



## **CONFERENCE PROGRAMME**

### **6th International KES Conference on Agents and Multi-agent Systems – Technologies and Applications KES AMSTA 2012**

**Dubrovnik, Croatia  
25-27 June 2012**

**Organized by:**



## **Welcome to KES-AMSTA 2012**

We are very pleased to extend to you a warm welcome to the 6th KES Conference on Agent and Multi-Agent Systems – Technologies and Applications (KES-AMSTA 2012). The conference is organized by the University of Zagreb, Faculty of Electrical Engineering and Computing, KES International and its Focus Group on Agent and Multi-agent Systems.

The aim of the conference is to provide an internationally respected forum for scientific research in the technologies and applications of agent and multi-agent systems. The conference attracted a substantial number of researchers and practitioners from all over the world who submitted their papers for ten main tracks covering the methodology and applications of agent and multi-agent systems, one workshop and five special sessions on specific topics within the field.

Submissions came from 20 countries. Each paper was peer reviewed by at least two members of the International Program Committee and International Reviewer Board. In all, 66 papers were selected for oral presentation and publication in the proceedings volume of KES-AMSTA 2012.

The Program Committee defined the following main tracks: Knowledge and Learning Agents, Virtual Organizations, Business Processing Agents, Multi-agent Systems, Mental and Holonic Models, Self-Organization, Conversational Agents and Agent Teams, and Multi-agent Systems in Distributed Environments.

In addition to the main tracks of the conference the First International Workshop on Trustworthy Multi-Agent Systems (TRUMAS 2012) and the following, five special sessions are also hosted: Intelligent Workflow, Cloud Computing and Intelligent Systems; Digital Economy; Assessment Methodologies in Multi-agent and Other Paradigms; ICT-Based Alternative and Augmentative Communication, as well as a Doctoral Track. This year's conference also organized a Work in Progress Track as a half-day workshop, giving early career stage researchers the opportunity to present their work.

We would like to express our sincere thanks to the Honorary Chair Ignac Lovrek, University of Zagreb, Croatia, for his support and help.

The Chairs' special thanks go to Tanja Grzilo and Vlaho Bruer, University of Zagreb, CAAS Dubrovnik, Croatia, and to the Local Organizing Chair Igor Cavrak, for his excellent work. Thanks are due to the Program Co-chairs, all Program and Reviewer Committee members and all the additional reviewers for their valuable efforts in the review process, which helped us to guarantee the highest quality of selected papers for the conference. We thank Special and General Session Chairs who have contributed in this way.

We would like to thank our main sponsor, University of Zagreb. Our special thanks also go to Springer for publishing the proceedings.

We would also like to express our thanks to the keynote speakers, Michael Luck, King's College London, UK, Wolfgang Ketter, Erasmus University, The Netherlands, and Kimon Valavanis, University of Denver, USA, for their interesting and informative talks of world-class standard. We cordially thank all of the authors for their valuable contributions and all of the other participants in this conference. The conference would not have been possible without their support.

The conference administrators, and the local organising committee, have all worked extremely hard to bring the conference to a high level of organisation. In this context we would like to thank Ana Petric, Iva Bojic and Vedran Podobnik (University of Zagreb, Croatia); Peter Cushion, Shaun Lee and Dilys Evans (KES Operations, UK).

A vital contribution was made by the authors, presenters and delegates without whom the conference could not have taken place. So finally, but by no means least, we thank them for their involvement.

June 2012

Gordan Jezic  
Mario Kusek  
Ngoc Thanh Nguyen  
Robert J. Howlett  
Lakhmi C. Jain

## Conference Chairs

### Honorary Chairs:



I. Lovrek, University of Zagreb, Croatia



L. C. Jain, University of South Australia, Australia

### General Co-Chairs:



G. Jezic, University of Zagreb, Croatia



N.T.Nguyen, Wroclaw University of Technology,  
Poland

**Executive Chair:**



R.J. Howlett, University of Bournemouth, UK

## Keynote Speakers



Prof Michael Luck, King's College London, UK

Behaviour Regulation and Normative Systems



Prof Wolf Ketter, Erasmus University, Netherlands

Competitive Simulations: Lessons learned from the  
Trading Agent Competition



Prof Kimon Valavanis, University of Denver (DU), USA

Challenges in Unmanned Systems Swarms  
A wireless, multi-agent distributed system  
perspective



