



ISCRAM 2018

Rochester Institute of Technology
Rochester, NY, USA

WORKSHOP: 1st International Workshop on Intelligent Crisis Management Technologies for climate events - ICMT

**15th International Conference on
INFORMATION SYSTEMS FOR CRISIS RESPONSE AND
MANAGEMENT**

“Visualizing Crisis”

Workshops and Doctoral Symposium May 20th, 2018

Conference May 21nd-23th, 2018

Rochester New York - USA
Rochester Institute of Technology (RIT)
<https://iscram2018.rit.edu/>

INTRODUCTION TO THE WORKSHOP

Organized by the Rochester Institute of Technology (RIT) on behalf of ISCRAM association.

Climate conditions are expected to change worldwide. This includes an increase in intensity and frequency of (among others) extreme weather events. As a result, flooding, droughts, fires, etc. will become even more common in the future. No matter the cause and kind, all major disasters require an immediate, comprehensive, and professional response. Major disasters create extreme stresses on every member of a community. Until now, a splintered structure dominated the emergency management landscape, leaving each community or county responsible for preparing for the disasters. This fragmented system often created significant risk exposures to communities, and limited resources resulted in significant loss of life and property. Given the advancements of Information Technologies lately, the disaster planners and responders should be able to exploit and use a wide variety of ICT technologies and tools to assist them during an incident. EU research is rather interested in this domain, which is also reflected by the three co-funded projects beAWARE¹, I-REACT² and ANYWHERE³.

ICMT welcomes novel research work that deals with new technologies to support rapid and efficient response to and management of the climate disasters including (but not limited to) fires, floods, earthquakes and heatwaves. The objective of the workshop is twofold. First, the workshop aims at presenting the most recent methods for forecasting, early warning, collection, processing, and transmission of the emergency data, analysis of multimodal data and coordination between the first responders and the authorities. Second, it aims at bringing together practitioners and researchers, both from crisis management and technical domains, to share ideas and experiences in designing and implementing novel intelligent techniques and tools to support crisis management.

WORKSHOP TOPICS

- *Information systems for crisis planning*
- *Information systems for crisis response*
- *Nowcasting and forecasting models*
- *Multirisk models*
- *Multimedia analysis for crisis management*
- *Data fusion, representation, and visualization*
- *Decision support systems*
- *Early warning systems*
- *Social Media for Crisis management*
- *Crowdsourcing systems and Gamification strategies for Disaster Risk Reduction (DRR)*
- *Human-centered design for Disaster Risk Reduction (DRR)*
- *Accurate outdoor and indoor positioning technologies for emergency services*
- *Virtual and Augmented Reality applications for Emergency Response*
- *UAV applications and technologies for emergency services*
- *Big Data Analytics and architectures for emergency management*

PRESENTERS RECRUITEMENT

ICMT is co-organised by members of three large scale European research projects beAWARE, ANYWHERE and I-REACT that exhibit research in the area of technologies for crisis management for extreme climate events. Due to the dissemination policies of the three projects, a significant number of partners of the consortia is expected to physically

¹ <http://beaware-project.eu/>

² <http://www.i-react.eu/>

³ <http://anywhere-h2020.eu/>

participate in the workshop and interact with the rest of the participants. We also expect that several researchers involved in all three projects will submit papers to the workshop, together with a significant number of external participants. The visibility of the researchers of the three projects, which are involved in the workshop organisation as organisers and program committee members will allow for attracting a substantial number of papers (around 15 paper submissions are expected). Although this is the first edition of ICMT we expect a high participation also due to the high interest of the topics that are interesting for researchers in the broad area of technologies for crisis management. Finally, we are also planning to organize invited talks by a high profile speakers from the main conference.

WORKSHOP STRUCTURE

ICMT will be a full day workshop. We expect to have three main sessions: the first focusing on technological trends of crisis management and state of the art technologies, the second will introduce the novel works that are proposed and the third will be an interactive session including a panel discussion with experts and the audience.

