Official Inauguration of the Lab and Office Building of the Physikalisch-Meteorologisches Observatorium Davos/World Radiation Center PMOD/WRC

WERNER SCHMUTZ, Director, Physikalisch-Meteorologisches Observatorium/World Radiation Center PMOD/WRC, Davos, Switzerland

WALTER J. AMMANN, President Swiss Research Institute for High Altitude Climate and Medicine, Davos, Switzerland

CHRISTIAN PLÜSS, Director, Swiss Federal Office of Meteorology and Climatology, Zurich, Switzerland

EUGEN ARPAJUS, Director, Economic Development and Tourism Agency, Canton of Grisons, Chur, Switzerland

RETO DÜRST, Representative, Government of Davos, Davos, Switzerland

Keynote Lecture: GHASSEM ASRAR, Director, World Climate Research Programme, WMO, Geneva, Switzerland

Cocktail Reception

Welcome and Introduction

WALTER J. AMMANN, President, Global Risk Forum GRF Davos, Davos, Switzerland

JAMES BOHLAND, Co-Director, Global Forum on Urban and Regional Resilience & Interim Vice President, Virginia Tech’s National Capital Region, Arlington, USA

Keynote: “Creating a Culture of Resiliency”

CHARLES STEGGER, President, Virginia Tech, Blacksburg, USA

International Dimensions of Resiliency: Goals for the Future

Resilience is shaped by the context of places. Thus, efforts to create resilient communities will vary across the diverse cultural, economic, environmental and social dimensions of nation states. Also, the type and scope of risks and disasters vary globally and change over time. Recent experiences have also clearly shown that disasters don’t stop at borders and the need for trans-border systems’ resiliency has become obvious. So it is imperative that each country and region have implemented resiliency efforts specific to their context. Presentations and discussions will focus on what should be the goals of a resilient country, region or community and on how to reach agreements on an international level. In his keynote, Dr Saifur Rahman will elaborate on international perspectives and goals in resiliency.

Keynote: “International Goals for Resiliency”

SAIFUR RAHMAN, Director, Advanced Research Institute, Virginia Tech, National Capital Region, Arlington, USA

Panel I: “International Disaster and Risk Reduction, Sustainability and Resiliency”

This first panel will explore what those goals might entail, and how international organizations can provide leadership in establishing useful goals, standards and indicators to address resiliency in the context of risk reduction and disaster management, and on how to link resiliency and sustainable development?

Chair: WALTER AMMANN, President and CEO, Global Risk Forum GRF Davos, Davos, Switzerland
Building a National Strategy for Addressing Resiliency

The responsibility for enhancing the resiliency of its communities falls initially on national governments although risks vary regionally within a nation. Regional or local efforts must be contextualized to be appropriate to time and place. It is national governments’ responsibility to craft policies and approaches that will reduce risks to their populations, improve the ability of communities to adapt to major events, and continue to grow and prosper in new post event norms. In her keynote, Dr Lauren Alexander Augustine will outline a national strategy for the United States.

Keynote: "The National Imperative"
LAUREN ALEXANDER AUGUSTINE, Associate Executive Director, Division on Earth and Life Studies, National Research Council of the U.S. National Academy of Sciences, Washington D.C., USA

14:15 - 14:45

Panel III: “Appropriateness of Resiliency as a National Strategy”
The panel will discuss the role of resiliency in national strategies to reduce risks and manage disasters and on how to focus national strategies, engage citizens in shaping them, and to create implementation plans that still allow to adapt to local conditions.
Chair JACK HARRALD, Associate Director, Global Forum on Urban and Regional Resilience, Virginia Tech, Blacksburg, USA

Speakers
SIMIN DAVIDI, Professor, Environmental Policy and Planning, Newcastle University, Newcastle, UK
JOAO RIBEIRO, General Director of the National Disasters Management Institute (INGC), Maputo, Mozambique
STEFAN BREM, Head of Risk Analysis and Research Coordination, Federal Department of Defence, Civil Protection and Sport, Federal Office for Civil Protection, Berne, Switzerland

14:45 – 16:00

Public and Private Sectors Resiliency Approaches
The session will focus on good practice example and on actions required to advance resiliency from goals and strategies to actions on all levels. In his keynote, Martin Powell will address challenges and opportunities in critical infrastructure sectors’ collaborations and on how the private and public sectors can collaborate to enhance the resiliency of both sectors.

Keynote: "The Resilient City of the future – a public and private affair!"
MARTIN POWELL, Head of Urban Development, Siemens AG, London, UK

8.30 – 9.00

Panel V: “Building Critical Public Private Sector Partnerships”
Panel V will provide insight in practical experiences in different critical infrastructure sectors and outline the potential in public-private partnerships for enhancing resiliency. Prerequisites for successful cooperation and some of the problems that must be overcome in creating effective collaborations will be identified.
Chair STEFAN BREM, Head of Risk Analysis and Research Coordination, Federal Department of Defence, Civil Protection and Sport, Federal Office for Civil Protection, Berne, Switzerland

Speakers
MARTIN POWELL, Head of Urban Development, Siemens AG, London, UK
JOHN ZEPPOS, Head Business Continuity Management, Cosmote Telecom, Athens, Greece
SUSANNE KRINGS, German Federal Office of Civil Protection and Disaster Assistance, Bonn, Germany

9.00 – 10.15
AGENDA

ROLAND FRIEDE, Senior Risk Engineer, Swiss Re Ltd., Zurich, Switzerland

CHLOE DEMOYESKY, Director Global Operations, DRI International and Associate Business Continuity Professional (ABC), USA

10.15 – 10.45

Break

Scientific Approaches to Resiliency
Moving resiliency forward requires science that can better ground action in theory. In his Keynote Address, State Secretary Mauro Dell’Ambrogio will highlight the importance of evidence based science to be key for society to become more resilient.

Dr Dirk Helbing will provide insight into a systems approach in resiliency that will help to focus future scientific efforts.

The subsequent panel VI provides both a critique of a systems approach and offers their perspectives on the scientific gaps in resiliency research, and on how to best address them. Setting new directions in research is a desired outcome of the panel, thus contributing to set the research agenda for the post Hyogo Framework for Action (HFA2) period.

10.45 – 11.15

Keynote: “The System Approach in Resiliency”
DIRK HELBING, Professor, Chair of Sociology, in particular of Modeling and Simulation, ETH Zurich, Zurich, Switzerland

11.15 – 12.30

Panel VI: “Creating a Scientific Base for Resiliency – the Road to HFA2”
Chair CHARLES STEGER, President, Virginia Tech, Arlington, USA
Speakers CHRIS BARRETT, Virginia Bioinformatics Institute, Virginia Tech, Arlington, USA
REGINALD DESROCHES, Professor, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, USA
MERLE MISSOWIT, Fraunhofer Institute for Technological Trend Analysis, Euskirchen, Germany
DENNIS WENGER, National Science Foundation, Washington D.C., USA

12.30 – 12.45

Signing Memorandum of Understanding: Virginia Tech and GRF Davos
CHARLES STEGER, President, Virginia Tech, Arlington, USA
WALTER AMMANN, President and CEO, Global Risk Forum GRF Davos, Davos, Switzerland

12.45 – 13.45

Lunch

Fostering Resiliency Through Social Networks
The session highlights the importance of social networks in building resilient communities. In his keynote, Dr Ortwin Renn provides context for understanding the importance of social networks and social capital.

Panel members expand on current research in social capital that bears on community resilience. Of particular importance is whether directed government actions can enhance the formation and retention of social capital, or is social capital the consequence of a long history of trusted relationships that cannot be stimulated by public actions.

