



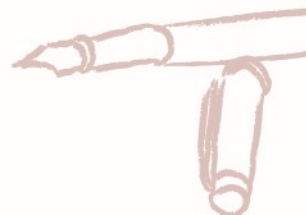
**NANYANG
TECHNOLOGICAL
UNIVERSITY**
SINGAPORE

Institute of Catastrophe Risk Management
**Ninth International
Symposium on
Catastrophe Risk Management**

CLOSING THE PROTECTION GAPS

– Challenges and Opportunities

7 AUGUST 2018 | SINGAPORE



NatCatDAX Alliance Founding Members:



NatCatDAX Consortium Partners:



Symposium Sponsors:



PROGRAMME

0820 | Registration and Arrival

SESSION 1: Opening Session

0900 | **Welcome Greetings**
Professor Tso-Chien Pan
Executive Director,
Institute of Catastrophe Risk Management
Nanyang Technological University

0910 | **Presentation 1**
**Future of Cat Insurance Expansion -
An Asian story**
Professor Haresh C Shah
Professor Emeritus, Stanford University
Chairman, International Advisory Board, ICRM

0930 | **Presentation 2**
**Closing the Protection Gap – What
would Success Look Like?**
Mr Malcolm C Steingold
Former CEO, Aon Benfield Asia Pacific
Member, International Advisory Board, ICRM

0950 | **Presentation 3**
Insuring Asian Resilience
Mr Rowan M Douglas
CBE; Head of Capital, Science & Policy
Practice, Willis Towers Watson
Member, International Advisory Board, ICRM

1010 | Morning Refreshment

SESSION 2: Reducing the Protection Gap - Cross National Views

1040 | **Presentation 4**
**Lessons Learned from International
Catastrophe Pools with Applications to
Financing Asia's Exposure to Extreme
Weather**
Professor Shaun S Wang
FCAS; Nanyang Business School
Nanyang Technological University

1100 | **Presentation 5**
**From CCRIF to SEADRIF: WB's Efforts
in Developing Cat Pool Solutions and
Lessons Learned**
Mr Francis Ghesquiere
Practice Manager
Urban Development and Disaster Risk
Management, East Asia & Pacific Region
The World Bank

1120 | **Presentation 6**
**Closing the Protection Gap: Lessons
learned from an insurer's global
initiatives**
Mr Kenrick Law
Regional CEO
Head of P&C Client Management, Asia Pacific
Allianz SE Reinsurance Branch Asia Pacific
Member, International Advisory Board, ICRM

1140 | **Presentation 7**
**Natural Catastrophe Modelling & Risk
Transfer Solutions**
Mr Hemant Nagpal
Director, Model Product Management
Risk Management Solutions

1200 | **Panel Discussion**
Panel Chair:
Mr Malcolm C Steingold
Former CEO, Aon Benfield Asia Pacific
Member, International Advisory Board, ICRM

Panelist:

1. **Professor Shaun S Wang**, FCAS; Nanyang Business School, Nanyang Technological University
2. **Mr Francis Ghesquiere**, Practice Manager, Urban Development and Disaster Risk Management, East Asia & Pacific Region, The World Bank
3. **Mr Kenrick Law**, Regional CEO, Head of P&C Client Management, Asia Pacific, Allianz SE Reinsurance Branch Asia Pacific Member of International Advisory Board, ICRM
4. **Mr Hemant Nagpal**, Director, Model Product Management, Risk Management Solutions

1230 | Lunch Break

SESSION 3: Risk Pooling - Regional Views

1330 | **Presentation 8**
**Establishing Exposure Databases for
Disaster Insurance Purposes in the
Philippines: Solutions and Lessons
Learned Applicable for the Asian
Region**
Dr Fouad Bendimerad
Ph.D., P.E.
Chairman and Executive Director
Earthquakes and Megacities Initiative

1350 | **Presentation 9**
**Trends in Losses and Insurance Gap of
Natural Disasters Globally and for
Southeast Asia**
Professor Peter Höeppe
Chair of Munich Climate Insurance Initiative
Former Head, Geo Risks Research of Munich Re
Adjunct Professor, ICRM, NTU

