15th Multi-Hazards Symposium 2019

Building Resilience through Disaster Risk Reduction, Response, Recovery & Reconstruction in the 2030 Agenda

Tecnológico de Monterrey
October 29-31, Mexico City
Welcome to the 15th Multihazard Symposium 2019 “Building resilience through disaster risk reduction, response, recovery and reconstruction in the 2030 agenda”. This year Tecnológico de Monterrey has the honor to host the Annual Symposium, second time in America, in collaboration with Association of Pacific Rim Universities.

This symposium will give us the opportunity to reinforce our great mission of doing further research to contribute to disaster risk reduction in disaster-prone countries of the Pacific Rim. I trust that the agenda we will have during the symposium days will help us to define extraordinary ways to foster the resilience and overall well-being of the Asia-Pacific region.

We are fully aware that today’s society requires citizens who have humanitarian and resilience capacities, but that are also able to gather and build new knowledge under a global vision. This is our opportunity to share our experiences and expertise in mitigating the danger in countries most vulnerable to disaster risks, to strengthen our communities and build a more resilient Asia Pacific.

My best wishes for a very productive Symposium. Please enjoy our capital and enjoy Mexico.

¡Bienvenidos!

David Garza
Rector, Tecnológico de Monterrey

40% of the world’s natural disaster events and 90% of the world’s earthquakes occur in the Asia Pacific. In a region of inevitable disasters, improving the coordination and sharing of knowledge across borders is essential to deliver effective disaster reduction and recovery measures.

As one of the most disaster-prone regions in the world, frequent natural hazards – from tsunamis to floods to volcanic eruptions – threaten the lives and livelihoods of millions of people around the Pacific Rim and result in catastrophic destruction and damage.

The losses and impacts that characterize disasters have much to do with the exposure and vulnerability of people and places as they do with the severity of the hazard event. While natural hazards cannot be eliminated, by sharing best practice, knowledge, and research, we can better understand risks and minimize the threat to human life.

Over the past decade, the Multi-Hazards Hub hosted by Tohoku University in Sendai, Japan has worked to harness the collective capabilities of APRU universities for cutting-edge research on the shared threat of natural hazards facing the region.

APRU collaborates with its members and partners to understand how academics, policy leaders, government, and communities can work together to facilitate disaster risk reduction and recovery. Whether it is enhancing the reach of the Sendai Framework or sharing expertise to mitigate the danger in countries most vulnerable to disaster risks, together we can build a more resilient Asia Pacific.

More information on:
# 15th Multi-Hazards Symposium 2019

## Program

<table>
<thead>
<tr>
<th>HOUR</th>
<th>MONDAY OCTOBER 28TH</th>
<th>TUESDAY OCTOBER 29TH</th>
<th>WEDNESDAY OCTOBER 30TH</th>
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<tr>
<td>09:00</td>
<td>Registration for Participants located in Mexico City (UNMIDCEN)</td>
<td>Keynote Lecture “Advances &amp; potentials of science &amp; technology in implementation of Sendai Framework &amp; beyond” by Dr. Rajib Shaw</td>
<td>Lunch</td>
<td>Keynote Lecture “Humanitarian Imperative: Effective Response and Resilience” by IFRC RD, Walter Cotte, keynote lecture “Comparative Study of Post-disaster Recovery Curves for Past Catastrophic Disasters in the World” by Dr. Osamu Murao</td>
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<td>09:15</td>
<td>Opening Ceremony</td>
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<td>Stop at Venue Hotel</td>
<td>OPTIONAL Teotihuacan Pyramids Tour</td>
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<td>09:30</td>
<td>Presentation by Tecnológico de Monterrey’s Rector</td>
<td>Speech by UNDRR Representative Mami Mizutori &amp; APRU Multi-Hazards Core Group Panel</td>
<td>Waterlily by IFRC RD, Walter Cotte</td>
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<td>09:45</td>
<td>Group Picture</td>
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<td>Optional Lunch</td>
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<tr>
<td>10:00</td>
<td>Keynote Lecture “The challenges of seismic engineering in Latin America” by Dr. Kiti M. Miyamoto</td>
<td>Lunch</td>
<td>Panel 6</td>
<td>Coffee Break</td>
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<tr>
<td>10:30</td>
<td>Keynote Lecture “Comparative Study of Post-disaster Recovery Curves for Past Catastrophic Disasters in the World” by Dr. Osamu Murao</td>
<td>Panel 9</td>
<td>Panel 10</td>
<td>Free afternoon</td>
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<td>10:45</td>
<td>Welcome dinner for Panelists</td>
<td>Coffee Break</td>
<td>Closing Remarks</td>
<td>Free Afternoon</td>
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### Notes:
1. A more updated version of the Program is printed on the back of your gaffette.
2. Please note that the Welcome Dinner, Scientific Fieldtrip and Teotihuacan Pyramids Tour, as they are not open events, required prior RSVP.

