



**NATECH 2022**  
6to Simposio Internacional de Accidentes Tecnológicos  
Desencadenados por Eventos de Origen Natural

# Schedule

6th International Symposium on Natural Hazard-Triggered Technological Accidents:  
Global Perspectives for Natech Risk Management

## FIRST DAY

TIME (COL) March 10th	TIME (CET) March 10th	TIME (JST) March 11th	Event
17:00 - 17:20	23:00 - 23:20	7:00 - 7:20	Opening
17:20 - 17:45	23:20 - 23:45	7:20 - 7:45	<b>PLENARY SESSION</b> Felipe Muñoz <i>ECOPETROL</i>

TIME			1ST DAY MAIN SESSION	1ST DAY PARALLEL SESSION (ONLINE)
(COL) March 10th	(CET) March 10th	(JST) March 11th	<b>1st session</b> Public stakeholder initiatives for Natech Risk Management Chair: María Camila Suárez	<b>3rd session</b> Natech Research: Case Studies in Colombia Chair: Alexander Guzmán
17:45 - 18:00	23:45 - 00:00	7:45 - 8:00	<b>NATECH'S EFFORTS IN THE COLOMBIAN MINING AND ENERGY SECTOR</b>  Elsa Lorena Sánchez Gómez <i>Ministry of Mines and Energy, Colombia</i> (SPANISH, ENGLISH, JAPANESE, ON-SITE)	IDENTIFICATION AND ANALYSIS OF LANDSLIDE EVENTS IN HYDROCARBON TRANSMISSION PIPELINES  Lina Parra <i>Graduate School of Engineering, University of Kyoto, Japan</i> (SPANISH, VIRTUAL)

18:00 - 18:15	00:00 - 00:15	8:00 - 8:15	<p><b>A NATECH HYDROCARBON EVENT THAT COULD HAVE BEEN AVOIDED IN PUTUMAYO</b></p> <p>Gladys Puerto <i>National Environmental Licensing Agency (ANLA), Colombia</i></p> <p>(SPANISH, ENGLISH, JAPANESE, ON-SITE)</p>	<p><b>MULTITEMPORAL EVALUATION OF COMMUNITY RESILIENCE TO TECHNOLOGICAL RISK DISASTERS IN COMMUNE 10 OF THE MUNICIPALITY OF DOSQUEBRADAS</b></p> <p>Evelin Langebeck y Nicolás Giraldo Hernández <i>Faculty of Engineering and Architecture, Catholic University of Manizales, Colombia</i></p> <p>(SPANISH, VIRTUAL)</p>
18:15 - 8:30	00:15 - 00:30	8:15 - 8:30	<p><b>METHODOLOGY FOR THE DETERMINATION OF NATECH SCENARIO VULNERABILITY INDEXES TO BE INCLUDED IN THE METROPOLITAN AREA OF THE ABURRÁ VALLEY TERRITORIAL MANAGEMENT</b></p> <p>Marco Fidel Gamboa <i>EAFIT University, Colombia (Author)</i> <i>Metropolitan Area of Aburrá Valley (Contracting Entity)</i></p> <p>(SPANISH, ENGLISH, JAPANESE, ON-SITE)</p>	<p><b>CONSIDERATIONS FOR A MORE INCLUSIVE NATIONAL CONTINGENCY PLAN: KNOWLEDGE OF TRADITIONAL AND NON-TRADITIONAL COMMUNITIES</b></p> <p>Itzayana González <i>Federal University of Rio Grande do Sul, Brazil</i></p> <p>(SPANISH, VIRTUAL)</p>
18:30 - 18:40	00:30 - 00:40	8:30 - 8:40	<b>Q&amp;A session</b>	<b>Q&amp;A session</b>
18:40 - 18:50	00:40 - 00:50	8:40 - 8:50	<b>Coffee Break and stands</b>	<b>Coffe Break</b>
<b>(COL) March 10th</b>	<b>(CET) March 11th</b>	<b>(JST) March 11th</b>	<p><b>2nd session</b> <b>Tsunami Natech Risk Assessment</b> Chair: Aoki Shin-ichi</p>	<p><b>4th session</b> <b>Advances in Natech Risk Communication, Perception, and Education</b> Chair: Subhajyoti Samaddar</p>
18:50 - 19:05	00:45 - 1:05	8:50 - 9:05	<p><b>THE URGENT NEED TO CARRY OUT PROBABILISTIC TSUNAMI HAZARD STUDIES IN COLOMBIA: IMPLICATIONS FOR THE PORT, FISHING AND OIL INDUSTRY</b></p> <p>Erick Velasco-Reyes <i>Earth Science Department, Tohoku University, Japan</i></p> <p>(SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>A MULTIPLE PERSPECTIVE ON THE STATE OF NATECH RISK MANAGEMENT</b></p> <p>Yiwen Pan <i>Institute for Disaster Management and Reconstruction, Sichuan University, China</i></p> <p>(ENGLISH, VIRTUAL)</p>

