



# PROGRAM GUIDE



**ARES 2012**

*The Seventh International Conference on  
Availability, Reliability and Security*

**CD-ARES 2012**



**ifip**

*International Cross Domain Conference and Workshop  
supported by IFIP TC 8 (WG 8.4, WG 8.9) and TC 5*

**August 20<sup>th</sup> – 24<sup>th</sup>, 2012**

**Prague, Czech Republic**

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## CONFERENCE OFFICERS

### **ARES 2012:**

#### **Program Committee Co-Chairs:**

Elisa Bertino, Purdue University, USA

A Min Tjoa, Vienna University of Technology, Austria

#### **Workshop Co-Chairs:**

Gerald Quirchmayr, University of South Australia, Australia

A Min Tjoa, Vienna University of Technology, Austria

### **CD-ARES 2012:**

#### **General Chairpersons:**

Josef Basl, University of Economics, Prague, Czech Republic

Erich J. Neuhold, Vienna University of Technology, Austria, IFIP TC5 Chair

#### **Program Committee Chairpersons:**

Gerald Quirchmayr, University of South Australia, Australia

Edgar Weippl, Vienna University of Technology, Austria, IFIP WG 8.4 Chair

## PROGRAM OVERVIEW

|               | MONDAY, 20.08.   |                   |                   |               | TUESDAY, 21.08.                                   |                   |                   |                   |
|---------------|--|-------------------|-------------------|---------------|---|-------------------|-------------------|-------------------|
| Time          | Lecture Hall<br>A  | Lecture Hall<br>B | Lecture Hall<br>C | Time          | Lecture Hall<br>A                                 | Lecture Hall<br>B | Lecture Hall<br>C | Lecture Hall<br>D |
|               |  |                   |                   | 07:30 - 17:30 | REGISTRATION                                      |                   |                   |                   |
|               |  |                   |                   | 09:00 - 10:30 | Key Note II: Chenxi Wang<br><i>Lecture Hall A</i> |                   |                   |                   |
| 09.00 - 17:30 | Registration   |                   |                   | 10:30 - 11:00 | Break   |                   |                   |                   |
| 11.00 - 12:30 | Opening and<br>Key Note I: Annie I. Antón<br><i>Lecture Hall A</i> |                   |                   | 11:00 - 12:30 | ARES F3   | SeCIHD 3          | SECSE 1           | CD-ARES 3         |
| 12.30 - 14:00 | Lunch  |                   |                   | 12:30 - 14:00 | Lunch   |                   |                   |                   |
| 14.00 - 15:30 | ARES F1  | SeCIHD 1          | CD-ARES 1         | 14:00 - 15:30 | ARES F4   | SeCIHD 4          | SECSE 2           | CD-ARES 4         |
| 15:30 - 16:00 | Break  |                   |                   | 15:30 - 16:00 | Break   |                   |                   |                   |
| 16:00 - 17:30 | ARES F2  | SeCIHD 2          | CD-ARES 2         | 16:00 - 17:30 | ARES F5   | SeCIHD 5          |                   | CD-ARES 5         |
|               | Welcome Reception  |                   |                   |               | Conference Dinner                                 |                   |                   |                   |

| WEDNESDAY, 22.08. |  |                |                | THURSDAY, 23.08. |                |                | FRIDAY, 24.08. |                |
|-------------------|--|----------------|----------------|------------------|----------------|----------------|----------------|----------------|
| Time              | Lecture Hall A   | Lecture Hall B | Lecture Hall C | Lecture Hall A   | Lecture Hall B | Lecture Hall C | Lecture Hall A | Lecture Hall B |
| 07:30 - 17:30     | REGISTRATION   |                |                | REGISTRATION     |                |                | REGISTRATION   |                |
| 09:00 - 10:30     | ARES S1  | OSA            | CD-ARES 6      | ARES S3          | RISI 1         | CD-ARES 9      | FARES 3        | MoCrySEN 1     |
| 10:30 - 11:00     | Break  |                |                | Break            |                |                | Break          |                |
| 11:00 - 12:30     | Panel<br><i>Raising the Bar: Performing More Effective<br/>Cyber Security Studies</i><br>Moderator: Shari Lawrence Pflieger<br><i>Lecture Hall A</i> |                |                | ARES S4          | RISI 2         | CD-ARES 10     | IWSMA          | MoCrySEN 2     |
| 12:30 - 14:00     | Lunch  |                |                | Lunch            |                |                |                |                |
| 14:00 - 15:30     | ARES S2  | WSDF 1         | CD-ARES 7      | ARES S6          | SecOnT 1       | FARES 1        |                |                |
| 15:30 - 16:00     | Break  |                |                | Break            |                |                |                |                |
| 16:00 - 17:30     | ARES S5  | WSDF 2         | CD-ARES 8      | ARES S7          | SecOnT 2       | FARES 2        |                |                |

## ARES 2012 & CD-ARES 2012 PROGRAM

### Monday, August 20<sup>th</sup>, 2012

09:00 – 17:30 *Registration Desk opened*

**Location: Registration**

- Registration for all events

11:00 - 12:30 *Plenary Session*

**Opening Ceremony & Keynote Annie I. Antón: *Designing Software Systems that Comply with Privacy and Security Regulations***

**Location: Lecture Hall A**

- Keynote Speaker: **Annie I. Antón**, Cair and Professor, School of Interactive Computing, Georgia Institute of Technology, US

12:30 – 14:00 *Coffee Break*

14:00 – 15:30 *Parallel Sessions*

**ARES Conference – Full Paper Session 1: Security as Quality Property**

**Location: Lecture Hall A**

1. Analyses Of Two End-User Software Vulnerability Exposure Metrics  
*Jason Wright, Miles McQueen, Lawrence Wellman*
2. Using Linear Support Vector Machines to Solve the Asymmetric Comparison-Based Fault Diagnosis Problem  
*Mourad Elhadef*
3. An Adaptive Risk Control and Security Management for Embedded Real-Time System  
*Yue Ma, Wei Jiang, Nan Sang, Ziguang Zhong*

**Workshop on Security and Cognitive Informatics for Homeland Defense (SECIHD) – Session 1**

Session Chair: Ilsun You (Korean Bible University, Republic of Korea)