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## Keynote Speakers

**MS. MAMI MIZUTORI**
Special Representative of the United Nations Secretary-General (SRSG) for Disaster Risk Reduction, and head of the United Nations Office for Disaster Risk Reduction

The role of the UN Office for Disaster Risk Reduction is to support countries and stakeholders in the implementation of the Sendai Framework for Disaster Risk Reduction (2015-2030). The Special Representative ensures the strategic and operational coherence between disaster risk reduction, climate change and sustainable development agendas as well as the linkage with the UN Secretary-General’s prevention agenda and with humanitarian action.

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**DR. KIT MIYAMOTO**
CEO, Miyamoto International & President, Miyamoto Relief
Expert to World Bank projects, including a seismic risk mitigation project in Istanbul, Manila, Mongolia, Indonesia and Myanmar. His team conducted disaster assessments after the 2010 Haiti earthquake. He is currently involved with earthquake reconstruction in Nepal, Mexico and Indonesia while his team conducts critical disaster preparedness policy work for USAID in Latin America and for the World Bank in Bangladesh.

*Lecture: “The challenges of seismic engineering in Latin America”*

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**DR. OSAMU MURAO**
Chairperson, APRU Multi-Hazard Program Core Group
He is also a professor at the International Research Institute of Disaster Science (IRIDeS) at Tohoku University, and founder of the International Strategy for Disaster Mitigation Laboratory (ISDM). His research focus on post-disaster recovery process & urban design, and the relationship between physical environment and disaster; he has investigated the post-disaster recovery process for damaged areas in Taiwan, Turkey, Sri Lanka, Thailand, Indonesia, Peru, Philippines, USA, and Japan, among others.

*Lecture: “Comparative Study of Post-disaster Recovery Curves for Past Catastrophic Disasters in the World”*

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**DR. RAJIB SHAW**
Professor, Graduate School of Media & Governance, Keio University
Shaw is also Chair of the United Nations Science Technology Advisory Group (STAG) for Disaster Risk Reduction, Co-chair of the Asia Science Technology Academic Advisory Group (ASTAAG), Coordinating Lead Author for Asia chapter of IPCC’s 6th Assessment Report, Senior Fellow of Institute of Global Environmental Strategies (IGES) Japan, and the Chairperson of SEEDS Asia and CWS Japan.

*Lecture: “Advances & potentials of science & technology in implementation of Sendai Framework & beyond”*

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**MR. WALTER COTTE WITINGAN**
Regional Director for the Americas, International Federation of Red Cross and Red Crescent Societies (IFRC)
Mr. Cotte has more than 40 years of humanitarian and development experience. He has served as a consultant with the United Nations Disaster Assessment and Coordination system & the International Search and Rescue Advisory Group, was a member of the Colombian Government’s National Disaster Board and of the board of the Colombian National Fire Association.

*Lecture: “Humanitarian Imperative: Effective Response and Resilience”*
1. ARCHITECTURE AND URBAN DESIGN FOR DISASTER RISK REDUCTION
MODERATOR: JOSE MANUEL PAEZ
Shahib Ahmad Kabirzad
Evaluating Resilient Capitals in Kabul City.
Fernando Aguirre-Durand
Building urban resilience to climate change: the case of Mexico City megapolис.
Layla Jorquera
Planning Parameters.
Ivan Paredes Tamayo
Fire Prevention Technology to Minimize Loss of Life During and After a Major Catastrophe.
Jorge López
Hydrometeorological risk prevention integral model in Veracruz city.
Slau Chen Chin
Seismic Resilience of Cities: What Academics, Industry and Authorities can do.

2. EDUCATION AND RESILIENCE
MODERATOR: TAKAO IZUMI
Yixuan Chen
Community Disaster Risk Reduction during Urbanization of Sichuan, China.
Carol Mutch
How well are principals and teachers prepared for their role in disaster response and recovery?
Gerardo Castañeda Garza
House of cards: A diagnosis of needs and a proposal of an instructional design for home insurance & natural disasters education in Mexico City.
Boris Grajzord, Omar López & Anel Demetrio
Introducing a digital strategy in risk reduction efforts.
Zakaria Almsheghi
Strategies for disaster risk reduction in the education sector.
Hector Becerril & Rocio López
University’s role for achieving risk-informed sustainable development: challenges and opportunities in the pacific south region of Mexico.

ROOM 4 PANEL AGENDA
TUESDAY, OCTOBER 29TH

3. SCIENCE AND TECHNOLOGY
MODERATOR: SAJAD KESHTEKAR
Hiroshi Kojima
Current and Future of Space Debris Problem: How Dangerous and How Can We Solve?
Diana Urquiiza, Suliel Garcia & Miguel Hernandez
Acoustic Measurements Methodology for Paging Systems Evaluation in Educational Facilities.
Mario Alvaro Ruiz Velazquez
Multi Hazard Early Warning Systems in Mexico.
Alejandro Ramos & Sarah Cosetino
The 2017 Mexico earthquake audio rescue response and its aftermath: the evolution of social action.
Yuanjin Zhang
Wiener path integral based non-linear oscillator response uncertainty determination subject to non-stationary earthquake hazard.
Rocio Castillo-Aja & Ma. Teresa Ramirez-Herrera
Improving Tsunami and Earthquake Chronologies for the Mexican Pacific Coast.

