



**Proceedings of the International Emergency Management Society  
(TIEMS)  
Conference, Berlin 2013**

**“Public Alerting and Social Media during Crisis and Disasters”**

**October 30 - November 1, 2013  
Berlin, Germany**

**Organised by:**

TIEMS, The International Emergency Management Society  
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Executive Office Postal Address: Østvangveien 29, 0588 Oslo, Norway

**and**

Fraunhofer Institute for Open Communication Systems FOKUS

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**Editors:**

***Snjezana Knezic***

Full professor at University of Split, Split, Croatia

***Meen Poudyal Chhetri***

*President of Nepal Center for Disaster Management, Lalitpur, Nepal*

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## **Welcome to Berlin from TIEMS President**

In a time of increasing number and severity of disasters, global cooperation and coordination are more vital than ever before. By working together and sharing of experiences and exchange of views among the experts of different countries we can learn from each other to develop better methods and systems and advocate for better policies in emergency and disaster management to be standardized and implemented all over the world. TIEMS conferences are such platforms where all stakeholders can meet and exchange experience and views and focus on different globally important subjects in emergency and crisis management. TIEMS conference in Berlin, Germany 30<sup>th</sup> October – 1<sup>st</sup> November 2013 is focusing on public alerting and use of social media during crisis and disasters. This gives the attending international experts in emergency and crisis management the opportunity to meet and exchange experiences and hopefully find better solutions which can improve the international preparedness for disastrous events.

TIEMS is a Global Forum for Education, Certification and Policy in Emergency and Disaster Management and is dedicated to developing and bringing the benefits of modern emergency management tools and techniques and best practice to society for a safer world, through exchanging information of the use of innovative methods, technologies and operations to improve society's ability to avoid, mitigate, respond to and recover from natural and technological disasters. TIEMS provides a platform for all stakeholders within the global emergency and disaster management community to meet and network, learn about technologies and operational methods, and exchange experience on best practice, and influence policy makers worldwide to improve global cooperation and establish global standards within emergency and disaster management.

TIEMS always cooperate locally when doing international events, and the Berlin local host Fraunhofer, with its representatives, Michael Klafft and Monika Pinkas, have done impressive preparations of the event together with TIEMS, and recruited sponsors, exhibitors and presentations of high quality, seeing to it that we have a high quality program with key international speakers and exhibitors. The event is expected to be visited by around 100 participants from all over the world. The participants will be having a comprehensive program of around 35 important presentations. The above technical program integrated with relaxing social events, showing the German culture on its best, will certainly make the 3 days at TIEMS Berlin conference 2013 a memorable event.

The papers will be presented in the conference proceedings, and should give a broad international view of public alerting and use of social media during crisis and disasters in an international perspective. With these proceedings TIEMS like to stimulate to a continuous ongoing global dialogue on these issues, which is important concerning improved preparedness. Many thanks go to Meen Chhetri, Chair of the Paper Review Committee, together with his co-chair Snjezana Knezic and their review team for doing an excellent job with reviewing the papers and preparing and being the co-editors of the proceedings together with the local host representatives.

TIEMS is an international, non political and not for profit NGO and has limited financial resources. TIEMS Berlin conference 2013 had not been possible without the support and co-organizing of the event by Fraunhofer and the EU project Opti Alert Advisory Board member's organizations. TIEMS is very thankful to all of them.

I welcome all participants to TIEMS Berlin Conference 30<sup>th</sup> October – 1<sup>st</sup> November 2013.

Oslo 19<sup>th</sup> September 2013  
K. Harald Drager  
TIEMS President

**The Conference International Program Committee**

**Ulrich Meissen**, Fraunhofer Institute for Open Communication Systems FOKUS, Germany,  
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**Marie-Valentine Florin**, International Risk Governance Council, Switzerland

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**Giuseppe Mario Patti**, Proxima S.r.L, Italy

**Meen Chhetri**, Nepal, Paper Review Chair and Proceedings Editor

**K. Harald Drager**, TIEMS President, Norway

## Papers

### Keynotes

Marie-Valentine Florin, International Risk Governance Council, Switzerland

[\*Social Media for Crisis Communications: Opportunities and Challenges\*](#)

Gideon For-Mukwai, XtraMile Solutions, Singapore

[\*Global Public Sphere 2.0: Lessons You Must Learn to Survive and Thrive\*](#)