**Location: Lecture Hall B**

1. Security-and-Privacy-Related Issues on IT Systems During Disasters  
*Shinsaku Kiyomoto, Kazuhide Fukushima, Yutaka Miyake*
2. Mobile Malware Threats and Defenses for Homeland Security  
*Seung-Hyun Seo, Kangbin Yim, Ilsun You*
3. A Collaborative Approach to Botnet Protection Consensus Building and In-operation Assurance for Service Dependability  
*Yutaka Matsuno, Shuichiro Yamamoto*
4. A Secure Distributed Video Surveillance System Based on Portable Devices  
*Pietro Albano, Andrea Bruno, Bruno Carpentieri, Aniello Castiglione, Arcangelo Castiglione, Francesco Palmieri, Raffaele Pizzolante, Ilsun You*

### **CD-ARES Conference – Session 1: Retrieval and Complex Query Processing I**

**Location: Lecture Hall C**

1. Ontology-based Retrieval of Experts - the Issue of Efficiency and Scalability within the eXtraSpec System  
*Monika Kaczmarek, Elzbieta Bukowska, Piotr Stolarski, Witold Abramowicz*
2. Integrating Query Context and User Context in an Information Retrieval Model Based on Expanded Language Modeling  
*Rachid Aknouche, Ounas Asfari, Fadila Bentayeb, Omar Boussaid*
3. Indexing and Search for Fast Music Identification  
*Guang-Ho Cha*

15:30 – 16:00 *Coffee Break*

16:00 – 17:30 *Plenary Session*

### **ARES Conference – Full Paper Session 2: Aspects of Privacy**

**Location: Lecture Hall A**

1. Topology-Driven Secure Initialization in Wireless Sensor Networks: A Tool-Assisted Approach  
*Stanislaus Stelle, Mark Manulis, Matthias Hollick*
2. On Measuring the Parasitic Backscatter of Sensor-enabled UHF RFID Tags  
*Thomas Plos, Christian Maierhofer*

3. Veto-based Malware Detection

*Raja Khurram Shahzad, Niklas Lavesson*

**International Workshop on Security and Cognitive Informatics for Homeland Defense (SECIHD) – Session 2**

Session Chair: Aniello Castiglione (Universita' degli Studi di Salerno, Italy)

**Location: Lecture Hall B**

1. Network Profiling: Content Analysis of Users Behavior in Digital Communication Channel

*Clara Maria Colombini, Antonio Colella, Marco Mattiucci, Aniello Castiglione*

2. How to Forge a Digital Alibi on Mac OS X

*Aniello Castiglione, Giuseppe Cattaneo, Roberto De Prisco, Alfredo De Santis, and Kangbin Yim*

3. Discussion on the Challenges and Opportunities of Cloud Forensics

*Rainer Poisel and Simon Tjoa*

4. A Secure Data Encryption Method by Employing a Feedback Encryption Mechanism and Three- Dimensional Operation

*Yi-Li Huang, Fang-Yie Leu and Cheng-Ru Dai*

**CD-ARES Conference – Session 2: Retrieval and Complex Query Processing II**

**Location: Lecture Hall C**

1. A 16-intersection matrix for the Polygon-Polyline Topological Relation for Geographic Pictorial Query Languages

*Anna Formica, Mauro Mazzei, Elaheh Pourabbas, Maurizio Rafanelli*

2. OrderBased Labeling Scheme for Dynamic XML Query Processing

*Beakal Gizachew Assefa, Belgin Ergenc*

17:30 – 22:00 Social Event 1

- Welcome Reception

## Tuesday, August 21<sup>st</sup>, 2012

07:30 – 17:30 *Registration Desk opened*

**Location: Registration**

- Registration for all events

09:00 – 10:30 *Plenary Session*

**Keynote Chenxi Wang: *Declarative Security***

**Location: Lecture Hall A**

- Keynote Speaker: **Chenxi Wang**, Vice President, Principal Analyst at Forrester Research, US

10:30 – 11:00 *Coffee Break*

11:00 – 12:30 *Parallel Sessions*

**ARES Conference – Full Paper Session 3: Cryptography**

**Location: Lecture Hall A**

1. Efficient Generic Construction of Forward-Secure Identity-Based Signature  
*Noura Al Ebri, Joonsang Baek, Abdulhadi Shoufan, Quang Hieu Vu*
2. From Computationally-proved Protocol Specifications to Implementations  
*David Cadé, Bruno Blanchet*
3. Oblivious and Fair Server-Aided Two-Party Computation  
*Amir Herzberg, Haya Shulman*



**Workshop on Security and Cognitive Informatics for Homeland Defense (SECIHD) – Session 3**

Session Chair: Kangbin Yim (SCH University, Republic of Korea)

**Location: Lecture Hall B**

1. Automatic Image Annotation using Semantic Text Analysis  
*Dongjin Choi, Pankoo Kim*
2. Design and Analysis of a Fragile Watermarking Scheme Based on Block-Mapping  
*Munkhbaatar Doyoddorj, Kyung-Hyune Rhee*



3. Detecting Unusual User Behaviour to Identify Hijacked Internet Auctions Accounts  
*Marek Zachara, Dariusz Palka*
4. Facial Identity Encryption with Kinoform and Phase-key Watermarking for Homeland Security Agencies  
*Muhammad Naveed Iqbal Qureshi, Jin-Tae Kim, Sang-Woong Lee*

### **Workshop on Secure Software Engineering (SECSE) – Session 1: Threats and Approaches**

Session Chair: Martin Gilje Jaatun (SINTEF ICT, Norway)

**Location: Lecture Hall C**

1. Representing Threats in BPMN 2.0  
*Per Håkon Meland, Erlend Andreas Gjære*
2. Type classification against Fault Enabled Mutant in Java based Smart Card  
*Jean Dubreuil, Guillaume Bouffard, Jean-Louis Lanet, Julien Cartigny*
3. Towards Concurrent Data Sampling using GPU Coprocessing  
*Mark M. Seeger, Stephen D. Wolthusen*

### **CD-ARES Conference – Session 3: Cross-Domain Applications: Aspects of Modeling and Validation I**

**Location: Lecture Hall D**

1. Ontology-Based Identification of Research Gaps and Immature Research Areas  
*Kristian Beckers, Stefan Eicker, Stephan Faßbender, Maritta Heisel, Holger Schmidt, Widura Schwittek*
2. Artificial neural networks approach for the prediction of thermal balance of SI engine using ethanol- gasoline blends  
*Mostafa Kiani Deh Kiani , Barat Ghobadian, Fathollah Ommi , Gholamhassan Najafi, Talal Yusaf*
3. A Context-aware Mashup Integration Guideline for Enterprise 2.0  
*Gerald Bader, Amin Anjomshoaa, A Min Tjoa*