In order to stimulate the discussion on the state of the art, challenges and future trends of crisis management for climate events, the first two sessions of the workshop are dedicated to present several existing practices, tools, methods and solutions. As a starting point an invited talk and the three solutions from beAWARE, I-REACT and ANYWHERE will be demonstrated.

During the second session, the workshop participants will present their solutions and experiences in an app. 15 minutes presentation including a demonstration of a particular method, tool or use case. We expect at least 6 oral presentations and 2-4 posters.

The third part of the workshop is an interactive session where the broader audience gets the opportunity to have a deeper look into the presented solutions. The solution providers get the opportunity to answer individual questions in face-to-face discussions. Then a discussion regarding the feedback on the presented tools, the broader experiences of the audience and the question which challenges and trends can be identified in the domain will be take place.

WORKSHOP CHAIR AND CO-CHAIR

	<p>Anastasios Karakostas*</p> <p><i>akarakos@iti.gr</i></p> <p>Information Technologies Institute - Centre for Research and Technology Hellas</p> <p>Dr. Anastasios Karakostas (m) received the Degree in Computer Science and the PhD degree in Computer Science Aristotle University of Thessaloniki Greece. He is a Researcher with ITI- CERTH. Currently, he is scientific manager of the H2020 DRS project beAWARE. beAWARE proposes an integrated solution to support forecasting, early warnings, transmission and routing of the emergency data, aggregated analysis of multimodal data and</p>
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management the coordination between the first responders and the authorities.

He has also participated in numerous European and national research projects and is the author of more than 60 publications in refereed journals and international conference. His research interests include decision support systems, semantic multimedia analysis, ontologies and semantic information modeling and reasoning. He has served as a reviewer in international Journals such as Computers and Education, IEEE Transactions on Learning Technologies and as Technical program committee in well reputed conferences and workshops such as CSCL, IEEE ICALT.

He has been one of the organizers of the IEEE International Conference on Intelligent Networking and Collaborative systems (INCoS 2010) and 2018 IEEE Image, Video, and Multidimensional Signal Processing (IVMSP) Workshop.

Anastasios Karakostas will be present at the ISCRAM conference and the ICMT workshop.



Claudio Rossi
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 Istituto Superiore Mario Boella

Claudio Rossi graduated at INPG - Institut National Polytechnique de Grenoble and at Politecnico di Torino with a double bachelor degree in Information and Communication Technology. In 2005 he obtained a Master of Science in Electrical and Computer Engineering from the University of Illinois at Chicago (UIC) and in 2006 he graduated from Politecnico di Torino with summa cum laude degree in Electronics. Between September 2006 and October 2007, he worked at Consorzio per il Sistema Informativo (CSI) as software analyst. From October 2007 to June 2010 he worked as a Project Manager at Fiat Group Automobiles (FGA). He was with the International Manufacturing Engineering team and with the World Class Manufacturing Headquarter. He led the realization of a new passenger car plant in India and the development of new standards. Fom June 2010 to July 2014 he worked for the Telecommunication Group (DET) of Politecnico di Torino as project manager, software analyst, programmer and system admin, mainly focusing on the realization of a novel self-hosted peer-to-peer social network, and on interference estimation and classification using innovative algorithms and Software Defined Radios. From September