Kerstin Dressel, Petricia Pfeil, sine-Institut gGmbH, Germany

[\*Public Alerting by Social Media and Beyond – Advantages and Challenges of Social Media Compared to More Traditional Alerting Tools\*](#)

### Session 1: Alerting Methods and Techniques: Current State

Matthias Müllner

[\*Siren Warning Systems: Key Elements of Public Warning\*](#)

Cristina Parraga Niebla, Joseph Muna, Sébastien Grazzini and Ralf Pfeffer

[\*A Complete Communication Framework for Public Alert: the Alert4All Approach\*](#)

### Session 2: Multi-Channel Approach in Public Alerting

Willi Wendt, Sigmund Kluckner and Wolf Engelbach

[\*Agent Based Simulation of Warning Channel Impacts\*](#)

Michael Klafft

[\*Modelling Alert Message Dissemination via Multi-Channel Electronic Communication Systems\*](#)

### Session 3: Case Studies for Public Alerting

Sonja Krawczyk

[\*Development of Local Level Threshold Terms for the Risk Analysis of Region Hannover\*](#)

### Session 4: Evacuation and Emergency Communication

Sajad Ganjehi, Behrouz Bavandpourigilan and Mohamadjavad Khojasteh

[\*Analysis of Security Parameters on Choose the Best Directions of Relief and Rescue\*](#)

Carol Allers and Jose Correira

[\*Communication Preparedness for Planned/Emergency Load Shedding\*](#)

## **Session 5: Technology Trends Relevant to Crisis Communication & Management**

Samantha Ridler

[\*An 'App' for everything; But can Apps for Disaster save lives?\*](#)

Joel Brynielsson, Fredrik Johansson, Carl Jonsson, Sinna Lindquist, Maribel Narganes Quijano and Anders Westling

[\*A Screening of New Media Tool for Crisis Management\*](#)

## **Session 6: Between Risk and Opportunity – Social Media in Crisis Communication**

Kyle Clayton, Kristin Samulkewitsch

[\*Communication Transformed: Social Media and Disaster Communication in the Modern Age\*](#)

Florian Roth, Stefan Brem

[\*Opportunities and Risks of Social Media in Disaster Management - A Swiss Perspective\*](#)

## **Session 7: Social Media Usage during Times of Crisis**

Hermann Huber, Georg Neubauer, Andrea Nowak, Joachim Klerx, Bettina Jager, Klaus Mak and Christian Meurers

[\*Social Media Information Analysis for Crisis and Disaster Management\*](#)

Jayesh Wadhvani and Tore Andre Nilsen

[\*Intelligent Alerting and Response using Social Media as a Software Sensor\*](#)

Tom Duffy, David Merrick and Kristin Samulkewitsch

[\*SMACR: Social Media Aggregation for Crisis Response\*](#)

Vitaveska Lanfranchi, Fabio Ciravegna, Uta Wehn de Montalvo, Simon McCarthy and Rodrigo Carvalho

[\*Social Media and Sensors for Citizens Engagement and Cooperative Situation Awareness\*](#)

## **Session 8: Special Cases for Social Media Use in Crisis Communication**

Eli Rohn and Connie White

[\*Social Media Usage in Man-Made Crisis: Offensive Information Warfare Revisited\*](#)

Alex Fullick

[\*TELL ME NOW!! How to Leverage Social Media for Business Continuity & Disaster Planning Programs\*](#)

Colum Donnelly, Massimiliano Mesenasco and Paola Valentini

[\*Social Media & Human Factor in time of Crisis: Making the Difference?\*](#)

## **Session 9: Integration of Public Alerting and Social Media**

Morten Gustavsen

[\*How can Social Media be a Reliable Added Value together with other Warning Channels\*](#)

Luis Teixeira, Barbara Manso, Hanna-Miina Sihvonen, Laura Hokkanen and Thomas Delavallade

[\*THEO – A Multi-dimensional Analytical Framework to Address the Use of New Communication / Social Media in Crisis Situations\*](#)

### **Posters:**

Seyed Abolfazl Mohammadi, Nasser Mehrdadi and Bahreh Ghods

[\*Studying of Information Technology & Media in Crises Management\*](#)

Seyed Abolfazl Mohammadi, Nasser Mehrdadi, Gholamreza Fathipirboudagh, Bahareh Ghods and Mehrdad Nazariha 39

[\*The Role of Media in Various Stages of Flood Crises\*](#)

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