12:30 – 14:00 Lunch Break

14:00 – 15:30 Parallel Sessions

## **ARES Conference – Full Paper Session 4: Privacy Enhancing Technologies**

**Location: Lecture Hall A**

1. A Group Signature Based Electronic Toll Pricing System  
*Xihui Chen, Gabriele Lenzini, Sjouke Mauw, Jun Pang*
2. Anonymous Communication by Branch-and-Bound  
*Stefan Rass, Peter Schartner, Raphael Wigoutschnigg, and Christian Kollmitzer*
3. An Analysis of Implemented and Desirable Settings for Identity Management on Social Networking Sites  
*Moritz Riesner, Michael Netter, Günther Pernul*

## **Workshop on Security and Cognitive Informatics for Homeland Defense (SECIHD) – Session 4**

Session Chair: Christian Damsgaard Jensen (Technical University of Denmark, Denmark)

**Location: Lecture Hall B**

1. A formal support for collaborative data sharing  
*Fabio Martinelli, Ilaria Matteucci, Marinella Petrocchi, Luca Wiegand*
2. Tool-Supported Risk Modeling and Analysis of Evolving Critical Infrastructures  
*Fredrik Seehusen, Bjornar Solhaug*
3. Towards a Logical Framework for Reasoning about Risk  
*Matteo Cristani, Erisa Karali, Luca Vigano*
4. A Collaborative Approach to Botnet Protection  
*Matija Stevanovic, Kasper Revsbech, Jens Myrup Pedersen, Robin Sharp, Christian Damsgaard Jensen*

## **Workshop on Secure Software Engineering (SECSE) – Session 2: Taxonomies and Comparisons**

Session Chair: Martin Gilje Jaatun (SINTEF ICT, Norway)

**Location: Lecture Hall C**

1. A Comparative Study of Security Pattern Classifications  
*Aleem Alvi, Mohammad Zulkernine*
2. Comparing Privacy Requirements Engineering Approaches  
*Kristian Beckers*

3. A Taxonomy of Time and State Attacks

*Horia V. Corcalciuc*

## **CD-ARES Conference – Session 4: Cross-Domain Applications: Aspects of Modeling and Validation II**

**Location: Lecture Hall D**

1. Validation of XML Documents with SWRL  
*Jesus M. Almendros-Jimenez*
2. A Taxonomy of Dirty Time-Oriented Data  
*Theresia Gschwandtner, Johannes Gärtner, Wolfgang Aigner, Silvia Miksch*
3. Combining Relational and Semi-Structured Databases for an Inquiry Application  
*Marius Ebel, Martin Hulin*

*15:30 – 16.00 Coffee Break*

*16:00 – 17:30 Parallel Sessions*

## **ARES Conference – Full Paper Session 5: Authorization and Authentication**

**Location: Lecture Hall A**

1. An Approach to Bridge the Gap between Role Mining and Role Engineering via Migration Guides  
*Anne Baumgrass, Mark Strembeck*
2. Towards Automated Assistance for Mined Roles Analysis in Role Mining Applications  
*Safaà Hachana, Frédéric Cuppens, Nora Cuppens-Boulahia, Joaquin Garcia-Alfaro*
3. A Coordination-Driven Authorization Framework for Space Containers  
*Stefan Craß, Tobias Dönnz, Gerson Joskowicz, Eva Kühn*

## **Workshop on Security and Cognitive Informatics for Homeland Defense (SECIHD) – Session 5**

Session Chair: Marek Ogiela (AGH University of Sci. and Tech., Poland)

**Location: Lecture Hall B**

1. Semantic Techniques of Image Retrieval - the Example of a Structural Analysis of Coronary Arteries

*Mirosław Trzupek, Marek R. Ogiela*

2. Evaluation of Carotid Artery Segmentation with Centerline Detection and Active Contours Without Edges Algorithm

*Tomasz Hachaj, Marek R. Ogiela*

3. Managing Urban Waste Collection through Timed Automata based Fuzzy Cognitive Maps

*Giovanni Acampora, Vincenzo Loia, Autilia Vitiello*

4. Routing Algorithm based on Nash Equilibrium against Malicious Attacks for DTN Congestion Control

*Chengjun Wang, Baokang Zhao, Wanrong Yu, Chunqing Wu, Zhenghu Gong*

## **CD-ARES Conference – Session 5: Trust, Security, Privacy and Safety I**

**Session Chair: Martin Gilje Jaatun**

**Location: Lecture Hall D**

1. Hunting for Aardvarks: Can Software Security be Measured?

*Martin Gilje Jaatun*

2. A Foundation for Requirements Analysis of Privacy Preserving Software

*Kristian Beckers, Maritta Heisel*

3. On complexity reduction of user interfaces for safety-critical systems

*Andreas Holzinger, Evgenia Popova, Bernhard Peischl, Martina Ziefle*

**18:30 – 22:00 Social Event 2**

- Conference Dinner

## Wednesday, August 22<sup>nd</sup>, 2012

07:30 – 17:30 *Registration Desk opened*

**Location: Registration**

- Registration for all events

09:00 – 10:30 *Parallel Sessions*

### **ARES Conference – Short Paper Session 1: Software Security**

**Location: Lecture Hall A**

1. Building a Flexible Service Architecture for User Controlled Hybrid Clouds  
*Anja Strunk, Marc Mosch, Stephan Groß, Yvonne Thoß, Alexander Schill*
2. Towards a Holistic Information Security Governance Framework for SOA  
*Marijke Coetzee*

### **Workshop on Organizational Security Aspects (OSA)**

**Location: Lecture Hall B**

1. Integrating ISO/IEC 27001 and other Managerial Discipline Standards with Processes of Management in Organizations  
*Juhani Anttila, Kari Jussila, Jorma Kajava, Ilkka Kamaja*
2. Towards an Open Standard Vote Verification Framework in Electronic Voting Systems  
*Ali Fawzi Najm Al-Shammari, Adolfo Villafiorita, Komminist Weldemariam*
3. Sensitivity Analysis of Loss of Corporate Efficiency and Productivity Associated with Enterprise DRM Technology  
*Wen Zeng, Kaiyu Liu*
4. A Multi-objective Decision Support Framework for Simulation-Based Security control Selection  
*Elmar Kiesling, Christine Strauss, Christian Stummer*