19:05 - 19:20	1:05 - 1:20	9:05 - 9:20	<p><b>TOWARDS PROBABILISTIC TSUNAMI-TRIGGERED OIL SPILL FIRE HAZARD ASSESSMENT: A PRELIMINARY UNCERTAINTY ANALYSIS</b></p> <p>Tomoaki Nishino  <i>Disaster Prevention Research Institute, Kyoto University, Japan</i>            (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>THE SIGNIFICANCE OF THE INTERNAL AND EXTERNAL SYNERGISTIC EFFECTS IN NATECH HAZARDS</b></p> <p>Zhichao He  <i>Institute of Public Safety Research, Department of Engineering Physics, Tsinghua University, Key Laboratory of Comprehensive Emergency Response Science, China</i>            (ENGLISH, VIRTUAL)</p>
19:20 - 19:35	1:20 - 1:35	9:20 - 9:35	<p><b>RISKS ASSOCIATED WITH FLOATING OBJECTS AROUND COASTAL BUILT ENVIRONMENTS DURING TSUNAMI</b></p> <p>Renne Josiah  <i>Osaka University, Japan</i>            (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>A SERIOUS GAMING APPROACH FOR NATECH RISK AWARENESS AND CHEMICAL INFORMATION DISCLOSURE</b></p> <p>Dimitrios Tzioutzios  <i>Department of Urban Management, Graduate School of Engineering, Kyoto University, Japan</i>            (ENGLISH, VIRTUAL)</p>
19:35 - 19:50	1:35 - 1:50	9:35 - 9:50	<p><b>OIL SPILL SIMULATION CAUSED BY TSUNAMI AND EVALUATION OF THE GOVERNMENT'S MEASUREMENTS AT OSAKA BAY</b></p> <p>Shoken Nakase  <i>Yokohama National University, Japan</i>            (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>INEQUALITY TO NATECH RESILIENCE: SOCIAL DIMENSIONS IN NATECH VULNERABILITY ANALYSIS</b></p> <p>Khanin Hutanuwatr  <i>Urban and Regional Planning Program, Faculty of Architecture Art and Design, King Mongkut's Institute of Technology Ladkrabang, Thailand</i>            (ENGLISH, VIRTUAL)</p>
19:50 - 20:05	1:50 - 2:05	9:50 - 10:05	<p><b>RISK ASSESSMENT OF SECONDARY DISASTERS BY TSUNAMI DEBRIS IN OSAKA BAY WITH OCEAN AND INUNDATION MODEL CONSIDERING METEOROLOGICAL EXTERNAL FORCES</b></p> <p>Masayasu Irie  <i>Osaka University, Japan</i>            (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>EXPANDING THE NATECH HORIZON BY CONSIDERING IMPLEMENTATION: WHY AN ALUMINUM FACTORY EXPLOSION WAS A SURPRISE TO THE LOCAL COMMUNITY</b></p> <p>Norio Okada<sup>1</sup> and Robert Goble<sup>2</sup>  <i>1 Kwansai Gakuin University, Japan</i>  <i>2 Clark University, USA</i>            (ENGLISH, VIRTUAL)</p>
20:05 - 20:15	2:05 - 2:15	10:05 - 10:15	<p><b>Q&amp;A session</b></p>	<p><b>Q&amp;A session</b></p>
20:15 - 20:20	2:15 - 2:20	10:15 - 10:20	<p><b>First day closing and acknowledgments, Lina Dorado</b></p>	

**SECOND DAY**

(COL) March 11th	(CET) March 11th	(JST) March 11th	Event
8:00 - 8:05	14:00 - 14:05	22:00 - 22:05	2nd day opening, Lina Dorado