**Conference Venue:**  
**Centre for Advanced Academic Studies (CAAS)**



**Address:**

Centre for Advanced Academic Studies

Don Frana Bulica 4

20000 Dubrovnik

Croatia

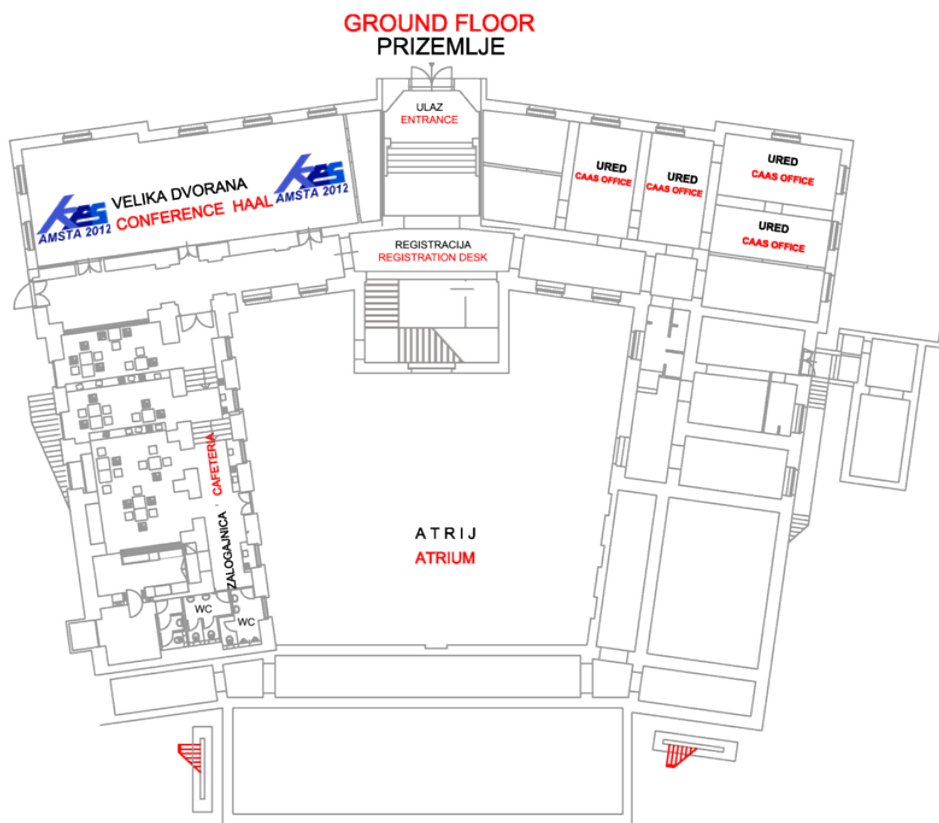
Website: <http://www.caas.unizg.hr>

**Conference rooms:**

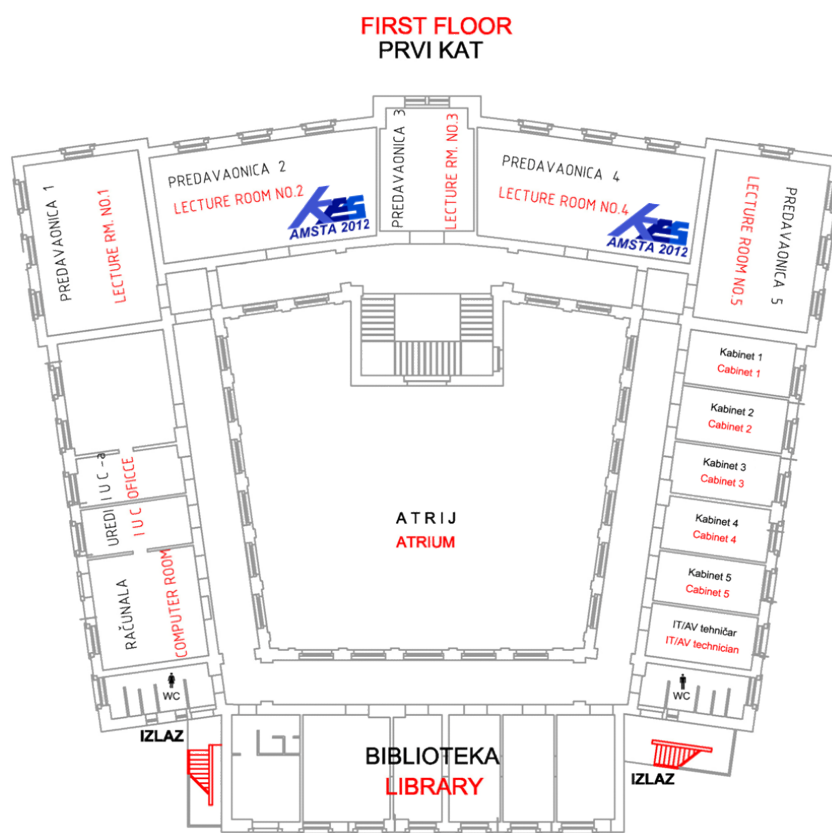
Conference hall (ground floor), plenary and parallel sessions