### **CD-ARES Conference – Session 7: Mobile Applications**

**Location: Lecture Hall C**

1. A formal Equivalence Classes based Method for Security Policy Conformance Checking  
*Ekkehard Hermann, Udo Litschauer, Jürgen Fuß*

2. Security SLAs – an idea whose time has come?

*Martin Gilje Jaatun, Karin Bernsmed, Astrid Undheim*

3. Trust as an organismic trait of e-commerce systems

*Tanja Ažderska, Borka Jerman Blažič*

4. UML representation of extended role-based access control model with the use of usage control concept

*Aneta Poniszewska-Maranda*

*10:30 – 11:00 Coffee Break*

*11:00 – 12:30 Plenary Session*

**Panel: *Raising the Bar: Performing More Effective Cyber Security Studies***

**Location:** Lecture Hall A

This panel addresses ways to do more rigorous, more easily replicable studies in cyber security, so that practitioners can determine which practices are most effective in which contexts. The moderator will present examples of experiments on cyber security training and case studies of usable security to show how rigor adds to the power of evidence, and in the long run to more effective decision-making about security. The panelists will discuss the benefits of and challenges in performing rigorous studies.

**Moderator:** *Shari Lawrence Pfleeger*, Director of Research for the Institute for Information Infrastructure Protection at Dartmouth College, New Hampshire

**Panelists:**

Angela Sasse, University College London (UK)

David Budgen, Durham University (UK)

Kelly Caine, Indiana University (US)

*12:30 – 14:00 Lunch Break*

14:00 – 15:30 *Parallel Sessions*

### **ARES Conference – Short Paper Session 2: Security and Usability**

**Location: Lecture Hall A**

1. An Algorithm for Compression of XACML Access Control Policy Sets by Recursive Subsumption  
*Bernard Stepien, Stan Matwin, Amy Felty*
2. E-mail Classification Using Social Network Information  
*Anton Borg, Niklas Lavesson*
3. Two-Pronged Phish Snagging  
*Rakesh Verma, Narasimha Shashidhar, Nabil Hossain*

### **Workshop on Digital Forensics (WSDF) – Session 1: Theoretical Methods and Statistics for Forensics**

Session Chair: Martin Mulazzani (Vienna University of Technology, Austria)

**Location: Lecture Hall B**

1. Uncertainty Bounds for Digital Forensic Evidence and Hypotheses  
*Richard E. Overill, Jantje A.M. Silomon*
2. Using Attack Graphs in Forensic Examinations  
*Changwei Liu, Anoop Singhal, Duminda Wijesekera*
3. A Statistical Approach for Identifying Videos of Child Pornography at Crime Scenes  
*Mateus de Castro Polastro, Pedro Monteiro da Silva Eleuterio*

### **CD-ARES Conference – Session 7: Mobile Applications**

**Location: Lecture Hall C**

1. Making Apps useable on multiple different mobile platforms: On interoperability for business application development on smartphones  
*Andreas Holzinger, Peter Treitler, Wolfgang Slany*
2. Enhancing Business APPification using SMS Text messages: Metrics, Strategies and Alternatives  
*Mersini Paschou, Evangelos Sakkopoulos, Efrosini Sourla, Athanasios Tsakalidis*

15:30 – 16:00 *Coffee Break*

16:00 – 17:30 Parallel Sessions

### **ARES Conference – Short Paper Session 5: Security Studies**

**Location: Lecture Hall A**

1. Using Security Requirements Engineering Approaches to Support ISO 27001 Information Security Management Systems Development and Documentation  
*Kristian Beckers, Stephan Faßbender, Maritta Heisel, Holger Schmidt*
2. An Empirical Study on Design Diversity of Functionally Equivalent Web Services  
*Amanda S. Nascimento, Fernando Castor, Cecilia M. F. Rubira, Rachel Burrows*
3. Federated Identity Management Challenges  
*Jostein Jensen*

### **Workshop on Digital Forensics (WSDF) – Session 2: Applied forensics and data generation**

Session Chair: Martin Mulazzani (Vienna University of Technology, Austria)

**Location: Lecture Hall B**

1. Synthetic Data Creation for Forensic Tool Testing: Improving Performance of the 3LSPG Framework  
*York Yannikos, Christian Winter, Markus Schneider*
2. Simplifying RAM Forensics - A GUI and Extensions for the Volatility Framework  
*Steffen Logen, Hans Höfken, Marko Schuba*
3. InnoDB Database Forensics: Reconstructing Data Manipulation Queries from Redo Logs  
*Peter Frühwirt, Peter Kieseberg, Sebastian Schrittwieser, Markus Huber, Edgar Weippl*

### **CD-ARES Conference – Session 8: Data Processing & Management**

**Location: Lecture Hall C**

1. Near duplicate document detection for large information flow  
*Daniele Montanari, Piera Laura Puglisi*
2. TinyStream Sensors  
*Pedro Furtado*
3. Distributed Sampling Storage for Statistical Analysis of Massive Sensor Data  
*Hiroshi Sato, Hisashi Kurasawa, Takeru Inoue, Motonori Nakamura, Hajime Matsumura, Keiichi Koyanagi*



17:30 – 19:30 *Social Event 3*

- Guided City Tour (for all participants who have registered for it)

**Thursday, August 23<sup>rd</sup>, 2012**

*07:30 – 17:30 Registration Desk opened*

**Location: Registration**

- Registration for all events

*09:00 – 10:30 Parallel Sessions*

**ARES Conference – Short Paper Session 3: Security in Electronic Services and Mobile Services**

**Location: Lecture Hall A**

1. Civitas and the Real World: Problems and Solutions from a Practical Point of View  
*Stephan Neumann, Melanie Volkamer*
2. Secure Mobile Data Collection Systems for Low-Budget Settings  
*Federico Mancini, Samson Gejibo, Khalid Mughal, Remi Valvik, Jørn Klungsøyr*
3. Understanding the Development Trends of Electronic Voting Systems  
*Ali Fawzi Najm Al-Shammari, Adolfo Villafiorita, Komminist Weldemariam*