PROGRAMME

1410 | **Presentation 10**
Bridging the Nat Cat Protection Gap via Digital Solutions
Mr James Park

Regional Head of Property Treaty Underwriting (India, Japan, Korea, and South East Asia), Munich Re

1430 | **Presentation 11**
Maipark's Experience as a National Pool
Mr Fiza Wira Atmaja

Senior Vice President, Group Head of Research, Development and Innovation, PT Reasuransi MAIPARK, Indonesia

1450 | **Presentation 12**
China Pilot Nat Cat Insurance Schemes: An Effective Way to Enlarge the Insurance Penetration
Dr Junhua Zhou

Director of China Reinsurance Catastrophe Research Center, China Reinsurance (Group) Corporation
Head of Innovative Business Department, China Property & Casualty Reinsurance Company

1510 | **Panel Discussion**
Panel Chair:
Mr Rowan M Douglas

CBE; Head of Capital, Science & Policy Practice, Willis Towers Watson
Member of International Advisory Board, ICRM

Panelist:

1. Dr Fouad Bendimerad, Ph.D., P.E., Chairman and Executive Director, Earthquakes and Megacities Initiative
2. Professor Peter Höeppe, Chair of Munich Climate Insurance Initiative, Former Head, Geo Risks Research of Munich Re
Adjunct Professor, ICRM, NTU
3. Mr James Park, Regional Head of Property Treaty Underwriting, (India, Japan, Korea, and South East Asia), Munich Re
4. Mr Fiza Wira Atmaja, Senior Vice President, Group Head of Research, Development and Innovation, PT Reasuransi MAIPARK, Indonesia
5. Dr Junhua Zhou, Director of China Reinsurance Catastrophe Research Center, China Reinsurance (Group) Corporation
Head of Innovative Business Department, China Property & Casualty Reinsurance Company

1540 | **Afternoon Refreshment**

SESSION 4: Enabling Parametric Risk Transfer Solutions

1610 | **Presentation 13**
GEM Global Hazard and Risk Model for Asia
Dr Marco Pagani

GEM Seismic Hazard Coordinator
Global Earthquake Model (GEM) Foundation

1630 | **Presentation 14**
Pre- & Post-Earthquake Applications of Large-Scale Dynamic Analysis of Cities
Professor Xinzheng Lu

Civil Engineering Department
Tsinghua University, Beijing, China

1650 | **Presentation 15**
Insurance that Pays Out without Proof of Loss?
Dr Alexander Pui

Natural Catastrophe Manager (APAC)
Swiss Re Corporate Solution

1710 | **Presentation 16**
Protection Gap for Indirect Business Interruption
Dr Gordon Woo

Catastrophist, Risk Management Solutions, London, UK
Adjunct Professor, ICRM, NTU

1730 | **Panel Discussion**
Panel Chair:
Professor Edmond Lo

Deputy Director, Institute of Catastrophe Risk Management, NTU

Panelist:

1. Dr Marco Pagani, GEM Seismic Hazard Coordinator, Global Earthquake Model (GEM) Foundation
2. Professor Xinzheng Lu, Civil Engineering Department, Tsinghua University, Beijing, China
3. Dr Alexander Pui, Natural Catastrophe Manager (APAC), Swiss Re Corporate Solution
4. Dr Gordon Woo, Catastrophist, Risk Management Solutions, London, UK; Adjunct Professor, ICRM, NTU

1800 | **Closing Remarks**
Professor Tso-Chien Pan

Executive Director,
Institute of Catastrophe Risk Management
Nanyang Technological University