Lecture room no. 2 (first floor), parallel sessions

Lecture room no 4 (first floor), parallel sessions



CAAS building - Ground floor



CAAS building - First floor



## Program Overview

	Monday, June 25		
8:00-9:30	Registration		
9:30-11:00	Opening Ceremony Plenary Session <a href="#">Keynote 1: Wolf Ketter</a>		
11:00-11:30	Coffee and Tea Break + Poster setting up		
11:30-13:00	Main Track 01: Virtual Organization	Main Track 02: Knowledge and Learning Agents	Main Track 03: Self-Organization
13:00-14:00	Lunch		
14:00-16:00	Main Track 04: Knowledge Agents	Special Session 01: Intelligent Workflow, Cloud Computing and Intelligent Systems	Special Session 05: ICT-based Alternative and Augmentative Communication (part I)
16:00-16:30	Coffee and Tea Break		
16:30-17:30	Special Session 06: Trading Agent Competition	Work in Progress Workshop	Special Session 05: ICT-based Alternative and Augmentative Communication (part II)
18:00	Guided Old City Tour Welcome Reception		

	Tuesday, June 26		
8:00-9:00	Registration		
9:00-10:00	Plenary Session <a href="#">Keynote 2: Michael Luck</a>		
10:00-10:30	Coffee and Tea Break		
10:30-12:00	Main Track 05: Multi-Agent Systems I	Main Track 06: Mental and Holonic Systems	Main Track 07: Business Processing Agents
12:00-13:00	Lunch		
13:00-14:00	Plenary Session <a href="#">Keynote 3: Kimon Valavanis</a>		
14:00-14:30	Coffee and Tea Break		
14:30-16:00	Main Track 08: Multi-Agent Systems II	Special Session 03: Assessment Methodologies in Multi-agent and other Paradigms	Doctoral Track
19:00	Conference Dinner		

	Wednesday, June 27	
8:30-9:00	Registration	
9:00 - 11:00	TRUMAS 2012: First International Workshop on Trustworthy Multi Agent Systems	Special Session 02: Digital Economy
11:00-11:30	Coffee and Tea Break	
11:30-12:45	Main Track 09: Multi-Agent Systems in Distributed Environments	Main Track 10: Conversational Agents and Agent Teams
12:45-13:00	Plenary Session Closing Ceremony	

## Detailed Program

Monday, 25 June 2012	
8:00 - 9:30	Registration
9:30 - 10:00	<b>Opening Ceremony</b> <b>Room: Conference hall (ground floor)</b>
10:00 - 11:00	<b>Keynote Talk I</b> <b>Chair: Prof Ngoc Thanh Nguyen (<i>Wroclaw University of Technology, Poland</i>)</b> <b>Room: Conference hall (ground floor)</b>  <b>Competitive Simulations: Lessons learned from the Trading Agent Competition</b> <b>Prof Wolf Ketter</b> <b>Erasmus University, Netherlands</b>
11:00 - 11:30	Coffee and Tea Break
11:30 - 13:00	<b>Main Track 1: Virtual Organizations</b> <b>Chair: Prof Bozena Wozna-Szczesniak (<i>Jan Dlugosz University, Poland</i>)</b> <b>Room: Conference hall (ground floor)</b>  On Mobile Target Allocation with Incomplete Information in Defensive Environments <i>Marin Lujak, Holger Billhardt, and Sascha Ossowski</i>  Bayesian proprioceptor for forest fire observer network <i>Ljiljana Seric, Maja Stula, Darko Stipanicev, and Maja Braovic</i>  Supervision of Agents Modelling Evacuation at Crisis Situations <i>Frantisek Capkovic</i>  Web service compositions which emerge from Virtual organizations with fair agreements <i>Romina Torres, Denise Rivera, and Hernan Astudillo</i>
11:30 - 13:00	<b>Main Track 2: Knowledge and Learning Agents</b> <b>Chair: Prof Kazuhiro Kuwabara (<i>Ritsumeikan University, Japan</i>)</b> <b>Room: Room no 4 (first floor)</b>  Evaluation of intelligent tutoring system incorporates learning profile to determine learning scenario <i>Adrianna Kozierekiewicz-Hetmanska</i>  Strategy-based Learning Through Communication With Humans <i>Nguyen-Thinh Le and Niels Pinkwart</i>