**Workshop on Resilience and IT-Risk in Social Infrastructures (RISI) – Session 1: On Security and Patterns**

Session Chair: Prof. Dr. Isao Echizen (National Institute of Informatics (NII), Japan)

**Location: Lecture Hall B**

1. An integrated Method for Pattern-Based Elicitation of Legal Requirements Applied to a Cloud Computing Example  
*Kristian Beckers, Stephan Faßbender, Holger Schmidt*
2. A Private Information Detector for Controlling Circulation of Private Information through Social Networks  
*Midori Hirose, Akira Utsumi, Isao Echizen, Hiroshi Yoshiura*

**CD-ARES Conference – Session 9: E-Commerce I**

**Location: Lecture Hall C**

1. Usage control enforcement - a survey  
*Åsmund Ahlmann Nyre*

2. Stock Market Multi-Agent Recommendation System Based on the Elliott Wave Principle  
*Monica Tirea, Ioan Tandau, Viorel Negru*
3. Similarity of Transactions for Customer Segmentation  
*Ke Lu, Tetsuya Furukawa*

10:30 – 11:00 Coffee Break

11:00 – 12:30 Parallel Sessions

#### **ARES Conference – Short Paper Session 4: Security Control**

**Location: Lecture Hall A**

1. High Level Model of Control Flow Attacks for Smart Card Functional Security  
*Pascal Berthomé, Karine Heydemann, Xavier Kauffmann-Tourkestansky, Jean-Francois Lalande*
2. Dynamic DNS Update security, based on Cryptographically Generated Addresses and ID-Based Cryptography, in an IPv6 Autoconfiguration Context  
*Jean-Michel Combes, Ghada Arfaoui, and Maryline Laurent*
3. Boosting Logical Attack Graph for Efficient Security Control  
*Zonghua Zhang, Shuzhen Wang*
4. Enforcing Access Control in Virtual Organizations Using Hierarchical Attribute-Based Encryption  
*Muhammad Asim, Tanya Ignatenko, Milan Petkovic, Daniel Trivellato, Nicola Zannone*

#### **Workshop on Resilience and IT-Risk in Social Infrastructures (RISI) – Session 2: On Isolation and Secure Systems**

Session Chair: Sven Wohlgemuth (Sirrix AG security technologies, Germany)

**Location: Lecture Hall B**

1. Peer-to-Peer driven Software Engineering Considering Security, Reliability, and Performance  
*Kristian Beckers, Stephan Faßbender*
2. Return-Oriented Programming Attack on the Xen Hypervisor  
*Baozeng Ding, Yanjun Wu, Yeping He, Shuo Tian, Bei Guan, Guowei Wu*

3. Evaluation of an Improved Visualization System for Helping Children Identify Risky Websites

*Tomoko Kajiyama, Isao Echizen*

## **CD-ARES Conference – Session 10: E-Commerce II**

**Location: Lecture Hall C**

1. Challenges in Using Linked Data within a Social Web Recommendation Application to Semantically Annotate and Discover Venues

*Jakub Dzikowski, Monika Kaczmarek, Szymon Lazaruk, Witold Abramowicz*

2. Pay-As-You-Go Data Integration Using Functional Dependencies

*Naser Ayat, Hamideh Afsarmanesh, Reza Akbarinia, Patrick Valduriez*

3. Analyzing recommender system's performance fluctuations across users

*Charif Haydar, Azim Roussanaly, Anne Boyer*

*12:30 – 14:00 Lunch Break*

*14:00 – 15:30 Parallel Sessions*

## **ARES Conference – Short Paper Session 6: Network Analysis and Security**

**Location: Lecture Hall A**

1. Antidotes for DNS Poisoning by Off-Path Adversaries

*Amir Herzberg, Haya Shulman*

2. A Personalized Whitelist Approach for Phishing Webpage Detection

*Amine Belabed, Esma Aimeur, Mohamed Amine Chikh*

3. Model-Based Digit Analysis for Fraud Detection Overcomes Limitations of Benford Analysis

*Christian Winter, Markus Schneider, York Yannikos*

## **Workshop on Security Ontologies and Taxonomies (SecOnT) – Session 1: Knowledge Base Development**

Session Chair: Stefan Fenz (Vienna University of Technology, Austria)

**Location: Lecture Hall B**

1. A Common Body of Knowledge for Engineering Secure Software and Services  
*Widura Schwittek, Holger Schmidt, Kristian Beckers, Stefan Eicker, Stephan Faßbender, Maritta Heisel*
2. Building an Incident Management Body of Knowledge  
*David A. Mundie, Robin Ruefle*
3. Challenges of Web-based Information Security Knowledge Sharing  
*Daniel Feledi, Stefan Fenz*

### **Workshop on Frontiers in Availability, Reliability and Security (FARES) – Session 1: Risk Assessment & Security Measurement & Embedded Security**

**Location:** Lecture Hall C

1. Fault Tolerance and Power Consumption Analysis on Chip-Multi Processors Architectures  
*Hossein Khezripour, Saadat Pourmozaffari*
2. Organizational Risk Assessment Based on Attacks Repetition  
*Marianne Azer, Ahmed Shaker, Sherif Nagy, Ahmed Raafat, and Mohamad Abuzaid*
3. A Critical Survey of Security Indicator Approaches  
*Manuel Rudolph, Reinhard Schwarz*

15:30 – 16:00 Coffee Break

16:00 – 17:30 Parallel Sessions

### **ARES Conference – Short Paper Session 7: Cloud Security and Analysis**

**Location:** Lecture Hall A

1. An Economic Model for Maximizing Profit of a Cloud Service Provider  
*Thanadech Thanakornworakij, Raja Nassar, Chockchai Box Leangsuksun, Mihaela Paun*
2. Security Concept and Implementation for a Cloud Based E-science Infrastructure  
*Thomas Ludescher, Thomas Feilhauer, Peter Brezany*
3. Classic Replication Techniques on the Cloud  
*Itziar Arrieta-Salinas, José Enrique Armendáriz-Iñigo, and Joan Navarro*

## **Workshop on Security Ontologies and Taxonomies (SecOnT) – Session 2: Applications**

Session Chair: Stefan Fenz (Vienna University of Technology, Austria)

**Location: Lecture Hall B**

1. Using Ontologies for Adaptive Information Security Training  
*Lee Mangold*
2. An Ontology for Run-Time Verification of Security Certificates for SOA  
*Stefania D'Agostini, Valentina Di Giacomo, Claudia Pandolfo, Domenico Presenza*
3. IO: An Interconnected Asset Ontology in Support of Risk Management Processes  
*Henk Birkholz, Ingo Sieverdingbeck, Karsten Sohr, Carsten Bormann*