	<p>2012 to March 2013 he was an intern at Telefonica I+D working on bandwidth aggregation techniques between wired and cellular networks. In Dic 2013 he obtained from Politecnico di Torino his PhD with the thesis titled "Cooperation Strategies for Enhanced Connectivity at Home", proposing several techniques to overcome connectivity issues, boost connection speed, achieve energy efficiency in wireless residential networks. He is now a researcher and project manager in the Microsoft Innovation Center at ISMB, focusing on mobile sensing, cloud-based web applications, wireless networks, and data analysis.</p> <p>He was the deputy project coordinator and technical lead of the FLOODIS project (http://floodis.eu/, FP7-SPACE-2013-1) and he currently has the same role in the I-REACT project (http://www.i-react.eu/, DRS-1 H2020). Both projects delivers novel services for emergency management involving the coupled use of Earth Observations (EO), nowcast and forecast models, gamified crowdsourcing, and social media. He is also the technical leader of other H2020 projects on agri-food (e.g. VISCA) and was involved in many regional and interregional research projects.</p> <p>He has authored more than 30 related scientific journal, conference and book chapter publications. He has served as a reviewer in international Journals such as Concurrency and Computation: Practice and Experience, IEEE Transactions on Multimedia and as Technical program committee in well reputed conferences and workshops such as IEEE ICNC, IEEE CLOUDTECH, ACM I-TENDER (co-located with ACM CoNEXT), IEEE Data Science for Emergency Management (co-located with IEEE International Conference on Big Data),</p>
	<p>Prof. Daniel Sempere Torres</p> <p><i>sempere@crahi.upc.edu</i></p> <p>UPC Civil Engineering School</p> <p>Professor of environmental engineering at the Civil Engineering School of the UPC, and Director of CRAHI. More than 15 years of experience on hydrological modelling and on precipitation estimation by radar. Coordinator of more than 10 Spanish projects related to water management and floods and leader of the Spanish teams in a number of EC RTD projects (HYDROMET, ENV4-CT96-0290; MITCH, EVK2-1999-00228; VOLTAIRE, EVK2-CT-2001-00273; FLOODSITE, GOCE-CT-2004-505420; HYDRATE, GOCE-CT-2005-037024; and the ERA-</p>

	<p>NET CRUE project EWASE, ERAC-CT-2004-515742). Chairman of the IV European Conference on radar in Meteorology and Hydrology (2006), member of the Radar Committee of the American Meteorological Society (2005-2007) and presently member of the scientific organizing committees of ERAD 2004-2010. AMS Radar Conference 2005-2007, and WRaH 2004-2008. Member of the Hydrology Section of the Spanish CEGG as well as of the editorial board of the journal Ingenieria Hidráulica en México, of the Consulting Council of the Meteorological Service of Catalunya, and Spanish representant in the COST 731 action. In 2001 obtained the Research Distinction of the Catalunya Governement, what entitles him to be free of academic duties and be fully devoted to research.</p>
	<p>Stefanos Vrochidis</p> <p><i>stefanos@iti.gr</i></p> <p>Information Technologies Institute - Centre for Research and Technology Hellas</p> <p>Dr. Stefanos Vrochidis received the Diploma degree in Electrical Engineering from Aristotle University of Thessaloniki, Greece, the MSc degree in Radio Frequency Communication Systems from University of Southampton and the PhD degree in Electronic Engineering from Queen Mary University of London. Currently, he is a Senior Researcher with ITI-CERTH and co-founder of CERTH-ITI's spin off Infalia. His research interests include semantic multimedia analysis, indexing and retrieval, data mining, web and social media monitoring, as well as security applications. Currently, Stefanos Vrochidis is the deputy Project Coordinator of H2020 SEC BeAWARE and participates in H2020 SEC TENSOR, H2020 SEC ROBORDER and in other EU research projects. Stefanos Vrochidis has been among the organizers of Environmental Multimedia Retrieval 2014 (EMR) and EMR 2015 workshops held in ICMR 2014 and 2015 respectively. He was also member of the organization team for the European Summer School in Information Retrieval (ESSIR 2015) and the International Workshop on Multimedia Forensics and Security 2015 (MFSec) and MFSEC 2017 in ARES 2015 and ICMR 2017 respectively and co-organizer of the CyberDD2017 (1st Intern. Workshop on Cyber Deviance Detection) collocated with WSDM 2017. Dr. Vrochidis was a guest editor in a special issue on Environmental Information Retrieval hosted by the Multimedia Tools and Applications Journal focusing on</p>

multimedia retrieval for environmental applications. He has authored more than 100 related scientific journal, conference and book chapter publications. He has served as a reviewer in international Journals such as Multimedia Tools and Applications, IEEE Transactions on Multimedia and as Technical program committee in well reputed conferences and workshops such as ICMR, ACM Multimedia, ICME, ECIR, ICIP, CIKM and FOSINT.

**Corresponding Chair*

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