	<p>Ontology based knowledge management and learning in Multi-Agent System <i>Dariusz Choinski and Michal Senik</i></p> <p>Data Analysis Systems And Cognitive Modelling Processes <i>Lidia Ogiela and Marek Ogiela</i></p>
11:30 - 13:00	<p><b>Main Track 3: Self-Organization</b>  <b>Chair: Prof Zeljko Hocenski (<i>University of Osijek, Croatia</i>)</b>  <b>Room: Room no 2 (first floor)</b></p> <p>A Self-Adaptive Multi-Agent System for Abnormal Behavior Detection in Maritime Surveillance <i>Nicolas Brax, Eric Andonoff, and Marie-Pierre Gleizes</i></p> <p>Control of AGVs in Decentralized Autonomous FMS based on a Mind Model <i>Hidehiko Yamamoto and Takayoshi Yamada</i></p> <p>Developing Intelligent Surveillance Systems with an Agent Platform <i>David Vallejo, Luis Garcia-Munoz, Javier Albusac, Carlos Glez-Morcillo, Luis Jimenez, and Jose Castro-Schez</i></p> <p>Agent-Based Control of Self-Sustained Oscillations in Industrial Processes: A Bioreactor Case Study <i>Piotr Skupin and Mieczyslaw Metzger</i></p>
13:00 - 14:00	Lunch
14:00 - 16:00	<p><b>Main Track 4: Knowledge Agents</b>  <b>Chair: Prof. Barbara Dunin-Keplicz (<i>Warsaw University and Polish Academy of Sciences, Poland</i>)</b>  <b>Room: Conference hall (ground floor)</b></p> <p>Path-oriented Integration Method for Complex Trees <i>Marcin Maleszka and Ngoc Thanh Nguyen</i></p> <p>Integrating quantitative attributes in hierarchical clustering of transactional data <i>Mihaela Vranic, Damir Pintar, and Zoran Skocir</i></p> <p>The MARS - A Multi-Agent Recommendation System for Games on Mobile Phones <i>Pavle Skocir, Luka Marusic, Marinko Marusic, and Ana Petric</i></p> <p>Informativeness of Inflective Noun Bigrams in Croatian <i>Damir Juric, Marko Banek, and Sandor Dembitz</i></p>

14:00 - 16:00	<p><b>Special Session 1: Intelligent Workflow, Cloud Computing and Intelligent Systems</b>  <b>Chair: Dr Yun-Heh Chen-Burger (<i>University of Edinburgh, UK</i>)</b>  <b>Room: Room no 4 (first floor)</b></p> <p>Multi-Agent Negotiation of Virtual Machine Migration Using the Lightweight Coordination Calculus  <i>Paul Anderson, Shahriar Bijani, and Alexandros Vichos</i></p> <p>On-line Communities Making Scense - A Hybrid Micro-blogging Platform Community Analysis Framework  <i>Cheng-Lin Yang and Yun-Heh Chen-Burger</i></p> <p>Measuring the Effectiveness of Thottled Data Transfers on Data-Intensive Workflows  <i>Ricardo Rodriguez, Rafael Tolosana-Calasanz, and Omer Rana</i></p> <p>Goal, Video Description and Capability Ontologies for Fish4Knowledge Domain  <i>Gayathri Nadarajan and Yun-Heh Chen-Burger</i></p> <p>An Early Comparison of Commercial and Open-Source Cloud Platforms for Scientific Environments  <i>Ivan Voras, Marin Orlic, and Branko Mihaljevic</i></p>
14:00 - 16:00	<p><b>Special Session 5: ICT-based Alternative and Augmentative Communication (part I)</b>  <b>Chair: Prof Zeljka Car (<i>University of Zagreb, Croatia</i>)</b>  <b>Room: Room no 2 (first floor)</b></p> <p>Introducing Session on ICT-based Alternative and Augmentative Communication  <i>Zeljka Car, Dinka Vukovic, Nadica Bjelcic, Goran Karas, and Velimir Karas</i></p> <p>The Use of AAC with Young Children in Croatia-from the Speech and Language Pathologists view  <i>Jasmina Ivsac Pavlisa, Marta Ljubescic, and Ivana Jerecic</i></p> <p>Mobile AAC Services Development Process: From Usability Requirements to Reusable Components  <i>Ivan Vucak, Hrvoje Belani, and Marin Vukovic</i></p> <p>e-Accessible service system: Calibrator and Communicator  <i>Ivan Blagajic, Ivan Semanjski, Tomislav Saric, Zeljka Janda-Hegedis, Marin Vukovic, and Zeljka Car</i></p>
	Coffee and Tea Break

16:30 - 17:30	<b>Special Session 06: Trading Agent Competition</b> <b>Chair: Dr Ana Petric (<i>University of Zagreb, Croatia</i>)</b> <b>Room: Conference hall (ground floor)</b>
16:30 - 17:30	<b>Work in Progress Workshop</b> <b>Chair: Prof Drago Zagar (<i>University of Osijek, Croatia</i>)</b> <b>Room: Room no 4 (first floor)</b>
16:30 - 17:30	<b>Special Session 5: ICT-based Alternative and Augmentative Communication (part II)</b> <b>Chair: Prof Zeljka Car (<i>University of Zagreb, Croatia</i>)</b> <b>Room: Room no 2 (first floor)</b>  Evaluation of mainstream tablet devices for symbol based AAC Communication <i>Jurica Dolic, Jesenka Pibernik, and Josip Bota</i>  Potentials of the tangible user interface (TUI) in enhancing inclusion of people with special needs in the ICT-assisted learning and e-accessibility <i>Matej Zajc and Andreja Starcic</i>
18:00	Guided Old City Tour & Welcome Reception