TIME			2ND DAY MAIN SESSION (AUDITORIUM)	2ND DAY PARALLEL SESSION (ONLINE)
(COL) March 11th	(CET) March 11th	(JST) March 11th	5th session Natech Risk Factors Modeling Chair: Guoyi Han	7th session Natech Risk in Hazardous Materials Transmission Pipelines Chair: Mauricio Sánchez
8:05 - 8:20	14:05 - 14:20	22:05 - 22:20	<p><b>ASSET PERFORMANCE MANAGEMENT FOCUSING ON GEOHAZARD ANALYSIS</b></p> <p>Jaime Hernán Aristizábal Ceballos <i>CENIT Transport and Logistics of Hydrocarbons, Colombia</i> (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>DEVELOPING A SIMPLIFIED MODEL FOR ASSESSING THE PIPELINE FAILURE PROBABILITY DUE TO MULTIPLE INDEPENDENT SOURCES OF RAINFALL-INDUCED DEBRIS FLOW</b></p> <p>Su Song <i>Kyoto University, Japan</i> (ENGLISH, VIRTUAL)</p>
8:20 - 8:35	14:20 - 14:35	22:20 - 22:35	<p><b>AN INNOVATIVE ACCIDENT PARADIGM TO SUPPORT A COMPREHENSIVE NATECH RISK ASSESSMENT</b></p> <p>Alessio Misuri <i>LISES – Laboratory of Industrial Safety and Environmental Sustainability, University of Bologna, Italy</i> (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>ASSESSMENT OF FAILURE FREQUENCIES OF PIPELINES CAUSED BY EARTHQUAKES IN NATECH FRAMEWORK</b></p> <p>Fabiola Amaducci <i>University of Bologna, Italy</i> (ENGLISH, VIRTUAL)</p>
8:35 - 8:50	14:35 - 14:50	22:35 - 22:50	<p><b>HOW WE ASSESS THE NATECH RISK UNDER A CHANGING CLIMATE?</b></p> <p>Xiaolong Luo <i>Institute for Disaster Management and Reconstruction, Sichuan University, China</i> (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	<p><b>WHAT HAVE WE ADVANCED IN NATECH APPROACHES IN PIPELINES?</b></p> <p>Rafael Amaya Gómez <i>Los Andes University, Colombia</i> (ENGLISH, VIRTUAL)</p>

8:50 - 9:05	14:50 - 15:05	22:50 - 23:05	<p><b>ANALYZING THE FATE OF HAZARDOUS MATERIALS RELEASED IN FLOODWATERS</b></p> <p>Amos Necci <i>European Commission Joint Research Centre, Italy</i> (SPANISH, ENGLISH, JAPANESE, VIRTUAL)</p>	Q&A session
9:05 - 9:15	15:05 - 15:15	23:05 - 23:15	Q&A session	
9:15 - 9:35	15:15 - 15:35	23:15 - 23:35	Coffee Break and stands	Coffee Break

(COL) March 11th	(CET) March 11th	(JST) March 11th	<p><b>6th session</b> Natech Risk and Emergency Response in Colombia Chair: Lina Dorado</p>	<p><b>8th session</b> Methodologies and Tools for Holistic, Systemic, and Cascading Risk Analysis Chair: Valerio Cozzani</p>
9:35 - 9:50	15:35 - 15:50	23:35 - 23:50	<p><b>AN OVERVIEW OF NATECH RISKS IN COLOMBIA</b></p> <p>María Camila Suárez <i>National Unit for Disaster Risk Management, Colombia</i> (SPANISH, ENGLISH, JAPANESE, ON-SITE)</p>	<p><b>THE SYNERGY OF VEGETATION AND METEOROLOGICAL CONDITIONS AFFECTING THE NORWEGIAN POWER GRID: AN EXAMPLE OF NATECH RISK INFLUENCING FACTOR</b></p> <p>Nicola Paltrinieri <i>Department of Mechanical and Industrial Engineering, Norwegian University of Science and Technology, Norway</i> (ENGLISH, VIRTUAL)</p>
9:50 - 10:05	15:50 - 16:05	23:50 - 00:05	<p><b>DISASTER MANAGEMENT AND EMERGENCY RESPONSE IN THE NATECH CONTEXT: THE CASE OF THE MUNICIPALITY OF FACATATIVÁ</b></p> <p>Gerson David Cordero E. <i>Facatativa Municipal Mayor's Office, Colombia</i> (SPANISH, ENGLISH, JAPANESE, ON-SITE)</p>	<p><b>SAFETY DISTANCES TO AVOID NATECH ACCIDENTS CAUSED BY WILDFIRES IN THE WILD-INDUSTRIAL-INTERFACE</b></p> <p>Federica Ricci <i>Department of Civil, Chemical, Environmental, and Materials Engineering, LISES Group – Laboratory of Industrial Safety and Environmental Sustainability, University of Bologna, Italy</i> (ENGLISH, VIRTUAL)</p>

10:05 - 10:20	16:05 - 16:20	00:05 - 00:20	<p><b>GUIDELINES OF THE NATIONAL NAVY FOR EMERGENCY RESPONSE TO SPILLS OF NOXIOUS SUBSTANCES</b></p> <p>Angel Leonardo Rojas Rodriguez  <i>Admiral Padilla Naval Cadet School, Colombian Navy, Colombia</i>            (SPANISH, ENGLISH, JAPANESE, ON-SITE)</p>	<p><b>NATECH ACCIDENT MONITORING AND RISK ANALYSIS USING DATABASE</b></p> <p>Elena Petrova  <i>Faculty of Geography, Lomonosov Moscow State University, Russia</i>            (ENGLISH, VIRTUAL)</p>
10:20 - 10:30	16:20 - 16:30	00:20 - 00:30	<b>Q&amp;A session</b>	<b>Q&amp;A session</b>
10:30 - 11:00	16:30 - 17:00	00:30 - 01:00	<p><b>PANEL SESSION AND CLOSING</b></p> <p>Professor Ana Maria Cruz</p>	