13.45 – 14.15

Keynote: “Social Capital and Resiliency”
ORTWIN RENN, Professor and Chair, Environmental Sociology and Technology Assessment, University of Stuttgart, Stuttgart, Germany

14.15 – 15.30

Panel VII: “Resiliency and Social Systems”
Chair LIESEL RITCHIE, Assistant Director, Natural Hazards Center, University of Colorado, Boulder, USA
Speakers DANIEL ALDRICH, Associate Professor, Purdue University and Fulbright Research Professor, Tokyo University, West Lafayette, USA
DILANTHI AMARATUNGA, Professor, School of the Built Environment, University of Salford, Salford, UK
KEITH SHAW, Professor of Politics, North Umbria University, Newcastle, UK

15.30 – 16.00

Break

Goverance and Resiliency
The session focuses on the important role of good governance in implementing resiliency. In his keynote, Dr Carlo Jaeger will outline the contextual framework of good governance and resiliency.

A central question for the panel will be whether governments are willing and able to implement the policies required for fostering resiliency. Also, what roles, if any, can we expect from non-profit organizations such as professional associations to enact standards that become part of our planning and building codes for the future. Included in the panel’s discussions are issues pertaining to barriers to building resilient communities, the relative roles of local, regional and federal jurisdictions, and an examination of current best practices.

16.00 – 16.30

Keynote: “Governance and Resiliency”
CARLO JAEGER, Chair, Global Climate Forum (Germany), Co-chair of IHDP–IRG, Beijing, P.R., China

16.30 – 17.15

Panel VIII: “Governance and Resiliency”
Chair JACK HARALD, Associate Director. Global Forum on Urban and Regional Resilience, Virginia Tech, Blacksburg, USA
Speakers JAMES KENDRA, Director, Disaster Research Center, University of Delaware, Newark, USA
JACK BROWN, Director of the Arlington County Office of Emergency, Arlington County, USA
BADARU ROUBAN, GRF Davos Senior Research Fellow, Former Director, UNESCO Unit for Disaster Reduction/ Disaster Risk Management, Paris, France
DEBORAH BROSAN, President, Brosnan Center and Adjunct Professor of Biology Virginia Tech, USA

17.45 – 17.55

Concluding Remarks
Abstracts are listed in alphabetical order by the speaker's surname.

Building Resilience: Social Capital 
Danial P. Aldrich / Panel VII / Friday 14:15

Using micro- and neighborhood-level data from four cities in three nations in the 20th and 21st centuries, this talk will investigate standard theories of recovery and resilience. Bivariate, time series cross sectional, and matching analyses show that more factors such as individual or personal wealth, aid from the government, or damage from the disaster, the strength of social capital best predicts the ability of communities to recover. Social capital works through three main mechanisms: elevating voice and suppressing exit, overcoming collective action barriers, and providing informal insurance. Should social networks prove the critical factor in recovery and after disaster, this suggests a new approach to disaster mitigation for NGOs, individuals, and governments.

[Panel IV: Translating National Strategies to Practice] 
Pedro Basabe / Panel IV / Thursday 16:30

Translating policies to practical disaster risk reduction activities on the ground is a challenge. In Africa thanks to the collaboration and the political will of the Africa Union Commission, Regional Economic Communities, countries, UN partners, donors and scientific-technical community, the continent has a Strategy and Programme for Subregional Risk Reduction which has been approved. However, managing recovery from extreme events, we must manage for unprecedented change, where resilience means different types of communities, supporting ecosystems and biological systems. We must build resilience for an evolving planet, and where there are few experiences to guide us. Scientists, governments, private sector and communities face new challenges and opportunities to find solutions. This presentation will facilitate some examples.

[Panel VIII: Governance and Resilience] 
Jack Brown / Panel VIII / Friday 16:30

Jack Brown will discuss current and planned emergency preparedness initiatives at the local government level designed to foster a resilient community. Engaging the community as individuals, families, businesses and schools provides an opportunity for conversation and planning that does not occur with traditional public outreach efforts. Mr. Brown will discuss ongoing partnerships with academia to blend the academic world and practice and engage in partnership to develop innovative solutions.

Switzerland’s National Strategy for the Protection of Critical Infrastructures: Identification of CIs, Risk Analysis, Protection, and Comprehensive Resilience 
Stefan Brem / Panel III / Thursday 11:45

The presentation covers Switzerland’s national CIP strategy which has been approved in June 2012. The main goal of the strategy is to strengthen the resilience of Switzerland’s critical infrastructures. Resilience is being improved by several measures to strengthen the robustness and flexibility of the critical infrastructure on the one hand as well as to ensure the other hand, to improve cooperation across and beyond critical infrastructure sector in order to strengthen the robustness and flexibility of society, the economy, and the state (federal, cantonal, and municipal level) and ensure that quick and rapid reliefs of goods are available in case of an adverse event. In a second part, particular measures of the strategy are presented such as the identification and prioritisation process of the critical infrastructure objects (like airports, data centres, power substations), the CIP guideline on integral protection concepts, and a process to allocate key resources based on the CI inventory and the specific situational awareness in monitoring. In conclusion, the presentation shows how the challenges and complexities of a comprehensive CIP approach can be addressed by an inclusive, all-hazard risk assessment process.

Resilience as the Transformational Process: Facing the opportunities and challenges when resilience is not a rebound but an evolution. 
Deborah Brosnan / Panel VIII / Friday 16:30

Resilience has its roots in ecological science, where the term describes the ability of biological systems to rebound after a disaster. But sometimes ecosystems do not recover to their previous states. They are transformed by the disturbance into an entirely new system with new rules, structures, and novel forms of resilience. Our systems and communities no longer have the same resilience they once had to withstand weather. In a society managing recovery from extreme events, we must manage for unprecedented change, where resilience means different types of communities, supporting ecosystems and biological systems. We must build resilience for an evolving planet, and where there are few experiences to guide us. Scientists, governments, private sector and communities face new challenges and opportunities to find solutions. This presentation will facilitate some examples.

[Panel V: Building Critical Public Private Sector Partnerships] 
Roland Friedli / Panel V / Friday 9:00

Based on examples of past critical infrastructure failures the challenges of designing, constructing and operating critical infrastructure is illustrated. Interdependencies and cascading effects, the ageing of infrastructure as well as how it works in combination with ecosystems. In a second part the presentation will briefly discuss the (traditional) insurability of critical infrastructure. Long lead times in the planning and construction of infrastructure are seen as an additional factor that increases complexity of reliable infrastructure. The examples presented will be discussing failures or near misses that occurred in the transportation industry (aviation, metro), utilities (generation, distribution, drinking water supply) and the food industry.

In a second part the presentation will briefly discuss the role of the reinsurance and insurance industry in embracing risks from critical infrastructure. Insurance is vital for the erection and operation of critical infrastructure. However there are limitations of insurability: risks with unforeseeable consequences or very new prototype technologies are just two elements which limit the (traditional) insurability of critical infrastructure.

Overcoming National-Regional State Local Tensions in Building Community Resilience 
Serry Galloway / Panel IV / Thursday 16:30

With each new disaster, recognition of the importance of resilience is increasing among not only those directly affected by the disaster but also those who observe the consequences through around-the-clock media coverage. At the national level in the United States, the President has emphasized the importance of building resilience through the issuance of two Presidential Policy Directives that direct federal agencies to take steps necessary to support resilience building in US communities. At the same time, those at local, state and regional levels are working to better understand their responsibilities for resilience. While, clearly, preparedness for response to, and recovery from disasters begins within the community, higher levels of government management control most of the resources (dollars) and develop and implement the laws, regulations and guidelines that shape the actions taken. It is in the execution of resource distribution and program execution these higher levels of decision-making most arise. Several recent studies have pointed to the need for clear delineation of responsibilities and identification of barriers that interfere with resilience action at both state and local levels. Lessons learned during Hurricane Sandy are helping to shape these relationships. While at the President’s level the federal message is clearly “support strategies” getting federal bureaucracies to examine and then streamline procedures to support local primacy, developing ad hoc regional organizations to deal with disasters that have broad geographic consequence, and establishing officials at all levels is not simple and will take time to complete. As long as there is a common belief that the federal government should be supporting and not doing and that local communities must be responsible for actions, moving to a national disaster resilience paradigm will be possible. State and regional efforts following Sandy indicate that it can be done.