Tuesday, 26 June 2012	
8:00 - 9:00	Registration
9:00 - 10:00	<b>Keynote Talk II</b> <b>Chair: Prof Gordan Jezic (<i>University of Zagreb, Croatia</i>)</b> <b>Room: Conference hall (ground floor)</b>  <b>Behaviour Regulation and Normative Systems</b> <b>Prof Michael Luck</b> <b>King's College London, UK</b>
10:00 - 10:30	Coffee and Tea Break
10:30 - 12:00	<b>Main Track 5: Multi-Agent Systems I</b> <b>Chair: Prof Richard Fung (<i>City University of Hong Kong, Hong Kong</i>)</b> <b>Room: Conference hall (ground floor)</b>  Rock Art Interpretation within Indiana MAS <i>Viviana Mascardi, Vincenzo Deufemia, Damiano Malafronte, Alessandro Ricciarelli, Nicoletta Bianchi, and Henry De Lumley</i>  A proposed architecture for a fault tolerant multi agents system using extern agents <i>Bouzahzah Mounira and Maamri Ramdane</i>



	<p>GeoHash and UUID identifier for Multi agent systems <i>Zoran Balkic, Damir Sostaric, and Goran Horvat</i></p> <p>Multi-Agent Power Management System for ZigBee based portable Embedded ECG Wireless monitoring device with LabView Application <i>Damir Sostaric, Goran Horvat, and Zeljko Hocenski</i></p>
10:30 - 12:00	<p><b>Main Track 6: Mental and Holonic Models</b>  <b>Chair: Dr Marin Lujak (<i>University Rey Juan Carlos, Spain</i>)</b>  <b>Room: Room no 4 (first floor)</b></p> <p>A Multi-Context Representation of Mental States <i>Aldo Franco Dragoni</i></p> <p>Epistemic Profiles and Belief Structures <i>Barbara Dunin-Keplicz and Andrzej Szalas</i></p> <p>To a Formal Modeling Approach of Error Recovery in Production Systems Based on Holonic Multi-Agent Systems Specification <i>Belhassen Mazigh, Ahmed Hammed, and Vincent Hilaire</i></p> <p>Holonification of a Network of Agents Based on Graph Theory <i>Monireh Abdoos, Ahmad Esmaeili, and Nasser Mozayani</i></p>
10:30 - 12:00	<p><b>Main Track 7: Business Processing Agents</b>  <b>Chair: Prof Przemyslaw Rozewski (<i>West Pomeranian University of Technology in Szczeczin, Poland</i>)</b>  <b>Room: Room no 2 (first floor)</b></p> <p>Scenario Modeling and Verification for Business Processes <i>Bruno Blaskovic, Zoran Skocir, and Luka Humski</i></p> <p>Agent-based analysis and detection of functional faults of vehicle industry processes: a process mining approach <i>Agnes Werner-Stark and Tibor Dulai</i></p> <p>Diverse Sentiment Comparison of News Websites over Time <i>Jianwei Zhang, Yukiko Kawai, Tadahiko Kumamoto, Shinsuke Nakajima, and Yuhki Shiraishi</i></p> <p>Evolution of Extensible Java EE-based Agent Framework <i>Mirjana Ivanovic, Milan Vidakovic, Dejan Mitrovic, and Zoran Budimac</i></p>
12:00 - 13:00	Lunch
13:00 - 14:00	<p><b>Keynote Talk III</b>  <b>Chair: Prof Ignac Lovrek (<i>University of Zagreb, Croatia</i>)</b>  <b>Room: Conference hall (ground floor)</b></p>

	<b>Challenges in Unmanned Systems Swarms: A wireless, multi-agent distributed system perspective</b> <b>Prof Kimon Valavanis</b> <b>University of Denver (DU), USA</b>
14:00 - 14:30	Coffee and Tea Break
14:30 - 16:00	<b>Main Track 8: Multi-Agent Systems II</b> <b>Chair: Prof Darko Stipanicev (<i>University of Split, Croatia</i>)</b> <b>Room: Conference hall (ground floor)</b>  A multi-agent system for dynamic integrated process planning and scheduling using heuristics <i>Luping Zhang, T.N. Wong, and Richard Fung</i>  The Optimal Solution Attainment Rate of the Multiplexing Method <i>Yasuki Iizuka</i>  Modeling Secure Mobile Agent Systems <i>Molka Rekik, Slim Kallel, Monia Loulou, and Ahmed Hadj Kacem</i>  An Influence of Random Number Generation Function to Multiagent Systems <i>Dominik Vymetal, Marek Spisak, and Roman Sperka</i>
14:30 - 16:00	<b>Special Session 3: Assessment Methodologies in Multi-agent and other Paradigms</b> <b>Chair: Prof Jadranka Sunde (<i>University of Adelaide, Australia</i>)</b> <b>Room: Room no 4 (first floor)</b>  Correct Speech Visemes as a root of total communication method for deaf people <i>Eva Pajorova and Ladislav Hluchy</i>  Target Depth and Metal Type Discrimination with Cost Based Probability Updating <i>Minh Dao-Johnson Tran, Canicious Abeynayake, and Lakhmi Jain</i>  How to Assess Human Visual Performance on an Operational Task <i>Katherine Hanton, Jadranka Sunde, Marcus Butavicius, Lakhmi Jain, and Nicholas Burns</i>
14:30 - 16:00	<b>Doctoral track</b> <b>Chair: Prof Vedran Podobnik (<i>University of Zagreb, Croatia</i>)</b> <b>Room: Room no 2 (first floor)</b>  Forecasting Consumer Interest in New Services using Semantic-aware Prediction Model: the Case of YouTube Clip Popularity <i>Luka Vrdoljak, Vedran Podobnik, and Gordan Jezic</i>

