Teorematica spa, Technology and Research for Security srl, Rome (Italy)
- *Challenges concerning the energy-dependency of the telecom infrastructure*
 - Lothar Fickert, Graz University of Technology (Austria)
 - Helmut Malleck, Project Management and Consulting in Telecommunications (Austria)
- *An effective approach for cascading effects prevision in Critical Infrastructures*
 - Daniele Perucchini, Fondazione Ugo Bordoni (Italy)
 - Luisa Franchina, (Italy)
 - Marco Carbonelli, (Italy)
 - Laura Gratta, (Italy)
 - Claudio Petricca, (Italy)