Creating an International Partnership for Resilient and Sustainable Infrastructure Development 
Ralph P. Hall / Panel I / Thursday 11:45

The IITK-VT partnership for “Sustainable Infrastructure Development” is an international collaboration between the Indian Institute of Technology in Kanpur (IITK) and Virginia Tech (VT), funded by the Obama-Singh 21st Century Knowledge Initiative (21KCI). The three-year partnership was established to create the next generation of sustainable infrastructure development professionals. At IITK, there is a need to advance the curriculum to provide graduates with the skills necessary to address the significant infrastructure development and management challenges facing urban and rural areas of India. At Virginia Tech, international education of engineering, planning, and public administration graduates to enhance their awareness of global issues and challenges, enabling them to perform in an international setting. The three-year partnership is structured by a series of meetings, workshops, and graduate student exchanges that are linked together by a knowledge platform (www.iitk-vt.com) developed to support virtual and digital exchange of information and data. The infrastructure challenges facing India and the U.S. present opportunities for research collaborations that leverage and advance best practices and theory.

At one year into the IITK-VT partnership, Dr. Hall will reveal the partnership’s progress and vision for how the partnership’s future research could focus on resilient and sustainable infrastructure service delivery. A core argument is that sustainability cannot be achieved without resilience, and resilience cannot be achieved without sustainability. Dr. Hall will also consider whether disruptive innovation is a necessary
condition for both resilience and sustainability. This raises the challenging question of how to stimulate disruptive change in the context of infrastructure systems.

Economics 2.0: Towards a Self-Regulating, Participatory Market Society to Counter Complexity and Extreme Events
Dirk Helbing / Keynote / Friday 10:45

Most 21st century challenges, including climate change, financial stability, or energy supply, cannot be solved by technology alone. They have an important behavioral and social component. Some of these challenges occur even if everybody has good intentions, is well equipped, and highly motivated to do the right things. These problems can be solved by systemic disruption potentially resulting in cascade effects and extreme events.

Typical examples are phantom traffic jams, crowd disasters, financial meltdowns, conflicts, or wars. Moreover, while cooperation in social dilemma situations would be favorable for everyone, it is often unstable. This can lead to "tragedies of the commons". The classical approach to overcome such tragedies is to introduce laws, regulations, punishments, taxes, or other mechanisms, which, in the best case, change the nature of the interaction.

However, so far these mechanisms have largely failed to reduce carbon emissions or overfishing, for example. As an alternative, I will demonstrate the power of a new kind of socio-economic organization, which I will call "socionomy" or "participatory market society", for an innovative kind of socio-economic organization, which I will call "socionomy" or "participatory market society".

The core idea behind socionomy is to: (i) develop an economy and a society that thrive along the coastline; and (ii) to develop resilient communities and ecosystems that can anticipate the level of destruction and risk and can react within less than two years to normalize life there.

India has a bigger challenge in the future particularly with the coastal community. The Indian coastline stretches about 7500 kms on the mainland and about 7900 kms including the two island territories and exhibits most of the known geo-morphology.

The tsunami of the Indian Ocean during December 2004, which exacted a devastating toll in human suffering and the destruction of the affected coastal areas, was a tragic reminder to all of us. The coastal communities are particularly affected by events that can bring about massive changes.

It is seen that the coastal communities are not resilient to these kind of events and places these communities at high risk. Furthermore, these communities have not yet learned about the importance of building resilience particularly in Indian perspective. With the wide-ranging hazards taking their toll all over the region, these communities need to respond to the issues in a more holistic and integrated manner. The paper will discuss on the aspects of coastal community resilience particularly with respect to the tsunami affected communities and how the multi-sector development planning program will solve the complexity of these hazards which are critical to the communities that thrive along the coastline.

Near-real-time Forensic Analysis of Disasters – the Case of 2013 German Floods
Bijan Khazai / Panel III / Thursday 16:30

To obtain additional, wider and more fundamental understanding of the factors which influence loss patterns and explain (lack of) resilience to disasters, more penetrating investigations must be developed and evaluated in a more explicitly decision-oriented and market-based framework with a common set of commonalities to the approach. The model for this type of research which requires new methodological approaches, institution arrangements, and governance technologies, which have a high potential for development in the future as well.

The model of the disaster risk management framework is an innovative and powerful approach to decision-making in the risk management domain. The framework is designed for decision-making in the risk management domain. The framework is designed for decision-making in the risk management domain. The framework is designed for decision-making in the risk management domain.
and unpredictability of potential crises as well as the rapid dynamics of incidents to be managed obviously also demand crisis management (CM) of an ever higher level of complexity. The frequency of crises will not necessarily increase, but unless research is up to the challenge of producing solutions, which fully exploit modularity, flexibility and adaptivity, then either the cost of CM capability development or the costs due to inadequate management of crises will grow.

At the same time resilience research has to realize that radical changes to the current CM system would be very costly and likely incur unacceptable loss of CM capability during a long transition phase. Consequently, research has to develop an ability to adapt the national and international CM system to new challenges as they emerge, while also respecting legacy systems.

On the basis of this thinking the EU FP7 project ACRI-MAS (Aftermath Crisis Managed System-of-Systems, phase I) developed the concept of creating room for experimentation and a pre-operational evidence-base for CM. The implementation of this idea as a distributed pan-European test-bed is practically proposed by the demonstration project DRIVER (Driving Innovation for crisis management and European Resilience) which is currently under negotiations.

International Goals for Resilience
Salifur Rahman / Keynote / Thursday 9:30

Every country or region has its own priorities to protect life, property and livelihood against natural and man-made disasters. Recent events – flooding in central Europe, hurricane Sandy in northeastern United States, severe flooding in India, tsunami in Japan, etc. – have laid bare the vulnerabilities citizens of the world face in their day-to-day lives. While the protection of life and property is of utmost concern to governments, a sustainable operation of the infrastructure that allows the proceeds of livelihood to continue after any disaster is an extremely important goal. In addition to highlighting how different countries address the resiliency issues against man-made and natural disasters, this lecture presents a cross-sector and multi-jurisdiction strategy to improve capabilities to deal with any major incident or disaster. It highlights infrastructure interdependencies and potential cross-sector impacts, and focuses on priority issues that should be considered to build a resilient socio-technical system.

Resilience as an ‘Ordinary Superpower’: A Transformational Approach to Community Resilience
Keith Shaw / Panel VI / Friday 14:15

‘Creating resilience is up to you. No one is going to do it for you. No experts can say exactly how it should be done in your community. You are the experts on what you think will work in the places and with the people you know best. It will take courage to ask big, difficult questions. It will take creativity and imagination, and in this sense, resilience is seen as an “ordinary superpower” in which the intuitive, “sensible” approach to solving problems, and adapting to changing situations developed by individuals and communities remains a crucial community resource in an era of profound uncertainty.