	<p>Comparing different overlay topologies and metrics in pulse-coupled Multi-Agent Systems <i>Iva Bojic and Mario Kusek</i></p> <p>Network-Centric Operations in Machine-to-Machine Networks <i>Damjan Katusic and Gordan Jezic</i></p>
19:00	Conference Dinner

Wednesday, 27 June 2012	
8:30 - 9:00	Registration
9:00 - 11:00	<p><b>TRUMAS 2012: First International Workshop on Trustworthy Multi Agent Systems</b>  <b>Chair: Prof Nicola Dragoni (Technical University of Denmark, Denmark)</b>  <b>Room: Conference hall (ground floor)</b></p> <p>Deployment of trust management system in environment of e- commerce  <i>Eva Zupancic and Denis Trcek</i></p> <p>SAT-based Bounded Model Checking for Deontic Interleaved Interpreted Systems  <i>Bozena Wozna-Szczesniak and Andrzej Zbrzezny</i></p> <p>A Concept for Testing Robustness and Safety of the Context-Aware Behaviour of Autonomous Systems  <i>Zoltan Micskei, Zoltan Szatmari, Janos Olah, and Istvan Majzik</i></p> <p>Two Approaches to Bounded Model Checking for Linear Time Logic with Knowledge  <i>Artur Meski, Wojciech Penczek, Maciej Szreter, Bozena Wozna-Szczesniak, and Andrzej Zbrzezny</i></p> <p>Modelling Trusted Web Applications  <i>Mohammed Alzahrani and Lilia Georgieva</i></p> <p>Modelling and Analysis of Dynamic Reconfiguration in BP-calculus  <i>Faisal Abouzaid, John Mullins, Manuel Mazzara, and Nicola Dragoni</i></p>
9:00 - 11:00	<p><b>Special Session 2: Digital Economy</b>  <b>Chair: Dr Arkadiusz Kawa (Poznan University of Economics, Poland)</b>  <b>Room: Room no 4 (first floor)</b></p> <p>Developing Agile Supply Chains - system model, algorithms, applications  <i>Katarzyna Grzybowska and Gabor Kovacs</i></p>

	<p>Standards for transport data exchange in the supply chain - pilot studies <i>Sliwczynski Boguslaw, Marcin Hajdul, and Paulina Golinska</i></p> <p>Smooth Component Analysis and MSE Decomposition for Ensemble Methods <i>Ryszard Szupiluk, Piotr Wojewnik, and Tomasz Zabkowski</i></p> <p>Discussion of the Competence Management Models for Education Context <i>Przemyslaw Rozewski</i></p> <p>Materials management in recovery network - integration of distributed data sources <i>Paulina Golinska</i></p> <p>Optimization of Supply Chain via Reduction of Complaints Ratio <i>Marcin Anholcer and Arkadiusz Kawa</i></p>
11:00 - 11:30	Coffee and Tea Break
11:30 - 12:45	<p><b>Main Track 9: Multi-Agent Systems in Distributed Environments</b> <b>Chair: Prof Frantisek Capkovic (<i>Slovak Academy of Sciences, Slovakia</i>)</b> <b>Room: Conference hall (ground floor)</b></p> <p>Multi-agent systems in distributed computation <i>Maja Stula, Darko Stipanicev, and Ljiljana Seric</i></p> <p>Effective Graph Representation for Agent-Based Distributed Computing <i>Adam Sedziwy</i></p> <p>Multi-Agent Based Software Licensing Model for Embedded Systems <i>Goran Horvat, Damir Sostaric, and Drago Zagar</i></p>
11:30 - 12:45	<p><b>Main Track 10: Conversational Agents and Agent Teams</b> <b>Chair: Prof Paulina Golinska (<i>Poznan University of Economics, Poland</i>)</b> <b>Room: Room no 4 (first floor)</b></p> <p>Deciding Roles for Efficient Team Formation by Parameter Learning <i>Dai Hamada and Toshiharu Suagwara</i></p> <p>On the Tight Formation for Multi-Agent Dynamical Systems <i>Ionela Prodan, Sorin Olaru, Cristina Stoica, and Silviu-Iulian Niculescu</i></p> <p>Dynamic Customization of a Remote Conversation Support System: Agent-Based Approach <i>Masaya Morita and Kazuhiro Kuwabara</i></p>
12:45 - 13:00	<p><b>Plenary Session &amp; Closing Ceremony</b> <b>Room: Conference hall (ground floor)</b></p>

## Social Events

### **Monday, June 25 at 18:00**

#### Guided Old City Tour & Welcome Reception

The best way to explore Dubrovnik Old City and to learn more about the fascinating Dubrovnik history is by taking a guided walking tour.