4. CEMEX-TEC CENTER FOR SUSTAINABLE COMMUNITIES
MODERATOR: PATRICIA TORRES
Araceli Ortega Díaz
Natural Disasters and Poverty: An Improved Analytical Framework.
Ana Fernanda Guadalupe de la Fuente
CEMEX TEC Center for Sustainable Communities, Social Processes.
Mariana Zamudio Guajardo
CEMEX TEC Center for Sustainable Communities, Social Innovation.
Luis Villarreal Ugarte y Carmen Armenta Menchaca
Participatory design and construction, a new way forward for the community of Villahermosa, Chiapas.
Nancy Contreras-Ríos
Karina Denisse Cántu López
CEMEX-TEC Center for Sustainable Communities: Ambient studies as a starting point for change.

WEDNESDAY, OCTOBER 30TH

5. AN EMIC GAZE: INDIGENOUS PERSPECTIVES ON DISASTER RISK REDUCTION
MODERATOR: ANA LUCIA HILL
Dr. Christine Kenney (Te Ati Awa, Ngati Toarangatira, Ngati Tahu) - Indigenous communities and DRR
Mrs.Lucy Kaier (Ngati Tahu) - Preparedness
Mrs.Winifred Geddes (Ngati Awa, Ngati Tai) - Response
Dr. Suzanne Phibbs (Ngati Tahu) - Recovery

6. SOCIAL INNOVATION PROJECTS FOR RESILIENCE DEVELOPMENT IN INDIGENOUS COMMUNITIES
MODERATOR: PATRICIA TORRES
Juan Pablo Rodriguez
David Ortega
José Agustín López
Francisco Ayala

7. HEALTH AND POVERTY
MODERATOR: TAKAO IZUMI
Ariel Abeldano
Post-traumatic Stress Symptoms in people exposed to the 2017 earthquakes in Mexico.
Junko Otani
Effect of natural disasters on perinatal health.
Christopher Boyer
Stress Testing the Capacity of Health Systems to Manage Climate Change-Related Shocks and Stresses.
Gloria Perez Salazar
Al Tashiro
OW green infrastructure affects human health and wellbeing in the post-disaster recovery?

8. PUBLIC POLICIES FOR RISK REDUCTION
MODERATOR: ANA LUCIA HILL
Alfredo Mahar Lagmay
Anticipatory planning in CCA-DDR.
Pia Navarrete Pimiento
Incorporation of the volcanic hazard in emergency plans: evolution, scope and challenges in Chile.
Rafael Van Dyck & Fernando Aragon
Development and Risk.
Giovanni Hernandez
Resilience of complex infrastructure systems under conditions of deep uncertainty. Mexico’s fuel transportation & storage infrastructure.
Juan Carlos Torres Sánchez
Disaster Risk Management System of Colombia & Resilience.
Kristoffer Berne
Science-policy interface for Disaster Risk Reduction: the case of Indonesia and The Philippines.

9. EARTH SCIENCES AND CLIMATE CHANGE
MODERATOR: JOSE MANUEL PAEZ
Rolando Talampas
Rising Tide Can Also Sink Some Boats: Some Dangers Facing Asian Coastal Regions.
Ricardo Gabriel Suarez & Fabián Carranza
Ma. Teresa Ramirez-Herrera, Hugo Romero
Geologic record of Tsunami and Great Earthquakes in Mexico: Implications for Hazard Assessment and Prevention Planning.
Ma. Teresa Ramirez-Herrera
Geographic indices and relative tectonic uplift in the Guerrero sector of the Mexican forearc.
Moisés Contreras & Leonardo Ramirez-Guzman
Seismic Intensity Maps for Mexico City and some applications for emergency response.

10. RESPONSE, MEDIA AND HUMANISTIC OUTLOOK
MODERATOR: JULIO RUBIO
Roland Tolentino
Representations of Post-Disaster Response and Recovery: Disasters in Philippine Cinema.
Mireia Pacheco
Literature review of humanitarian logistics research. Trends and challenges in preparedness area.
Cavin White
Community resilience or disaster risk reduction? The experience of the Red Cross Movement in managing conflicting expectations.
Armin Gomez-Barrios
Impacts of Dark Tourism Following Sichuan Earthquake in China.
David Ortiz Haro (ON-LINE)
The importance of integral studies of collective and collaborative citizen behaviors for facing catastrophes.
BEING PART OF TECNOLÓGICO DE MONTERREY MEANS:

- 4,222 ENTERPRISES INCUBATED IN OUR ENTREPRENEURSHIP HUB
- 2,469 LEARNING COMMUNITY CENTERS RECEIVING OUR SUPPORT
- 93,168 ALUMNI THROUGHOUT OUR 26 CAMPUS NATIONWIDE
- 9,916 PROFESSORS COMMITTED WITH OUR NEW ON CHALLENGE-LEARNING-BASED EDUCATIONAL MODEL, TEC21
- 40+ RESEARCH GROUPS WITH STRATEGIC APPROACH TO SOLVE SOCIAL PROBLEMS

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