Community and Household Resilience to the Impacts of Climate Change: Lessons from Floods and Inundation in South Asia
Krishna Vatta / Panel II / Thursday 11:45

In South Asia, several countries such as India, Pakistan, Bangladesh, and Nepal have experienced prolonged flooding and inundation due to increase in precipitation and warming of oceans, leading to change in rainfall patterns, and disruption in drainage, largely an outcome of climate change. These floods have damaged houses and destroyed livelihoods on a large-scale, particularly in rural areas. As large tracts of agricultural lands became waterlogged, and salinity, the production of foodgrains and availability of drinking water are seriously affected in the flood-prone areas.

As a result of flooding, the work opportunities for the rural populations have reduced considerably, forcing a large number of people to migrate to other areas to find work. A lack of alternative employment and income-earning opportunities has a serious impact on “households” capacity to recover. The people affected by floods have not been able to reconstruct or repair their houses, and their access to civic amenities such as electricity and sanitation has reduced considerably. Though the direct deaths and injuries attributed to floods have been relatively fewer, indirect and long-term health impacts have been widespread.

In 1960s and 1970s, a large number of embankments were constructed along the rivers to control and regulate floods. The maintenance and regulation of these embankments has emerged as an important challenge for the governments. It is also becoming clearer that engineering solutions as offered through embankments, and polders are not sustainable strategies for avoiding flood catastrophes. There is need to create engineered spillways, which can channel the escaping floodwater, thus restricting the geographic extent of inundation and facilitating early warning to the population in danger.

A suitable response to the challenges posed by climate change impacts needs to be based on appropriate policies, regulations, and institutions. There is need to recommend policies and measures which are centered on improving natural drainage, early warning systems, and floodplains management, as compared to an excessive reliance on flood protection structures.

One of the important strands of intervention must focus on strategies which allow households or communities to move out of poverty. Recovery Assistance becomes critical for households, though access to such assistance based on rights and entitlements is a complex issue. It is, however, clear that household’s resilience to the impact of these shocks can only be achieved through long-term livelihood strategies, control over their assets, and access to social services such as education and health.

Resilience as an ‘Ordinary Superpower’: A Transformational Approach to Community Resilience
Keith Shaw / Panel VI / Friday 14:15


In May 2013, the Forth Session of the Global Platform on Disaster Risk Reduction called for an immediate start of work to be led by UNISDR to develop targets and indicators to monitor the reduction of risk and the implementation of HFA2. It is now becoming evident that a considerable focus of the HFA2 should be local level DRR action. UNISDR has used the Making Cities Resilient Campaign as one of the main vehicles for the local level consultations on the development of HFA2. As the consultations develop to discuss and formulate the elements of the HFA2, the perspectives of local governments on how local perspectives should be integrated becomes more important.

[Panel VI: Resilience and Social Systems]
Dennis Wenger / Panel VI / Friday 11:15

As a focus for scientific research, the concept of resilience has become a topic of extreme importance and interest. Observations will be made regarding the focus of resilience research and the implications of this concept for basic, scientific and theoretical progress regarding disaster risk reduction. The value of basic research on resilience will be assessed.

[Panel I: International Disaster and Risk Reduction, Sustainability and Resilience]
Jerry Velasquez / Panel I / Thursday 10:00
Daniel P. Aldrich is an associate professor of political science at Purdue University who is on leave in 2011-2012 as a Research Fellow at Harvard University’s Program on US-Japan Relations, a Visiting Researcher at Centre Américain, Sciences Po in Paris, France and a Visiting Professor at the Tata Institute for Disaster Management in Mumbai, India. He is a board member of the journals Asian Politics and Policy and Risk Hazards and Crisis in Public Policy and a Mansfield U.S. Japan Network for the Future Alumni. He is the section organizer for the American Political Science Association’s Disasters and Crises Related Group. His research interests include post-disaster recovery, the siting of controversial facilities, the interaction between civil society and the state, and the socialization of women and men through experience. Daniel’s first book, Site Fights: Divisive Facilities and Civil Society in Japan and the West, was published by Cornell University Press in 2008 and was republished (as a 2nd edition paperback) in May 2010. He has published more than 20 peer-reviewed articles and book reviews, and op-eds for general audiences in five main areas: disaster recovery, controversial facility siting, countering violent extremism, fieldwork practices, and sex differences in political behavior.

Walter Ammann is the Founder, and CEO of GRI Davos, a foundation focused on risk reduction, disaster management, sustainable development and climate change mitigation and adaptation. He is the chairman and organizer of the biennial IDRC Conference in Davos to be held for the 5th time in 2014 in Davos, Switzerland, and is director of the GRI Risk Academy, a think tank offering knowledge management, R&D and continuous education worldwide. His interest in current R&D is risk reduction and disaster management, in particular methods and technologies on how to reduce vulnerability and increase resilience and their harmonization with climate change adaptation. He is also the lead author of the Strategy on “Dealing with Risks and Disasters” for the Swiss Government and is advisor to numerous national and international institutions.

He is author and co-author of over 250 papers, books and scientific reports and is a member of various national and international professional associations and expert consulting groups like the UNISDR Science and Technology Support Office (STSO) for the Permanent Representatives of the United Nations. She is an Advisory Panel Member of United Nations International Strategy for Disaster Reduction Campaign on Resilient Cities 2010 – 2015. She has supervised and supported various graduate research students. To date she has produced over two hundred publications, refereed papers and reports, and has made a large number of presentations in around 25 countries. Dilanthi is an Associate Head of the Royal Institution of Chartered Surveyors (RICS). She has presented widely at international conferences, has led international disaster management workshops and seminars and has been invited to speak to several national governments, international organizations and agencies and the private sector. She has been the lead author of the Strategy of Disaster Resilience for the Private Sector (2014) and the Resilience Guidebook for Industry. She has written on large-scale city health systems holding the potential to mitigate the impact of an epidemic, for example, can play a key role in shaping public health policies and mitigating the potential impact of an epidemic. In 2005, Barret retired from Los Alamos National Laboratory, where he led the Basic and Applied Simulation Science Group and had built a research program active in theoretical and applied research in risk and uncertainty, and application of computer simulation to large-scale complex systems and advanced HPC-based computer simulation, then came to VBI to set up the NDSSL.

Dr. Barrett received his Ph.D. in bioinformation systems from the California Institute of Technology and has been widely recognized for his work.

Pedro Basabe, geologist and Dr. ès. Sc. in Geology, has expertise in applied geology, natural hazard identification, mapping, monitoring systems, research and policy management since 1979. During the nineties, he formulated and implemented several international projects on disaster risk management in Latin America for the Swiss Agency for Development and Cooperation, Humanitarian Aid (SHA) in coordination with the UN. He is also UNDAC and SHA member since 1995 participating in several projects of disaster preparedness, evaluation and coordination missions.

He joined the UN Office for Disaster Risk Reduction (UNISDR) in November 2001, where he has increased responsibilities, contributing to DDR knowledge and capacity development, outbreak, drought risk reduction practices and linkages with humanitarian sector to promote holistic and integrated disaster risk management. The last five years he has been heading the UNISDR Regional Office for Africa in Nairobi, actively developing collaboration with the Africa Union Commission, Regional Economic Communities, 38 countries, UN partners, donors and scientific community. As result, Africa has a continental Programme for Disaster Risk Reduction, mechanisms for coordination, Sub-regional policies and/or programmes, some of them implemented in several countries.