## **Workshop on Frontiers in Availability, Reliability and Security (FARES) – Session 2: Privacy**

**Location: Lecture Hall C**

1. A Privacy preserving Approach to Call Detail Records Analysis in VoIP Systems  
*Stefan Hofbauer, Kristian Beckers, Gerald Quirchmayr*
2. Disabilities and Authentication Methods: Usability and Security  
*Kirsi Helkala*
3. Privacy Policy Preferences Enforced by SPARQL Query Rewriting  
*Said Oulmakhzoune, Nora Cuppens-Boulahia, Frederic Cuppens, and Stephane Morucci*
4. Design and implementation of a CBR-based Privacy Agent  
*Karin Bernsmed, Inger Anne Tøndel, Åsmund Ahlmann Nyre*

## Friday, August 24<sup>th</sup>, 2012

07:30 – 12:30 *Registration Desk opened*

**Location: Registration**

- Registration for all events

09:00 – 10:30 *Parallel Sessions*

### **Workshop on Frontiers in Availability, Reliability and Security (FARES) – Session 3: Cloud Computing & Social Networks**

**Location: Lecture Hall A**

1. Automatic Anonymization of Natural Languages Texts Posted on Social Networking Services and Automatic Detection of Disclosure  
*Hoang-Quoc Nguyen-Son, Quoc-Binh Nguyen, Minh-Triet Tran, Dinh-Thuc Nguyen, Hiroshi Yoshiura, Isao Echizen*
2. Policy and Context Management in Dynamically Provisioned Access Control Service for Virtualized Cloud Infrastructures  
*Canh Ngo, Peter Membrey, Yuri Demchenko, Cees de Laat*
3. Trusted Virtual Infrastructure Bootstrapping for On Demand Services  
*Peter Membrey, Keith C.C. Chan, Canh Ngo, Yuri Demchenko, Cees de Laat*

### **Workshop on Modern Cryptography and Security Engineering (MoCrySEn) – Session 1: Invited Talk & Modern Cryptography**

Session Chair: Dimitris E. Simos (INRIA, France)

**Location: Lecture Hall B**

- Invited talk: "Code-based Cryptography: Theory and Practice", Nicolas Sendrier (INRIA France)
- 1. On the Weak State in GGHN-like Ciphers  
*Aleksandar Kircanski, Amr Youssef*

10:30 – 11:00 *Coffee Break*

11:00 – 12:30 Parallel Sessions

### **Workshop on Security of Mobile Applications (IWSMA)**

Session Chair: Peter Kieseberg (SBA Research, Austria)

**Location: Lecture Hall A**

1. E2E: An Optimized IPsec Architecture for Secure And Fast Offload  
*Daniel Migault, Daniel Palomares, Emmanuel Herbert, Wei You, Gabriel Ganne, Ghada Arfaoui, Maryline Laurent*
2. Location Anonymity Based on Fake Queries in Continuous Location-Based Services  
*Lin Yao, Chi Lin, Guangya Liu, Fangyu Deng, Guowei Wu*
3. Janitor, Certificate and Jury (JCJ) Trust Scheme for Wireless Ad-hoc Networks  
*Mohamad M. Abuzaid and Marianne A. Azer*
4. Repackaging Android Applications for Auditing Access to Private Data  
*Pascal Berthomé, Thomas Fécherolle, Nicolas Guilloteau, Jean-Francois Lalande*

### **Workshop on Modern Cryptography and Security Engineering (MoCrySEn) – Session 2: Security Engineering**

Session Chair: Dimitris E. Simos (INRIA, France)

**Location: Lecture Hall B**

1. BPVrfy: Hybrid Cryptographic Scheme Based - Federate Identity Attributes Verification Model for Business Processes  
*Nan Guo, Tianhan Gao, and Bin Zhang*
2. Symmetry in Security Protocol Cryptographic Messages – A Serious Weakness Exploitable by Parallel Session Attacks  
*Anca Jurcut, Tom Coffey, Reiner Dojen*
3. A Scan-Based Side Channel Attack on the NTRUEncrypt Cryptosystem  
*Abdel Alim Kamal, Amr Youssef*



## VENUE

### About Prague



PRAGUE - the capital of the Czech Republic - has always played an important role in the history of the Czech Republic. Since the Middle Ages Prague has been famous as one of the most beautiful cities of the world and has been attributed adjectives such as “golden“, “hundred-spined“, “the crown of the world“.

The unique character of the city is also partly a consequence of its natural environment: Prague, similar to Rome built on seven hills, was built on nine hills along the Vltava river, which flows through the city for a distance of 31 km and forms a perfect unit with the city. The dominant features of the city architecture are reflected in the river: towers, church spires and cupolas, palaces and town houses, along with the greenery of gardens, parks and islands.

Prague was founded on the cross-roads of ancient trade routes at a site where the most varied spiritual and cultural currents merged. The history of the city begins with the founding of Prague Castle in the 9th century. Of the original stone buildings in pre-Romanesque style, a basilica remains from the second half of the 10th century, and forms the core of St George’s church. Among the preserved Romanesque structures in Prague, three renovated rotundas can be visited. At the time of the founding of the Old Town of Prague at the beginning of the 13th century, the Romanesque style began to be replaced with the Gothic; the oldest structure in this style is the Convent of St Agnes of Bohemia or the Old-New Synagogue, while St Vitus Cathedral, Charles Bridge, the Church of Our Lady before Týn etc. are examples of the prime of this style. The greatest flourishing of the Czech state occurred at this time, which will eternally be connected with the monarch Charles IV, who founded the famous Charles University in 1348, the first university in Central Europe. The late Gothic style is connected with buildings such as Vladislav Hall, the Powder Tower and the Old Town Hall with the Horologe.

In the 16th century the Renaissance style started to be favoured by the court aristocratic circles. The first and truly representative structure is the Royal Summer Palace along with many aristocratic palaces in Prague. The Church did not favour the Renaissance art; on the other hand,



it was completely taken over in the 17th century by the Baroque style. Especially the Lesser Town is characterized by the Baroque style and the Church of St Nicholas forms a predominant feature of this area.

