

# Program: Part 1

## Dec. 14 (Wed.)

09:00-17:00 Registration

### **Session 1: Plenary – Opening Ceremony and Keynote addresses -**

Chairperson: Teruyuki Kato (ERI, Japan)

09:30-09:35 Opening Address

Shuhei Okubo (ERI, Director, Japan)

09:35-09:45 Opening Remarks

Teruyuki Kato (ERI, Japan)

(Intermission)

09:50-10:40 [P1-1-1] Keynote Lecture: The Next Giant Sumatran Megathrust Earthquake: From Science to Human Welfare

Kerry Sieh (USA)

10:40-11:30 [P1-1-2] Keynote Lecture: Tsunamis –Their Coastal Effects and Defense Works –

Nobuo Shuto (Nippon University, Japan)

(lunch time) 11:30-13:00

### **Session 2-1: Mechanism and future probability of the 2004 Giant Earthquake and Tsunami in Indian Ocean**

Chairperson: Kenji Satake,

13:00-13:15 [P1-2-1-1] Tsunami hazard and vulnerability along the Myanmar coast

Kenji Satake, Than Tin Aung, Yuki Sawai, Yukinobu Okamura, Kyaw Soe Wing, Win Swe, Chit Swe, Tint Lwin Swe, Soe Thura Tun, Maung Maung Soe, Thant Zin Oo, and Saw Htwe Zaw

13:15- 13:30 [P1-2-1-2] Coseismic uplift of the Andaman Islands associated with the Sumatra-Andaman Earthquake of 2004 and the recurrence history of gigantic earthquakes

Hajime Kayanne, Yasutaka Ikeda, Tomoo Echigo, Masanobu Shishikura and Takanobu Kamataki

13:30-13:45 [P1-2-1-3] Ongoing efforts to understand the style of deformation and the seismic/tsunami history of the Andaman-Nicobar region C. P. Rajendran and Kusala Rajendran

13:45-14:00 [P1-2-1-4] Coseismic Land-level changes caused by 26 December, 2004 Sumatra earthquake in Andaman and Nicobar Islands, India

Javed N. Malik and C.V.R. Murty

14:00-14:15 [P1-2-1-5] Macroseismic, tsunami surveys and GPS monitoring in Andaman and Nicobar Islands in the aftermath of the Great Mw9.0 earthquake of 26th December 2004 – a brief appraisal

Ashish Kumar Ghosh Roy, Prasun Jana, Sandeep Bardhan, Shaikh Rezaul Basir, Tapan Ghosh, Thiruvalluvar Saranathan Giritharan, Pranab Chakraborty and Dulal Chandra Ghosh

14:15-14:30 [P1-2-1-6] Earthquake Disaster Mitigation Initiatives in Myanmar

Than Myint

14:30-14:45 [P1-2-1-7] Current Situation on Modern and Paleo-seismology in Myanmar

Than Myint and Win Swe

14:45-15:00 [P1-2-1-8] Characteristics of Post-seismic relaxation in Andaman-Nicobar region from continuous GPS measurements

C. D. Reddy, Sanjay K Prajapati, Teruyuki Kato

(coffee break: 15:00-15:15)

15:15-15:30 [P1-2-1-9] Kinematics of the 2004 Great Sumatra Earthquake from Static Co-seismic GPS Offsets

Paramesh Banerjee, Roland Burgmann and Fred Pollitz

15:30-15:45 [P1-2-1-10] Crustal deformation associated with the 2004 Sumatra earthquake from GPS observation