Mr. Basabe is currently back at the UNISDR headquarters, in New York, as the Acting Director of the Office for Disaster Risk Reduction. He has been heading the UNISDR Regional Office for Africa in Nairobi, actively developing collaboration with the Africa Union Commission, Regional Economic Communities, 38 countries, UN partners, donors and scientific community. As result, Africa has a continental Programme for Disaster Risk Reduction, mechanisms for coordination, Sub-regional policies and/or programmes, some of them implemented in several countries.
James Bohland is Co-Director for Global Forum on Urban and Regional Resilience and Security at the Virginia Tech’s National Capital Region (NCR) Operations. He is also a full professor in Urban Affairs and Planning. Bohland served as chair of the Urban Affairs and Planning program from 1984 to 1995. He was the founding director of the School of Public and International Affairs and served in that capacity until the spring of 2001. From August 2000 to August 2001 he served as interim provost for Virginia Tech and in September 2001, he was appointed Senior Fellow for Biomedical, Bioengineering, and Health Projects by the university, a position he held until 2005. From 2000 to 2008, he served as director of the institute for Community Health.

He earned a Ph.D. in geography from the University of Georgia and accepted a position at Virginia Tech in 1978.

With primary research interests in health policy and planning, community and population health, and in the social aspects of information technology, particularly as it relates to health, Bohland has authored or co-authored more than 75 refereed articles, book chapters and technical reports on topics ranging from community health, digital divide, and Community Technology Centers. He has received grants from NSF, Exxon, National Telecommunications and Information Agency, NIH and NASA.

Deborah Brosnan is a marine ecologist working on the interface of natural hazard science and policy. She is President of The Brosnan Center and Professor (adj) of Biology at Virginia Tech. She has consulted for teams of interdisciplinary scientists to find solutions to pressing environmental and policy challenges for US governments. She works globally to research and find solutions to ecological and social resilience. She has worked around on many natural and human-caused hazards and the communities that impact including Montserrat volcano, Indian Ocean Tsunami, Hurricane Rita and Gloria in the southern USA states, and tsunami forecasting in California. She has testified before US Senate and Congressional Committees. She is a member of several scientific and non-profit Boards.

Jack Brown is the Director of the Arlington County Office of Emergency Management, which is responsible for the County’s strategic emergency management priorities. Specifically, OEM plans and coordinates County emergency services, including operation of the County’s Emergency Operations Center and Arlington’s Emergency Operations Center during crises and major incidents. In 2012, Virginia Governor Bob McDonnell appointed Brown to the Secure Communities Task Force. He has also been charged with reviewing the reliability of Virginia’s 9-1-1 services in the wake of widespread failures during the June 2012 “super derecho” storms.

Jack Brown’s public safety career includes 29 years with the Fairfax County, Virginia Fire & Rescue Department, where he was awarded as Assistant Fire Chief of Operations. He is past and served as a Planning Section Chief and Task Force Leader for the Fairfax County Urban Search and Rescue Task Force. He deployed to Haiti, his native country. Simin has in response to the 1998 embassy bombing and led the task force on a deployment to Taiwan in response to an earthquake in 1999. Upon his retirement from Fairfax County in 2000, he became the Assistant Chief for the Loudoun County Department of Fire, Rescue and Emergency Management, where he led a team of firefighters to the Pentagon on 9/11 and assisted the Arlington County Fire Department as the initial Planning Section Chief. Thierry Courvoisier is the President of the Swiss Academy of Sciences and a professor for astrophysics at the University of Geneva, Switzerland. As a member of the Swiss Academy of Sciences he focuses on sustainable solutions for national and global problems such as renewable, sustainable energy and sharing his expertise with policy and society. He is also as President of the Swiss Academy of Natural Sciences. He was born in La Chaux-de-Fonds and grew up in Geneva, Switzerland. He holds a physics diploma in Theoretical Physics at the Federal Institute of Technology in Zurich (ETH) specializing in theoretical physics with Prof. N. Straumann at the University of Zurich in 1980. After research stays in Germany at the European Space Operations Center (ESOC) and Space Telescope European Coordinating Facility at ESRO (European Southern Observatory) and in England as a Senior scientist SERC fellow in Preston he has been teaching at University of Lusanne and Geneva as well as at CERN and in numerous specialized schools. He has become a full Professor of Astrophysics at University of Geneva in 1999 and has been supervising 16 doctoral theses. His fields of interest lie in; high energy astrophysics, observations using satellite-borne and ground-based telescopes, modeling of accretion processes onto black holes and neutron stars. Respectively his main research is the Active Galactic Nucleus (AGN). Besides being an author/co-author of over 120 publications he is an author of 2 books. Since 1995 he is chairing the INTEGRAL Science Data Centre (ISDC) which is analyzing the data of the ESA’s INTEGRAL Mission. Moreover, Thierry Courvoisier is President of the Swiss Academy of Natural Sciences (SCnat), President of the European Astronomical Society (EAS) and President of the Swiss Academies of Arts and Sciences. Additionally, he is a member of numerous other unions and serves as an expert for ESA, ESA, PPARC (UK), the Swedish national space board, Belgian Science policy, Science Foundation of Ireland, Fonds National suisse, ISRO (the Indian space board) and the Swedish Academy of Sciences. In 2009/2010 he was skipper of the sailing yacht CERES around the Atlantic Ocean.
environmental governance has been funded by a range of international and national research funding bodies and has publications and research widely. Her work on resilience is published in the journals of Planning Theory and Practice [2012, 13(2): 299-307]; Planning Practice and Research [2013, 28(1)] and the Planning Review [2013, 4(4)].

Mauro Dell’Ambrogio, the holder of a Doctorate in Law from the University of Zurich, held a number of public offices in canton Ticino from 1979 to 1999 after passing his bar exam: Judge, Chief of the Cantonal Police, Secretary-General for Education and Culture, project manager for the creation of the University of Lugano (USI), and Secretary-General of the USI.

After four years heading up a group of private clinics, he was made Director of the University of Applied Sciences of Southern Switzerland (SUPSI) in 2003. He has been mayor of Giubiasco, a member of the Ticino cantonal parliament and chairman of the Ticino electricity works. From 2008 to 2012 he has been State Secretary for Education and Research.

In January 2013 he took up the post of State Secretary for Education, Research and Innovation.

Reginald DesRoches is the Dean of the College of Engineering, and Professor and Associate Chair of Civil and Environmental Engineering at the Georgia Institute of Technology. His primary research interests are seismic design of buildings and bridges, seismic risk assessment of lifeline systems, and application of innovative materials in rehabilitation of structures. He has published more than 100 articles and reports in the area of structural and earthquake engineering.

DesRoches has served as chair of the ASCE Seismic Effects Committee (2006–2010), and chair of the executive committee of the Technical Council on Lifeline Earthquake Engineering (2010). He currently is a member of the executive committee of the National Academy of Sciences Disasters Roundtable, and is on the board for the Earthquake Engineering Research Institute (EERI).

DesRoches has been a key technical leader in the U.S. response to the 2010 Haiti Earthquake. He led a team of 28 engineers, architects, city planners, and scientists, to study the impact of the earthquake with the goal of informing the Haitian government on effective ways to rebuild Haiti to be more resilient and sustainable. He has continued his consulting with the U.S. Government, USAID, and the United Nations on the rebuilding efforts in Haiti.

DesRoches was born in Port-au-Prince, Haiti and grew up in Queens, N.Y. He earned his Bachelor's of Science in Mechanical Engineering, Master of Science in Civil Engineering, and Ph.D. in Structural Engineering – all at the University of California, Berkeley.

Chloe Demovsky is the Director of Global Operations at DRI Interna- tional and an Associate Business Continuity Professional (ABCP). She is responsible for overseeing DRI International’s Global Network that conducts courses in over 50 countries on 6 contin- ent. She was a co-founder of a member of Global National’s global education growth, which since 2009 has resulted in DRI teaching more people outside the United States than inside and in 2011 resulted in a certification increase of 72%. She created an international version of DRI’s audit course that encompasses both United States and international standards. As part of her role at DRI, she has presented at conferences on four continents. She founded the DRI BCM Glossary Committee and serves as International Editor for Thrive International Magazine and Thrive America Magazine. DRI’s premier publication of original content in the Spanish language. She holds a Master’s summa cum laude in International Business from New York University, where she served as External Affairs Co-Chair for International Business and Development, and a Bachelor’s summa cum laude from Bard College at Simon’s Rock. Passionate about economic development, she has traveled to India and Kenya to work on private sector solutions for poverty alleviation and social inclusion. Follow her @ ChloeDemovsky.