The organized tour will start on Monday, June 25 at 18:00h and will take about 2 hours. After the tour, the conference Welcome Reception will be held at restaurant Klarisa in the historic heart of Dubrovnik, near the entrance to the Old City.



Restaurant Klarisa

### **Tuesday, June 26 at 19:00**

#### Conference Dinner

The Conference Dinner will take place at restaurant Dubravka located on the square Brsalje at the entrance to the Old City of Dubrovnik. The restaurant is surrounded by three of the most beautiful town fortifications - Lovrijenac, Bokar and Minčeta and the view that stretches from the restaurant terrace over the high seas is simply breathtaking.



Restaurant Dubravka

### **Wednesday, June 27 at 15:00**

#### **Excursion to Ston (optional)**

After the conference a bus tour (with an English tour guide) will be organised for the KES-AMSTA-2012 participants to colourful places Trsteno and Ston. The excursion departs at 15:00h and includes a drive along the Adriatic coast, through scenic landscapes where the first stop will be in the small village of Trsteno. At over 500 years old and housing more than 300 species of exotic tree and plant life, the Trsteno's renowned arboretum is widely acknowledged as one of the finest gardens in Europe. After an exploration of the botanical garden, the tour moves to Ston which was among the first towns in Europe to be built according to a definite urban plan. This historic town is surrounded by a 5km long fortified wall which was originally built in 1358 to protect the town. The walk around the City Walls is followed by a visit to the Ston's Saltpans. The excursion also includes a dinner at the restaurant Koruna. Return to Dubrovnik is planned around 22:00h.

Price of the excursion: 290 - 340 HRK (40-45 €) per person depending on the number of participants interested in the excursion. The price includes bus transfer, entrance tickets, guided tour and dinner.

The participants should apply by e-mail to Mrs. Tanja Grzilo (tanja.grzilo@caas.unizg.hr), subject: "KES-AMSTA Excursion" and send a list of people interested in the excursion. Application deadline is Wednesday, June 20. In order for the excursion to take place a minimum of 20 applications is required. The excursion fee is paid at the conference registration desk.



## **Additional Information**

### **Conference help desk**

Opening hours:

June 25, 8.00 - 17.30

June 26, 8.00 - 16.00

June 27, 8.30 - 13.00

### **Travel to Dubrovnik**

Traveling by plane is a convenient and comfortable way to visit Dubrovnik. Dubrovnik Airport (DBV), also referred to as Čilipi Airport, is the international airport of Dubrovnik, Croatia. Many European companies have regular flights to Dubrovnik or Zagreb. The Croatian national carrier, Croatia Airlines, provides regular flights from Zagreb to Dubrovnik. Dubrovnik airport is located about 18 km from Dubrovnik's city center. From the airport you can take a bus or a taxi.

The Atlas buses depart upon arrival of every scheduled flight and for 35 HRK (5 EUR) take you to the Old Town (Pile gate, 1st bus stop). If you are staying in CAAS Residence this is most suitable option. Hotel Lero is near the Pile gate, but there is a 20 minute walk, so you can take additional bus from there. If you are staying in hotels Neptun or Ariston, you should also get off the bus at Pile station, and then take the local bus to Babin Kuk, where these hotels are located.

Taxi price from airport to the city is approximately 35-50 EUR.

### **Accommodation**

Accommodation at a conference rate has been arranged with the CAAS Residence (collocated with the conference venue) as well as with hotels Lero, Neptun and Ariston.



**KES-AMSTA 2013**

#### IMPORTANT DATES

**15 November 2012:**

Papers Submission

**01 February 2013:**

Acceptance Notification

**25 February 2013:**

Final Paper due

#### ORGANIZED BY



**International**



**HUE UNIVERSITY**

#### GENERAL CHAIRS

Prof. Dr. Sc. Ngoc Thanh NGUYEN  
Wrocław University of Technology,  
Poland

Prof. Dr. Manh Thanh LE  
Hue University, Vietnam

#### ORGANISING CHAIRS

Prof. Dr. Huu Hanh HOANG  
Hue University, Vietnam

#### GENERAL QUERIES

For general enquiries about the  
conference, please contact:  
amsta-13@kesinternational.org

## 7<sup>th</sup> International KES Conference on Agents and Multi-agent Systems – Technologies and Applications

*Hue City - Vietnam, 28 — 30 May 2013*

KES-AMSTA-2013 is an international scientific conference for research in the field of agent and multi-agent systems. The aim of the conference is to provide an internationally respected forum for scientific research in the technologies and applications of agent and multi-agent systems.