Agustan, Irwan Meilano, Yasaku Oota, Takeo Ito, Fumiaki Kimata,

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|             | Dudy Darmawan, Heri Andreas, Hasannudin Z. Abidin, Mipi A. Kusuma, Didik Sugiyanto, Takao Tabei  |
| 15:45-16:00 | [P1-2-1-11] Postseismic deformation of 2004 Sumatra earthquake from continuous GPS observation in Aceh   |
| 16:00-16:15 | Didik Sugiyanto, Yasaku Ohta, Irwan Meilano, Takeo Ito, Fumiaki Kimata and Takao Tabei   |
| 16:15-16:30 | [P1-2-1-12] Seismological Activities, Tsunami Effect and Prevention in Myanmar<br>Myint Soe  |
| 16:30-16:45 | [P1-2-1-13] The rupture process of 2004 Sumatra-Andaman Earthquake viewing from the data obtained by the strainmeters of JMA<br>Yasuhiro Yoshida and Hidemi Ito  |
| 16:45-17:00 | [P1-2-1-14] Changes in seismicity associated with the Sumatra earthquake and their implications for the stress state<br>Masajiro Imoto, Shozo Matsumura, Shin'ichi Noguchi and Sachiko Tanaka  |
| 17:00-17:15 | [P1-2-1-15] Mechanism of the 2004 great Sumatra-Andaman earthquake estimated from tsunami waveforms<br>Yuichiro Tanioka, Sin-Iti Iwasaki, Yoshinobu Tsuji, Yuichi Nishimura, Hiroyuki Matsumoto, Syusaku Inoue, Yuichi Namegaya, and Yudhicara |
| 17:20-17:50 | [P1-2-1-16] Development of Indonesia Permanent Sea Level Monitoring Network For Supporting Indian Ocean Tsunami Warning System<br>Parluhutan Maurung   |
|             | Press Briefing   |

(Reception: 18:00-20:00 : DVD show by Mikio Satomura(Shizuoka Univ.))

## **Session 2-2 (Joint): Human resource program for the education and outreach and Restoration program and urban design**

Chairperson: Hirokazu Iemura,

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| 13:00-13:15 | [P1-2-2-1] Report on the Post-Tsunami Reconstruction Condition in Sri Lanka affected by 2004 Sumatra Tsunami<br>Osamu Murao, Hideaki Nakazato, and Nihal Rupasinghe  |
| 13:15-13:30 | [P1-2-2-2] Post Tsunami Construction, Rehabilitation & Restoration Program in Sri Lanka<br>Nihal Rupasinghe and A A Virajh Dias  |
| 13:30-13:45 | [P1-2-2-3] Identification of tsunami wave loads based on damage assessment of road structures in Sri Lanka due to the 2004 Giant Earthquake and<br>Tsunami in the Indian Ocean<br>Gaku Shoji, and Yoichiro Mori                |
| 13:45-14:00 | [P1-2-2-4] Damage of Infrastructures Caused by December 2004 Great Earthquake and Tsunami in Aceh Region Indonesia<br>Agussalim  |
| 14:00-14:15 | [P1-2-2-5] Tsunami Questionnaires and Bridge Damage Surveys in Banda Aceh for City Restoration Planning and Urban Design<br>Hirokazu Iemura, Yoshikazu Takahashi, Pariatmono Sukamdo, Mulyo Harris Pradono, and Rudi Kurniawan |
| 14:15-14:30 | [P1-2-2-6] The Challenge of Rehabilitation and Reconstruction of Banda Aceh City<br>Taufiq Saidi and Elysa Wulandary, MT   |
| 14:30-14:45 | [P1-2-2-7] Damage and Restoration of Lifeline in Thailand due to the 2004 Giant Earthquake and Tsunami in the Indian Ocean<br>Shiro Takada, Yasuko Kuwata and Arun Pieta   |

(coffee break: 14:45-15:00)

Chairperson: Koshun Yamaoka,

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| 15:00-15:15 | [P1-2-2-8] Human Resource Program for Education and Outreach Agenda: Possibilities in India and Sri Lanka<br>Hirotsune Kimura                       |
| 15:15-15:30 | [P1-2-2-9] Restoration and Urban Design in relation to Habaraduwa Township in Galle District : A Sociological Perspective<br>Imaduwa V. Edirisinghe |
| 15:30-15:45 | [P1-2-2-10] Community Base Action in costal forest rehabilitation in Tsunami effected area of   |

Aceh Province, Indonesia

Helmi Thomin

15:45-16:00 [P1-2-2-11] Sustaining Community Outreach Programmes : Learning from past experiences

Manu Gupta, Anshu Sharma, Suman Nag and Manisha Munjal

16:00-16:15 [P1-2-2-12] Establishment Plan of Aceh Heritage Tsunami Estate (AHTE)

Hasanudin Z. Abidin

16:15-16:30 [P1-2-2-13] Tsunami Risk Awareness in the Affected Communities

Tetsushi Kurita

16:30-16:45 [P1-2-2-14] Strengthening Communities Through Partnership – The ADRRN Model

Aishah Mohd Amin

16:45-17:00 [P1-2-2-15] Education on the Earthquake Disaster Reduction for International Students in Japan

Koshun Yamaoka, Keiji Doi and Satoru Suhara

(Reception: 18:00-20:00 : DVD show by Mikio Satomura(Shizuoka Univ.))