Roland Friedli joined Swiss Re Risk Engineering Services in 2006. He is responsible for assessing risks in the construction, utility, machinery and transportation in -dustry. He also assists in the area of nanotechnology, emerging risks and environmental liability.

Before this he worked as project manager in engineering compa- nies in Switzerland and in the US. There he was responsible for risk assessment of natural hazard and for the investigation and the containment of chemical accidents. In Swiss Re’s internal Environmental Management Roland Friedli was responsible for the energy efficiency and CO2 reporting of Swiss Re’s operations and infrastructure.

He holds a Masters Degree in Environmental Sciences from the Swiss Federal Institute of Technology Zurich in Switzerland.

Gerry Galloway is a Glenn L Martin Institute Professor of Engineering and Affiliate Professor of Public Policy at the University of Mary- land where he teaches and con- ducts research in national water resources policy and management, flood mitigation, and disaster management. He has served as a consultant to national and inter- national government and business organizations. He is currently a member of the Louisiana Governor’s com- mission on coastal protection, an advisor to The Nature Conservancy on its Yangtze River Program and to the WWF. He has been a member of a team studying the impacts of climate change and dam construction in the Mekong River Basin and was recently appointed by The Secretary of State as one of three inaugural Energy and Climate Partnership of the Americas Fellows. He has been Presidentially appointed to the Mississippi River Commission and was assigned to the White House to lead a study of the 1993 Missis- sippi River Flood. He served in the US Army for 20 years retiring as a Brigadier General and Dean of Academics at West Point. He is a member of the National Academy of Engineering and a Fellow of the National Academy of Public Administration.

John (Jack) Harrald is the Associ- ate Director for the Global Forum on Security, Regional Infrastructure, and Disasters at the Virginia Tech. He is the Director Emeritus of The George Washington University Institute for Crisis, Disasters, and Risk Manage- ment. Dr. Harrald is a member and Chair of the National Research Council’s Disasters Roundtable Steering Committee. He is also an Associate Editor of the electronic Journal of Homeland Security and Emergency Management and is the immediate Past President, The International Emergency Management Society (TIEMS). He has been engaged in the fields of emergency and crisis management and maritime safety and security and as a researcher in his academic career and as a practitioner during his 22 year career as a U.S. Coast Guard officer. He retired from the grade of Commander in 2001. Dr. Harrald received his B.S. from the U.S. Coast Guard Academy, a M.A.L.S. from Wesleyan University, a M.S. from the Massachusetts Institute of Technology where he was an Alfred P. Sloan Fellow, and an MBA and Ph.D. from Rensselaer Polytechnic Institute.

Dirk Helbing was born on Janu- ary 19, 1965. He studied Physics and Mathematics, but was always interested in other fields for the Sociology as well. In the year 2000, he became Professor and Managing Director of the Institute for Transport Policy at the University of Technology, and in 2007 he was appointed Professor of Sociology, in particular of Modeling and Simulation, at ETH Zürich. Since 2008, he is elected member of the German Academy of Sciences “Leopoldina”.

More than 200 publications in different scientific fields, 300 talks and more than 300 reports in the public media reflect his wide field of interest, reaching from traffic science over crisis management to biologically inspired logistics. He also had projects with Xerox PARC, Volkswagen, SCA Packaging, Siemens, PTV, further companies, and various foundations.

Helbings team developed a traffic assistance system and patented the principle of a self-organized traffic light control, which implements massively parallel, de cen-tralized control concepts for the optimization of traffic flows. The resulting increase of performance and the higher flexibility are an important step toward the understanding of complex systems. Companies and societies are other examples of such complex systems. This is also the reason why Dirk Helbing is interested in sociology.

As scientific coordinator of the FoturICt project, he is promoting the collaboration of natural, social and engineering sciences to address the challenges of the complex and strongly interconnected global technolo- socio-economic-environmental systems we have
created. He believes that we need to develop a global systems science, a new data science and a systemic risk calculus. Therefore, he is also the founding vice chair of the Swiss National Science Foundation's 'transdisciplinary Concepts and Methods' at the Potsdam Institute for Climate Impact Research.

Developing climate impact research guided by stakeholder dialogues and using mathematics as a tool to meet conceptual challenges is the focus of his work.

He was Professor at the University of Darmstadt and Head of the Human Ecology Department at the Swiss Federal Institute for Environmental Science and Technology. He is a member of the Scientific and Technical Council of the International Risk Governance Council, and has served on the boards of various scientific organizations. He holds degrees in economics (PhD, Frankfurt University, Germany) sociology (MA, University of Bern, Switzerland), and extensively on the interactions between technological progress and environmental problems, in particular the role of information technologies in urban development.

He has also considerable research experience in the field of stakeholder dialogue. His current research interest focuses on the positive impact of climate policy on prosperity and growth and on the role of financial markets in managing climate change.

Bijan Khazai is a Senior Research Scientist, CEDIM at the Karlsruhe Institute of Technology. He holds Masters and doctoral degrees in Earthquake Engineering from the University of California at Berkeley. Before moving to Germany, Dr. Khazai was an earthquake engineering research fellow at Kyoto University's Disaster Prevention Research Institute (DPRI) and Columbia University's Earth Institute where he was involved in the socio-economic assessment of recovery and reconstruction processes working in the field following disasters in Iran, Sri Lanka, Pakistan and New Orleans. Dr. Khazai's research interests are social vulnerability analysis, megacity and urban risk, and decision support for emergency response and recovery planning. He is Principal Investigator of the Social Vulnerability and Integrated Risk Project of the Global Earthquake Model (GEM) and also director of the collaborative research project on integrated earthquake risk assessment between KIT and Heidelberg University in Kathmandu. As a project specialist for the Earthquake and Megacities Initiative (EMI), he has worked closely with stakeholders in a number of applied disaster risk management projects in Istanbul, Amman and Metro Manila, Mumbai, Kathmandu and Dhaka.

James Kendra is an associate professor in the School of Government and Administration and Director of the Disaster Research Center at the University of Delaware. Previously he was coordinator of the Emergency Administration and Planning Program in the Department of Public Administration at the University of North Texas. His research interests focus on individual and organizational responses to risk, improvisation and creativity during crisis, post-disaster shelter and housing, and planning for behavioral health services. Projects have included research on the reestablishment of New York City's emergency operations center after the 9/11 attacks, a major study of the waterborne evacuation of Manhattan on 9/11, research on the social impacts of the Indian Ocean tsunami, and research on the organization of disaster behavioral health services.

Daniel Kull is a Senior Disaster Risk Management Specialist with the Global Facility for Disaster Reduction and Recovery (GFDRR) of the World Bank. Based in Geneva, Switzerland, Mr. Kull represents the World Bank in interagency and inter-governmental disaster risk management, climate change adaptation and humanitarian coordination mechanisms, and provides technical expertise to the GFDRR Hydromet Program, helping to formulate and guide World Bank and partner investments in modernizing weather, climate and hydrologic service delivery. Before being elected IRgC's Founding Rector in 2003 he was Professor at the University of Darmstadt and head of the Human Ecology Department at the Swiss Federal Institute for Environmental Science and Technology. He is a member of the Scientific and Technical Council of the International Risk Governance Council, and has served on the boards of various scientific organizations. He holds degrees in economics (PhD, Frankfurt University, Germany) sociology (MA, University of Bern, Switzerland), and extensively on the interactions between technological progress and environmental problems, in particular the role of information technologies in urban development.