1810 | **Cocktail Reception**

1930 | **End**

POSTER SESSION

Natural Catastrophe Data Analytic Exchange (NatCatDAX) Initiative: Databases

- 1. Automatic Extraction of Urban Building Area and Height using High Resolution Satellite Imagery**
Assoc Prof Edmond Y.M. Lo, Prof Tso-Chien Pan and Dr Velautham Daksiya
Institute of Catastrophe Risk Management, NTU, Singapore
Mr Kuo-Shih Shao, Mr En-Kai Lin, Mr Yi-Rung Chuang and Mr Kuan-Yi Lee
Disaster Prevention Technology Research Center
Sinotech Engineering Consultants, Inc., Taipei, Taiwan
- 2. Building Attribute Ruleset for Taipei Building Stock**
Mr Kuo-Shih Shao, Mr En-Kai Lin, Mr Yi-Rung Chuang and Mr Kuan-Yi Lee
Disaster Prevention Technology Research Center
Sinotech Engineering Consultants, Inc., Taipei, Taiwan
Prof Tso-Chien Pan and Assoc Prof Edmond Y.M. Lo
Institute of Catastrophe Risk Management, NTU, Singapore
- 3. Estimating Building Value from Capital Stock – Taipei, Taiwan**
Ms Mansi Kalra, Adj Prof Pane Stojanovski, Assoc Prof Edmond Y.M. Lo and Prof Tso-Chien Pan
Institute of Catastrophe Risk Management, NTU, Singapore
- 4. Harvesting Loss and Damage Information of Disasters by Automated Analytics of Online News**
Assoc Prof Kezhi Mao
School of Electrical & Electronic Engineering, NTU, Singapore
Mr Qi Li
Institute of Catastrophe Risk Management, NTU, Singapore

Nat Cat Risk Studies in Asian Cities

- 5. Assessing Spatial and Temporal Urban Growth Patterns in Major Southeast Asian Cities**
Mr Shankar Acharya K, Assoc Prof Edmond Y.M. Lo and Dr Pradeep Mandapaka
Institute of Catastrophe Risk Management, NTU, Singapore
Assoc Prof Kevin Xiao Gaoxi
School of Electrical & Electronic Engineering, NTU, Singapore
- 6. Evaluation of Natural Catastrophe Impact on the Pearl River Delta (PRD) Region - Earthquake Risk**
Prof Tso-Chien Pan, Assoc Prof Edmond Y.M. Lo and Dr Wenqi Du
Institute of Catastrophe Risk Management, NTU, Singapore
Prof Cheng Su, Dr Heqing Mu and Dr Yichuan Deng
South China University of Technology
Dr Huiqiang Zuo
China Re
- 7. Evaluation of Natural Catastrophe Impact on the Pearl River Delta (PRD) Region - Flood Risk**
Prof Tso-Chien Pan, Assoc Prof Edmond Y.M. Lo and Dr Wei Jian
Institute of Catastrophe Risk Management, NTU, Singapore
Assoc Prof Adam Douglas Switzer
Asian School of the Environment, NTU, Singapore
Dr Linlin Li
Earth Observatory of Singapore, NTU, Singapore
Prof Cheng Su, Prof Xiangju Cheng, Assoc Prof Zhaoli Wang and Dr Chengguang Lai
South China University of Technology
Dr Huiqiang Zuo
China Re
- 8. Macro-Level Risk Assessment in Megacities**
Prof Tso-Chien Pan and Ms Gizem Mestav Sarica
Institute of Catastrophe Risk Management, NTU, Singapore
- 9. Modelling of Multi-Sectoral Critical Infrastructure Interdependencies for Vulnerability Analysis**
Dr Jiwei Lin, Prof Tso-Chien Pan and Assoc Prof Edmond Y.M. Lo
Institute of Catastrophe Risk Management, NTU, Singapore

Modelling of Nat Cat Hazards

- 10. Application of Microtremor Array Recordings for the Estimation of S-Wave Velocity Structure of Singapore**
Dr Meya Yanger Walling and Prof Tso-Chien Pan
Institute of Catastrophe Risk Management, NTU, Singapore
- 11. Modelling of Cold Surges in South China**
Mr Anupam Kumar and Assoc Prof Edmond Y.M. Lo
Institute of Catastrophe Risk Management, NTU, Singapore
Assoc Prof Adam Douglas Switzer
Asian School of the Environment, NTU, Singapore
- 12. Spatiotemporal Patterns of Rainfall Extremes in Southeast Asia: Implications for Flood Risk Assessment**
Dr Pradeep Mandapaka, Dr Velautham Daksiya and Assoc Prof Edmond Y.M. Lo
Institute of Catastrophe Risk Management, NTU, Singapore