## **Session 2-3 : Effective tsunami warning system and mitigation**

Chairperson: Fumihiko Imamura,

- 13:00-13:15 [P1-2-3-1] Field Investigation of the 2004 Indian ocean tsunami on the affected coast  
Fumihiko Imamura, Shunichi Koshimura, Kazuo Goto, Hideaki Yanagisawa and Yoko Iwabuchi
- 13:15-13:30 [P1-2-3-2] Jawa-Sumatran Tsunamis, their Modeling, and Mitigation  
Hamzah Latief, Safwan Hadi, Haris Sunendar, Aditya R. Gusman, and Fumihiko Imamura
- 13:30-13:45 [P1-2-3-3] Forecasting of tsunami amplitudes by the Neuro-genetic algorithm  
Seree Supharatid
- 13:45-14:00 [P1-2-3-4] Sedimentation from the December 26<sup>th</sup> 2004 South Asia tsunami in northern Sumatra, Indonesia  
Andrew Lathrop Moore, Yuichi Nishimura, Takanoobu Kamataki and Guy Gelfenbaum
- 14:00-14:15 [P1-2-3-5] Comparing the Tsunamis of 2004 and 2005 in West Sumatra, Indonesia  
Jose C. Borrero, Bruce Jaffe, Brian McAdoo, Gegar Prasetya and members of the International Tsunami Survey Team (ITST)
- 14:15-14:30 [P1-2-3-6] Tsunami warning system in Japan  
Shin'ya Tsukada
- 14:30-14:45 [P1-2-3-7] Effect of earthquake rupture mechanism on tsunami generation and propagation  
–Toward examination of a possible tsunami warning system applicable to M9 earthquakes –  
Kenji Hirata
- 14:45-15:00 [P1-2-3-8] Offshore Tsunami Monitoring Network Design using GPS Buoys and Coastal on-site Sensors  
Toshihiko Nagai
- (coffee break: 15:00-15:15)
- 15:15-15:30 [P1-2-3-9] Proposal for Tsunami Study Program by KORDI  
Sok Kuh Kang, Sung-Dae Kim, and Hee Do Ahn
- 15:30-15:45 [P1-2-3-10] Development of the nationwide tsunami information network in the central and south pacific ocean in Mexico  
José Miguel Montoya Rodriguez and Toshihiko Nagai
- 15:45-16:00 [P1-2-3-11] Current Status of Indonesian Tsunami Early Warning Systems  
Pariatmono and Santosa Y. Warsono
- 16:00-16:15 [P1-2-3-12] Tsunami Damage to Oil Storage Facilities in Aceh Province, Sumatra, Indonesia  
Yozo Goto

(Reception: 18:00-20:00 : DVD show by Mikio Satomura)

- Poster [P1-p-1] Learning tsunami disasters through the puppet play "The Fire of Inamura (Rice Sheaves)"  
Tadashi Kojima, Mikio Satomura, Kunio Ozawa and Waniko
- Poster [P1-p-2] The seismic gap south off Sumatra and active period of the seismicity along the plate boundary between India-Australian and Eurasian plates  
Yuzo Ishikawa