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Jaffer AA Khan is the Director of Marg Institute of Design and Architecture Swarnabhoomi (MIDAS)Chennai, affiliated to Anna University of Technology. MIDAS is promoted by MARG GROUP in Chennai, an infrastructure company with projects more than 5000ac.

He brings in 27 years of rich interdisciplinary, national and international experience in the field of Government and Administration through MIDAS. The philosophy of the school is to establish a strong symbiotic relationship between education, research, theory and practice.

He is the gold medalist in Architecture from the University of Madras in 1983. He was awarded the most prestigious Aga Khan Scholarship in 1983 on his graduation at the Bartlett School of Architecture and Planning, UCL, University of London in 1985. Back home he started his practice in 1985 and has designed nearly 300 buildings many of them award winning at national and international level. His projects are widely published and nominated for several awards. Projects have included research on the reestablishment of New York City’s emergency operations center after the 9/11 attacks, a major study of the waterborne evacuation of Manhattan on 9/11, research on the social impacts of the Indian Ocean tsunami, and research on the organization of disaster behavioral health services.

Dr. Kendra has participated in several quick response disaster reconnaissance trips, including the 2001 World Trade Center attacks, 2005 Midwest tornadoes, the 2006 Indian Ocean tsunami, and Hurricane Ike in 2008, as well as documenting maritime relief efforts in the US following the 2010 Haiti earthquake. He has been involved in several agency planning and decision process efforts, and he is a Certified Emergency Manager. He graduated from Massachusetts Maritime Academy with a degree in marine transportation, and served several years at sea, attaining a Master Mariner license. His master’s degree is in geography from the University of Massachusetts, and his PhD is in geography from Rutgers University. He is a member of the US Coast Guard Auxiliary, with interests in boating safety and public education.

Wolfgang Kröger is Executive Director at the ETH Risk Center, ETH Zurich. Zurich, Switzerland. Wolfgang Kröger has been Ordinarius of Safety Technology at the ETH Zurich since 1990 and director of the Laboratory and Safety Analysis. Before being elected IRG’s Founding Rector in 2003 he headed research in nuclear energy and safety at the Paul Scherrer Institute (PSI), where he was also on the board of directors. After his retirement at the beginning of 2011 he has become the Managing Director of the newly established ETH Risk Center.

Susanne Krings joined the German Federal Office of Civil Protection and Disaster Assistance (Bundesamt für Bevölkerungsschutz und Katastrophenhilfe), BfBS in 2010 as a policy advisor in the Critical Infrastructure Policy Issues division. Although the division covers a wide range of different topics related to critical infrastructures, one of the key aspects of her work is adaptation to climate change with a special focus on civil protection. Before joining the BfBS she worked as a research associate at the United Nations University – Institute for Environment and Human Security (UNU-ETHS). In the Vulnerability and Disaster Management and Adaptive Planning section of the institute she contributed to research projects focusing on the vulnerability of critical infrastructures.

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Carlo C. Jaeger is co-founder and the chairman of the Global Climate Forum, leading GCF’s Green Growth research process. He holds a degree in Geophysics from the University of Bern, Switzerland.

He is an advocate for “Climate Change” and has spoken at different occasions at different forums both at national and international level on the subject. He is a member of The Royal Institute of British Architects (RIBA),UK and a Fellow of the Royal Society of Arts(RSa).London. He is also a research scholar at RMIT University Melbourne Australia.

He has been very active in the media, like radio and television, in giving his views and conducting interviews. He is known as an expert in the field of Disaster Risk Management. He has been a writer, critic and an academician apart from professional face for more than quarter century and has written thought provoking articles on Environment, Heritage and Sustainable Development.

His research interests focus on individual and organizational responses to risk, improvisation and creativity during crisis, post-disaster shelter and housing, and planning for behavioral health services. Projects have included research on the reestablishment of New York City’s emergency operations center after the 9/11 attacks, a major study of the waterborne evacuation of Manhattan on 9/11, research on the social impacts of the Indian Ocean tsunami, and research on the organization of disaster behavioral health services.

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the American Institute of Architects, for services to the profession in 2000; the Textbook Excellence Award for the Humanities – Core Sciences, Text and Academic Authors, for Human Geography, with Sallie Marston in 1999; the Association of Collegiate Schools of Architecture Service Award in 1999; and the Virginia Social Science Association’s Outstanding Scholar Award in 1999. Dr. Martin has been involved in the advancement of building code and seismic design provisions in the US and abroad. In addition, he frequently serves as an international engineering consultant on major infrastructure projects. Dr. Martin has received numerous national, state, and university awards including the American Society of Civil Engineer’s Norman Medal.

Merle Misssewitz is a Senior Researcher at the Fraunhofer Institute for Technological Trend Analysis. She has a background in biology and physics and is coordinating the international defense and security research in her unit. In her current work on the security side she has been focusing on Crisis Management research & Innovation planning. She is involved in a working group 4 ‘crisis management’ and Co-Coordinator and Project Quality Manager of the FP7 Demonstration Phase I project ACRIMAS. She is engaged in several other FP7 security research projects and will be the Scientific Coordinator of the upcoming FP8 Crisis Management Demonstration Project DRIVER – Driving Innovation in European crisis management and Resilience (currently under negotiations). She was a member of the Societal Security Expert Group to the European Commission and is Programme Manager of the Fraunhofer Future Security Conference 2013 in Bonn. Her expertise is on environmental processes in environmental policy making. Renn also serves on the Expert Advisory Board of the US President Barroso, the Scientific and Technical Council of the International Risk Governance Council (IRGC) in Lausanne, the National Academy of Disaster Reduction and Emergency Management Sciences of China and several national and international Academies of Science. In the past he served on the panel on “Public Participation in Environmental Assessment and Decision Making” of the National Academy of Sciences in Washington, D.C. (from 2005-2007) and on the German Federal Government’s “Commission on Energy Ethics” (2011). In 2010 he was elected president of the Society for Risk Analysis (SRA).

Ortwin Renn has a doctoral degree in social psychology from the University of Cologne. His career included teaching and research positions at the Juelich Research Center, Clark University (Worcester, USA), the Swiss Institute of Technology (Zuerich) and the Center of Technology Assessment (Stuttgart). Among others he is a member of the Advisory Board of the International Risk Governance Council (IRGC) in Lausanne, the National Academy of Disaster Reduction and Emergency Management Sciences of China and several national and international Academies of Science. In the past he served on the panel on “Public Participation in Environmental Assessment and Decision Making” of the National Academy of Sciences in Washington, D.C. (from 2005-2007) and on the German Federal Government’s “Commission on Energy Ethics” (2011). In 2010 he was elected president of the Society for Risk Analysis (SRA).

Ortwin Renn serves as full professor and Chair of Environmental Sociology and Technology Assessment at the University of Stuttgart (Germany). He directs the Stuttgart Research Center for Interdisciplinary Risk and Innovation Studies at the University of Stuttgart (ZIRUS) and the non-profit DIALOGIK, a research institute for the investigation of communication and participation processes in environmental policy making. Renn also serves as director of the Integrated Research Centre for Technology Assessment at Stavanger (Norway) and as Affiliate Professor for “Risk Governance” at Beijing Normal University.