A number of styles alternated in the 19th and the beginning of the 20th century. The most important buildings include the Classicist Estate Theatre, Neo-Renaissance National Theatre and Rudolfinum and the Art Nouveau Municipal House and Main Railway Station.

The period of the first half of the 20th century was influenced by the Czech Modern style and Architectural Cubism which was an original style, with no counterpart in contemporary



international art.

Nowadays, Prague is an important European city that attracts visitors not only by the abundance of architectural gems the generations of our ancestors left us. It is a place where cultural, social and political events of international importance are held as well as a popular destination for trade fairs and congresses.

See <http://www.praguewelcome.cz/> for more information.

## How to get to the Conference Location

### From and to the airport:

The Praha Ruzyn airport is located in the northwest outskirts of Prague, some 20 kilometres from the city centre.

The transportation to and from the airport is provided by buses of the city public transport:

- line 119 Airport Ruzyn - Dejvická Metro Station - 24 minutes
- line 100 Airport Ruzyn - Zlín Metro Station - 18 minutes
- line 179 Airport Ruzyn - Nové Butovice Metro Station - 45 minutes
- night line 510 Airport Ruzyn - centre - 40 minutes
- timetables and detailed information - tel. 296 191 817, [www.dpp.cz](http://www.dpp.cz)

or

- shuttle minibuses Cedaz from náměstí Republiky [www.cedaz.cz](http://www.cedaz.cz)
- Airport Cars [www.airport-cars.cz](http://www.airport-cars.cz)
- taxi 1.1.1. Radiocab taxi [www.111radiocab.cz/](http://www.111radiocab.cz/)

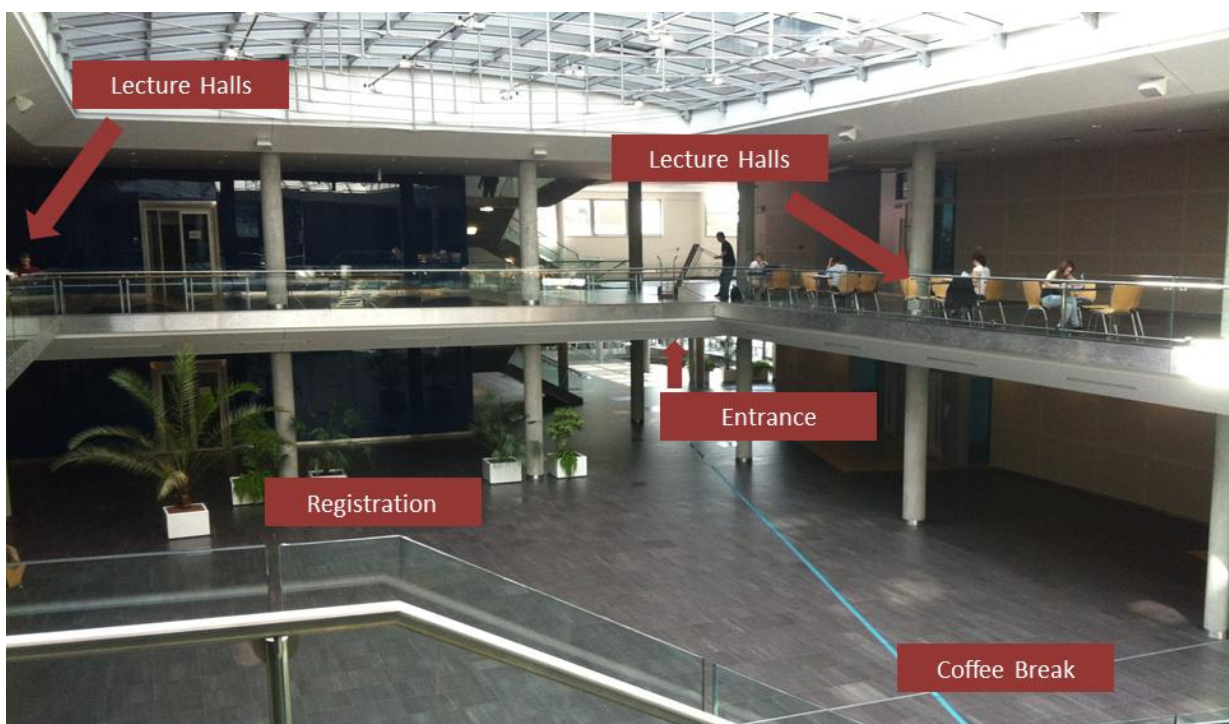
## INTERNET ACCESS

WLAN is provided in the whole conference area. You will find the password in your envelope of participation.

## MAPS

### ARES Conference Venue

ARES 2012 will be held at the **University of Economics** in Prague.