## **Dec. 15 (Thu.)**

9:00-14:00 Registration

### **Session 3: Plenary – interdisciplinary presentations –**

- 9:00-9:15 [P1-3-0-1] Sea bottom shattered by the Sumatra-Andaman Earthquake of 26th December 2004  
Wonn Soh, Yusuf S. Djajadihardja, Yudi Anantasena, Kohsaku Arai, Eiichiro Araki, Safri Burhanuddin, Toshiya Fujiwara, Nugroho D. Hananto, Kenji Hirata, Hananto Kurnio, Hideaki Machiyama, Badrul K. Mustafa, Christian Müller, Leonardo Seeber, Kiyoshi Suyehiro and Kazuki Watanabe
- 9:15-9:30 [P1-3-0-2] Understanding the nature of giant earthquakes and tsunamis in Sumatra-Andaman to restore and establish safer cities around the Indian Ocean Danny Hilman Natawidjaja, Kerry Sieh, Richard Briggs, Mohammed Chlieh, Jean-Philippe Avouac, Jehuda Bock, Linnette Prawirodirdjo, Robert McCaffrey, Cecep Subarya, John Galetzka, and Bambang W. Suwargadi
- 9:30-9:45 [P1-3-0-3] The 2004 Indian Ocean tsunami along the Indian coast: Observed sea levels, run-ups, extent of source region, and future plans  
S.S.C. Sheno
- 9:45-10:00 [P1-3-0-4] Learning from the 2004 Indian Ocean tsunami – Buildings damage and clues for tsunami resistant design  
Panitan Lukkunaprasit<sup>1)</sup> and Anat Ruangrassamee<sup>1)</sup>
- (coffee break: 10:00-10:30)

### **Session 3-1: Mechanism of the 2004 Giant Earthquake and Tsunami in Indian Ocean**

Chair Person: Kenji Satake (AIST., Japan)

- 10:30-10:45 [P1-3-1-1] Changes in Geomagnetic Transfer Functions: Pre and Post Sumatra earthquake  
P B V Subba Rao and C D Reddy
- 10:45-11:30 Discussion

### **Session 3-2 (Joint): Human resource program for the education and outreach and Restoration program and urban design**

Chairperson: Koshun Yamaoka (ERI, Japan)/Hirokazu Iemura (Kyoto Univ., Japan)

- 10:30-10:45 [P1-3-2-1] Gender and Socioeconomic Analysis of Alleviating and Preventing Tsunami Affected Society: A Case Study from Sri Lanka and India  
Hisae Nakanishi
- 10:45-11:00 [P1-3-2-2] Mitigation of tsunami impact on lifelines  
C. Scawthorn
- 11:00-11:30 Discussion

### **Session 3-3 : Effective tsunami warning system and mitigation**

Chairperson: Fumihiko Imamura (Tohoku University)

- 10:30- 11:30 Discussion

(lunch time: 11:30-13:00)

### **Session 4 : Plenary – session summary and action plan toward future**

Chairperson: Eisuke Fujita (NIED, Japan)

- 13:00-13:15 Kenji Satake (AIST, Japan) Summary of Subgroup and discussion
- 13:15-13:30 Koshun Yamaoka (ERI, Japan) Summary of Subgroup and discussion
- 13:30-13:45 Fumihiko Imamura (Tohoku Univ., Japan) Summary of Subgroup and discussion
- 13:45-14:00 Hirokazu Iemura (Kyoto Univ., Japan) Summary of Subgroup and discussion
- (14:00-14:15 Coffee Break)
- 14:15-15:55 Free discussion and adoption of action plan

15:55-16:00      Closing address Teruyuki Kato (ERI, Japan)  
Announcement for the International Symposium by Fujita

(16:00    Adjournment of the Workshop)

16:05-16:35      Press Briefing



## **Program: Part 2**

### **Dec. 16 (Fri.)**

|              |                 |   |
|--------------|-----------------|---|
| 10:00-10:05  | Opening Address | Tsuneo KATAYAMA (NIED, President)         |
| 10:05-10:20  | Guest Speech    | Yuichi ONO (UN/ISDR)                      |
| 10:20-10:35  | Guest Speech    | (MEXT)                                    |
| 10:35-11:05  | Invited Speech  |   |
|              | [P2-0-1]        | Toshibumi Sakata (AESTO, Chair & CEO)     |
| 11:05-11:50  | Keynote Speech  |   |
|              | [P2-0-2]        | Kiyoshi Kurokawa (SCA, Secretary General) |
| (lunch time) | 11:50-13:00     |   |