Agents and multi-agent systems are related to a modern software paradigm which has long been recognized as a promising technology for constructing autonomous, complex and intelligent systems. This conference will provide an excellent opportunity for researchers to discuss modern approaches and techniques for agent and multi-agent systems and their applications.

KES-AMSTA-2013 is organised by **KES International** and Hue University, Vietnam. The conference will take place in Hue City, one of the most prominent tourist destinations in Vietnam. Hue City is a city with a unique political and cultural history (the imperial capital of Vietnam, the Nguyen Dynasty, from 1802–1945), and world famous monumental heritage and beauty (inscribed on the UNESCO World Heritage List). It is located in the middle of Vietnam, and in the World Heritage Road of Vietnam.

The conference will consist of keynote talks, oral and poster presentations, invited sessions and workshops, on the technologies and applications of agent and multi-agent systems, as well as intelligent systems in the field of social networks, self-organisation and trust. It will provide excellent opportunities for the presentation of interesting new research results, modern approaches and discussion about them, leading to knowledge transfer and generation of new ideas.

### SCOPE

#### Agent Systems

Formal models of agency. Agent architectures. BDI architecture. Learning, evolution, and adaptation. Perception and action. Communication: languages, semantics, pragmatics, protocols, and conversations. Knowledge representation. Computational complexity. Autonomous or humanoid robots. Social robots and robot teams. Autonomy aspect. Cognitive models, including emotions and philosophies. Embodied and believable agents. Emergent behaviour. Ontologies.

#### Multi-agent Systems

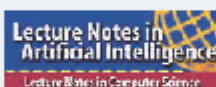
Cooperative distributed problem solving. Task and resource allocation. Mechanism design, auctions, and game theory. Modelling other agents and self. Multi-agent planning. Negotiation protocols. Multi-agent learning. Conflict resolution. Trust and reputation management. Privacy, safety and security. Scalability, robustness and dependability. Social and organizational structures. Verification and validation. Novel computing paradigms. Brokering and matchmaking. Agent-

oriented software engineering. Mobile agents. Performance, scalability, robustness, and dependability. Verification and validation. E-business agents. Pervasive computing. Privacy, safety, and security.

#### Tools and Applications

Simulation systems. Web services and service-oriented computing. Social systems. Autonomic computing. Case studies and reports on deployments. Computational infrastructures. Information retrieval. Semantic web. E-learning systems. E-institutions. E-commerce.

### PUBLICATION



The conference proceedings will be published by Springer-Verlag in Lecture Notes in AI as part of the LNCS/LNAI series. When formatting papers, please refer to the Springer-Verlag web site, and strictly follow the Instructions to LNCS Authors.

Papers are required in PDF format for review purposes, but authors are required to upload editable word-processor files (LaTeX or MS Word) at the end of the review process (see the Springer web site to find out about the files required).

Please note that the required paper length is 10 pages in Springer format. Papers longer than this may be subject to an additional charge. Papers much longer or shorter than the required length may be rejected, at the decision of the organisers.

<http://amsta-13.kesinternational.org>

Invitation: Book chapters are invited

Studies in Computational Intelligence

Editors:

Professor Dr Mirjana Ivanović,  
University of Novi Sad, Faculty of Sciences,  
Department of Mathematics and Informatics

[http://perun.dmi.rs/index.php?option=com\\_content&task=view&id=68&Itemid=41](http://perun.dmi.rs/index.php?option=com_content&task=view&id=68&Itemid=41)

Professor Dr Lakhmi Jain,  
University of South Australia,  
School of Electrical and Information Engineering

<http://www.unisa.net.unisa.edu.au/staff/Homepage.asp?Name=lakhmi.jain>

*Tentative book title:*

**e-Learning Paradigms and Applications**

*Subtitle:*

**Agent-based Approach**

Book Chapters are invited on all aspects of e-Learning Paradigms and Applications using Agent-based approach.

There is no limit on the length of chapter as it will depend on the topic.

*Important Dates:*

15 July, 2012 — Please submit a summary (one page approximate)  
of your proposed chapter as well as your brief resume.  
Co-authored chapters are also welcome.

30 July, 2012 — Acceptance decision

30 December, 2012 — Draft chapter due

28 February, 2013 — Final Decision and Feedback to the authors

30 April, 2013 — Camera ready chapter due

*Editorial Contact:*

Professor Dr Mirjana Ivanović  
University of Novi Sad, Faculty of Sciences,  
Department of Mathematics and Informatics,  
Trg Dositeja Obradovica 4, 21 000 Novi Sad, Serbia  
E-mail: [mira@dmis.uns.ac.rs](mailto:mira@dmis.uns.ac.rs)



Springer