Stefan Wolfgang Pickl was born in Darmstadt, Germany on 29th September, 1967. He studied mathematics, electrical engineering and philosophy at the Technical University of Darmstadt (diploma in 1993; ERASMUS-scholarship at the EPLI Lausanne). He obtained his doctorate degree at the TU Darmstadt in 1998 followed by his habilitation at the University of Cologne in 2005. From the years 2000 to 2005 Mr Pickl was scientific assistant and project manager at the Center for applied Computer Sciences in Cologne. In other functions he was holding main responsibility in the field of “Modelling, simulation and optimizing conflicts involving resources – analysis of complex systems”. Since July 2005 Mr Pickl holds a chair for Operations Research at the UBW Munich. In 2000 Mr. Pickl received the phd-thesis award by the German Society for Operations Research; followed by international “best-paper awards” in the years 2003, 2005 and 2007. He is leading the working group “Simulation and Optimization of Complex Systems” of the German Society for Operations Research (GOR). Furthermore he is vice-coordinator of the European Operations Research Society (EURO). He is counsellor to the “Center for the Advanced Studies of Algorithms (CASA)” at the University of Nevada, Las Vegas, as well as an associated member of the “Center for Network Innovation and Experimentation (CENETIX)” of the NPS Monterey, CA (USA). His main research issues are located in the area of analysis, control and optimization of complex systems and discrete structures. Furthermore he is interested in the field of IT-supported process optimization as well as issues regarding decision and planning processes with a view to the background of international experiments, service-oriented reachback-conceptions and safety & security operations. Mr Pickl was one of the first mathematicians who developed a model for the simulation and optimization of the CO2-conflict. Respectively Mr Pickl is a member of the Excellence-Cluster “HUMETE-Energy” at the RWTH Aachen since 2008. He released 120 publications and furthermore he participates in national and international seminars and editing of several international conference volumes.

Since 2008 Mr Pickl is Vice-Chair of the international committee for Controlling Theory in the range of IFAC (International Federation on Optimol Control Section: Technical Committee on Optimal Control). He was furthermore on the editorial board of the IEEE Transactions on Sustainable Energy. He is chair of the advisory board of the German Society for Operations Research. Furthermore Mr. Pickl is director of the Academy for Highly Gifted Pupils at UBW Munich.

The conference OR2010 attracted academics and practitioners working in various fields of Operations Research and provided them with the most recent advances in Operations Research and related areas to the general topic “Mastering Complexity” and “Safety & Security”. Stefan Pickl is member of Munich Aerospace and NITM (International Ph.D. Consortium on Networks, Information Technology and Management) with a special focus on Aviation Management and Humanitarian Logistics.

Martin Powell is Head of Urban Development within Siemens Germany’s Centre of Competence. This role involves working with City Leadership across the globe and providing expert advice and support to help ensure cities can meet economic, social and environmental targets.

Martin was previously The Mayoral Advisor on the Environment to the current Mayor of London, Boris Johnson, responsible for policy development for Energy and Climate Change, Adaptation, Water, Air Quality and Waste. He was also Director of Environment at the London Development Agency, the Mayor’s agency for economic development in London where he had responsibility for delivery of the agency’s Major Programmes.

Martin was Managing Director of Cambridge Manage- ment & Research, an organisation working with a number of cities and a Special advisor to the c40 cities climatic action group, Chaired by Mayor of New York, Michael Bloomberg.

Martin speaks extensively on the topic of future cities and the economic models of delivering solutions at scale and the city governance required to deliver these solutions.

He is a contributing author to the Wiley Guide to Project Management and Project, Programme & Portfolio Man- agement also published by Wiley. He has also presented for MBS Learning Channels.
Renn is primarily interested in risk governance, political participation as well as technical and social change towards sustainability. Since 2012 he co-directs together with Armin Grunwald the German Helmholtz-Allee: "Future infrastructures for meeting energy demands. Towards sustainability and social compatibility". Renn has published more than 30 books, articles and reports, most prominently the monograph "Risk Governance" (Earthscan: London 2008).

João Tiago Meneses Machado Ribeiro is the INGC General Director. He was born in Quelimane, Zambezia province, Mozambique, and holds a degree in Forestry Engineering, on Renewable Natural Resource & Alternative Energy Sources, by the Faculty of Forest Engineering – Federal University of Paraná (Brazil). He is currently General Director of the National Institute of Disaster Management in Mozambique (INGC), where he has been working since 2006. His main roles and responsibilities are to manage the INGC whole process and the system of disaster risk reduction at the national level as well as coordinate the preparation of plans, policies and implement multisectoral response operations for emergencies caused by natural hazards such as floods, earthquakes, hurricanes, droughts and wild fires and associated consequences. He is one of the founders of the National Center for Emergency Operations (CENO) and the National Unit for Civil Protection (UNAPROC) in Mozambique. He was also co-chair of the former studies for the Study on Climate Change Impact on Disaster Risk in Mozambique. Under his leadership, the Beira city won the first ever RISK Award at the International Disaster and Risk Conference (IDDR) in 2006. He has a degree in Forestry Engineering and has previously served as Director of Agriculture and Rural Development and Director of the Board of Directors in Sugar Factory in Mafambisse, Sofala Province.

Liesel A. Ritchie is assistant director for research at the Natural Hazards Center. She has served as either principal investigator or senior researcher on more than 70 projects since 1996. Since 2001, Liesel’s focus has been on the social impacts of disasters with an emphasis on technological disasters, social capital, and renewable resource communities. Liesel currently directs three National Science Foundation projects—one on the social impacts of the high stakes litigation resolution associated with the Exxon Valdez oil spill, one on the response and recovery to the 2010 BP Deepwater Horizon oil disaster. Liesel is also leading evaluation efforts associated with the USGS’s Science Applications for Risk Reduction Tsunami Scenario Project; the Department of the Interior’s Strategic Sciences Group; and is co-PI on a NOAA-funded project to incorporate social science into its tsunami research. In addition, Liesel has been involved with social impact assessment efforts regarding oil pipeline development activities in northwestern Canada.

Badaou Rouhban is a specialist in disaster risk management. He advises public services, civil societies and non-governmental organizations on capacity building for disaster resilience. He served for several years at UNESCO, Paris, in the Programmes on natural hazards and the environment and is the former Director of UNESCO’s Unit for Disaster Reduction. He is a Global Risk Forum (GFR) Senior Research Fellow at Roman holes. He obtained a Doctor of Engineering degree from the University Paris VI and has carried out post-doctoral research in engineering seismology at the Tokyo Institute of Technology.

Keith Shaw is Professor of Social Sciences – Northumbria University, Newcastle, UK. He has undertaken research and consultancy for a range of national and international organizations on sub-national governance, urban regeneration and the role of the voluntary and community and voluntary sectors in governance and public service delivery. His recent work has critically examined the application of the concept of resilience at the local level, focusing on the climate change and emergency planning disasters. A key theme of his research is an understanding of resilience as ‘transformation’ can be usefully applied to the role of local communities and local organizations facing environmental, economic and social threats. He is Associate Director for the Disaster Research Center at the University of Delaware in the United States. His research has focused upon the social and multidisciplinary aspects of natural, technological, and human-induced disasters. Specifically, he has studied such topics as local emergency management capabilities and response, police and fire planning and response to disasters, search and rescue and the delivery of emergency medical services, mass media coverage of disasters, warning systems and public response, factors related to local community recovery, success, and disaster beliefs and emergency planning. He undertook the only empirical study of the evacuation of the World Trade Center towers after the first terrorist attack in 1993 and served as the principal investigator for the first project to enable the Future Generation of Hazard Researchers. He is the author of numerous books, journal articles and reports. Dr. Wenger currently serves as one of the nine members of the United Nations Scientific and Technical Committee to the International Strategy for Disaster Reduction. At NSF Director’s Office, he is the NSF’s representative to the Roundtable on Disasters of the National Academy of Science.
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