### **Session 1: Disaster report and Needs of the Affected Countries**

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|----------------|--------------|--|
| 13:00-13:20    | [P2-1-1]     | The December 2004 Sumatran Tsunami: An effort to established national hazard mitigation program<br>Herry Harjono and Jan Sopaheluwakan   |
| 13:20-13:40    | [P2-1-2]     | Disaster Management and Risk Mitigation: India's Experiences and Future Needs<br>Prem P. Pangotra  |
| 13:40-14:00    | [P2-1-3]     | Natural disasters in Bangladesh: GoB's disaster management framework for reducing damages<br>Monirul Hoque   |
| 14:00-14:20    | [P2-1-4]     | Thailand : After its worst tsunami<br>Adichat Surinkum   |
| 14:20-14:40    | [P2-1-5]     | Rapid Assessments on the Physical Impacts of the 26 <sup>th</sup> Dec 2004 Tsunami along the Northwestern Coastline of Malaysia Peninsular<br>Tajul Anuar Jamaluddin and Ibrahim Komoo |
| (coffee break: | 14:40-15:00) |  |



## **Session 2: Proposals for disaster reduction framework in view of Science & Technology**

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| 15:00-15:20 | [P2-2-1] Mechanism and future probability of the 2004 Giant Earthquake and Tsunami in Indian Ocean<br>Kenji Satake, Teruyuki Kato, Hidemi Ito, Masajiro Imoto and Sin-Iti Iwasaki |
| 15:30-15:50 | [P2-2-2] Education and promotion for increasing disaster preparedness<br>Koshun Yamaoka, Hirosune Kimura and Tetsushi Kurita  |
| 15:50-16:10 | [P2-2-3] Effective Tsunami Warning System and Mitigation<br>Fumihiko Imamura, Shinya Tsukada, Kenji Hirata, Norihiko Nagai  |
| 16:10-16:30 | [P2-2-4] Vulnerability of Infrastructures against the Sumatra Earthquake and Tsunami and their Restoration Program<br>Hirokazu Iemura   |
| 16:30-16:50 | General Discussion  |

(close at 16:50)

(Reception 18:00 – 20:00)

**Dec. 17 (Sat.)**

**Session 3: Lessons from Disaster Fields and Needs for Higher Disaster Coping Capacity**

Chair Person: Haruo Hayashi (Kyoto, U., Japan)

9:00- 9:30 [P2-3-1] Not Child's Play: Taking Another Look at Vulnerability in the Light of the Indian Ocean Tsunami and Hurricane Katrina

Greg Bankoff

9:30-10:00 [P2-3-2] Motivation and Capacity Building for Disaster Reduction

Kenji Okazaki

10:00-10:30 [P2-3-3] Matching Goods and People: Emergency Assistance Under Uncertainty

Jin Sato

10:30-11:00 [P2-3-4] Recovery of Aceh Post-Tsunami: Lesson Learnt and Challenges

Saifuddin Bantasyam

11:00-11:30 [P2-3-5] Community based to disaster prevention and management

Ravadee Prasertcharoensuk

11:30-12:00 [P2-3-6] Potential For Incorporating Coping Capacities In Community Based Disaster Management

Manu Gupta and Anshu Sharma

(lunch time: 12:00-13:15)

13:15-13:45 [P2-3-7] Empowerment of Coastal Community in Risk Reduction - Bangladesh Experience

B.M.M. Mozaharul Huq

14:15-14:45 [P2-3-8] Strategy for disaster prevention and reduction

Haruo Hayashi

14:45-15:15 [P2-3-9] How to strengthen Disaster Coping Capacity of a community and a State

Masayuki Watanabe

15:15-15:40 Discussion

(coffee break: 15:40-16:00)

#### **Session 4: For Sustainable Development in Affected Countries – Needs in Research Works and Practices (Panel Discussion)**

16:00-16:45      Co-chair: Tsuneo Katayama (NIED, Japan) and Greg Bankoff (Univ. of Auckland)

Panelists: Haruo Hayashi (Kyoto, U., Japan), Kenji Satake (AIST, Japan),  
Ir.H. Sarwidi (the Islamic Univ. of Indonesia), Jostacio Lapitan(WHO, WKC)

16:45-16:55      Proposals from the symposium      Tsuneo Katayama (NIED, Japan)

16:55-17:00      Closing address

17:00      Adjournment of the Symposium)