## Address of ARES 2012 Conference:

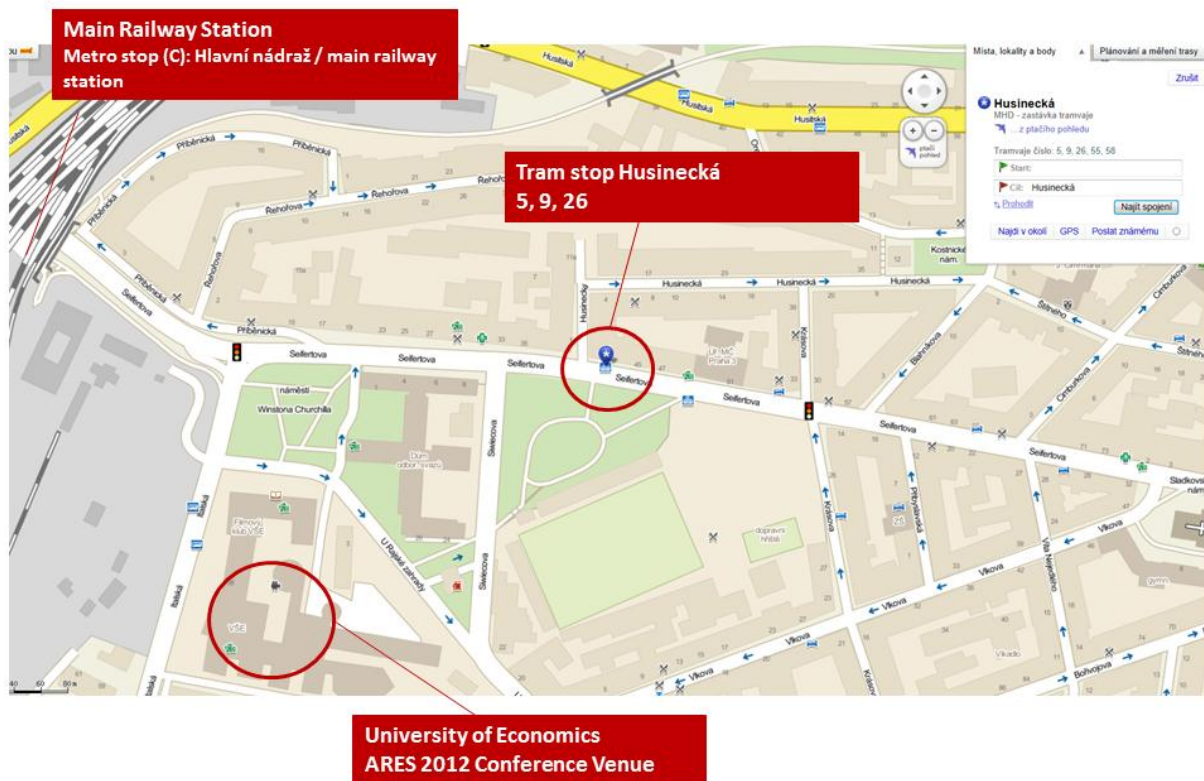
University of Economics, Prague

W. Churchill Sq. 4

130 67 Prague 3

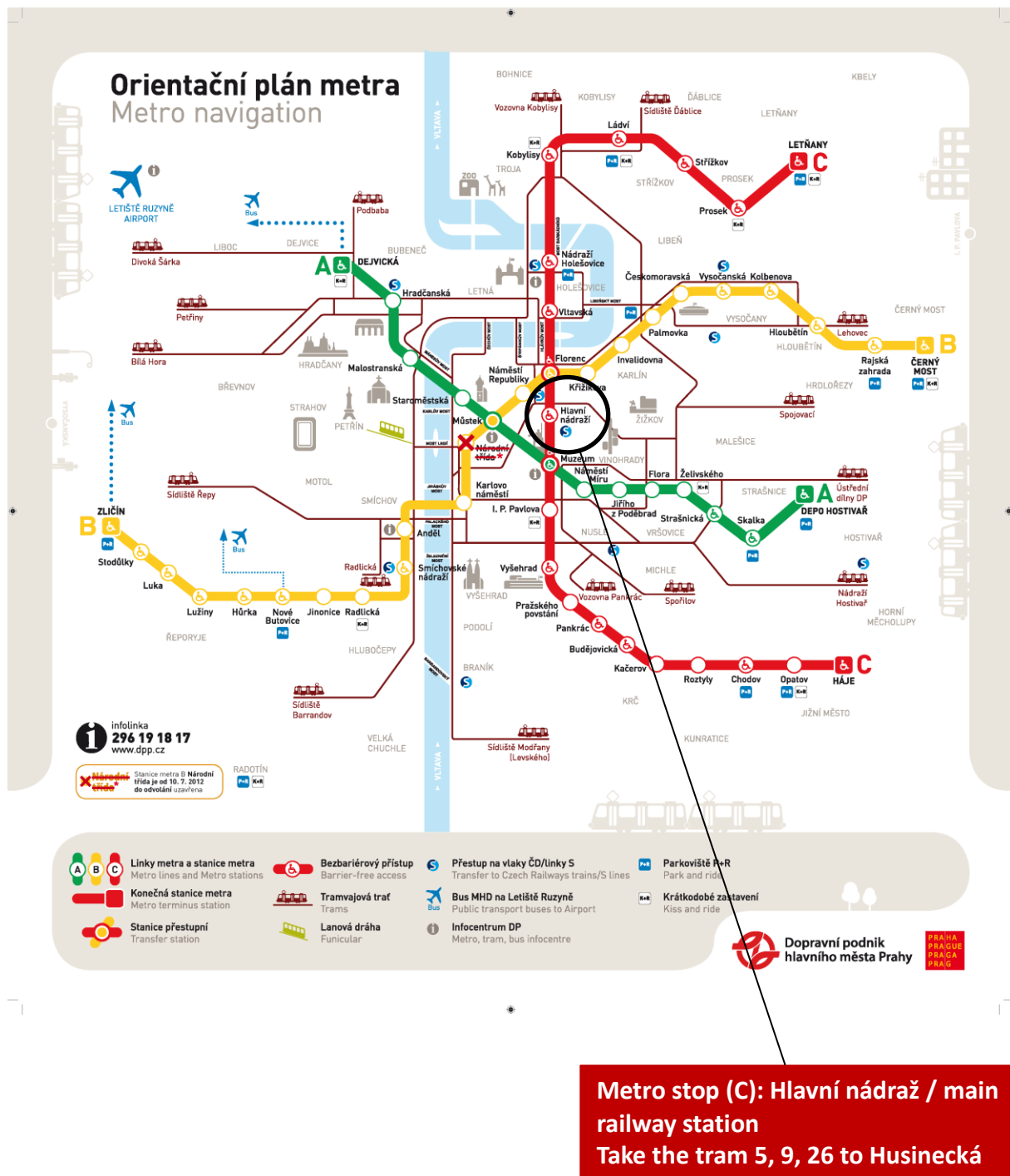
Czech Republic

### ARES 2012 Conference Venue



## Public Transport

To find a connection: use [www.dpp.cz/en](http://www.dpp.cz/en)



## SOCIAL EVENTS

### Welcome Reception on August 20<sup>th</sup> 2012

The Welcome Reception will take place at the university and will start directly after the last session at 17.30.

### Conference Dinner on August 21<sup>st</sup> 2012

The Conference Dinner will take place at the Historical Big Monastery Restaurant - Velká Klášterní Restaurace and will start at 18.30.

Address of the Conference Dinner Restaurant:

*Velká Klášterní Restaurace*  
*Strahovské nádvoří 302*  
*118 00 Praha 1*

**The best way to reach *Velká Klášterní Restaurace* is to take the No 22 tram to *Pohorelec*.**

### Guided City Tour on August 22<sup>nd</sup> 2012

All participants who have registered for the guided city tour will be picked up in front of the university at 17.30 (after the last session). The tour will last 2 hours.

## REGISTRATION OFFICE

If you have any questions or need assistant during the conference do not hesitate to contact:

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