

As of April 30, 2009

3rd circular



**IFED2009**

# **Preliminary Program**

Fourth Forum:  
Long-term Policy Making for a Sustainable Society

May 13–16, 2009  
Hotel Daihakone,  
Sengokuhara, Hakone, Kanagawa, Japan

**Sponsored by**  
**Center for Sustainable Urban Regeneration**  
**The University of Tokyo**



<http://www.ifed.ethz.ch/>

## **Theme of the fourth IFED forum:**

### **Long-term Policy Making for a Sustainable Society**

Natural hazard modelling

Life-cycle cost analysis

Socio-economic impacts on decision making

Modelling of preferences of decision making

Societal preference in decision making

Risk treatment for disaster mitigation

Complex system using Bayesian nets and other methods

Implication on regulatory frameworks for decision making

Treatment of different types of uncertainties

Models for assets integrity management

Stochastic modelling of damage

Stochastic fields for decision making

Strategies for sustainable decision making

### **Background and motivation**

The IFED forums are concerned with engineering decision-making that is based on assessments of engineering risks. The quantification of risks is an important element of risk-based decision-making, but the fourth IFED forum is focused primarily on long-term policy making for a sustainable society. In particular the forum is focused on the assessment of socio-economical impact considering hazard modeling, damage modeling and consequence modeling. The sustainable society will be a model for 21<sup>st</sup> century, aiming the sustainable use of energy and material.

### **Aim of the fourth IFED forum**

The single session IFED forum brings together experts in the field of decision making, risk and reliability analysis and probabilistic modeling who have specific interests in the themes of the forum. The basic objectives are:

- To outline current challenges related to decision making.
- To discuss and to present possible solutions and applications.
- To develop directions for future research in the field.

Discussions, collegiality, and dialogue are the key ingredients of a successful IFED forum. The program of the forum provides plenty of opportunity to interact. At each IFED forum a joint conclusion is formulated by all the participants in the IFED forum.



## Program

### Wednesday 13 May, 2009

Wednesday 13 May, 2009	Program	Room
3:00pm-6:00pm	Registration	Lobby of 4th floor
6:00pm-8:00pm	Welcome Reception	Banquet room (2nd floor)

### Thursday 14 May, 2009

Thursday 14 May, 2009	Program	Room	
8:50am-8:55am	Opening		
9:00am-10:00am	<u>Ross B. Corotis</u>	Political Issues for Sustainable Hazards Policy	Main banquet room (4th floor)
	<u>Jim Hall</u> , Hamish Harvey, Richard Dawson	Strategic risk-based decision making under uncertainty for protection of London from tidal and fluvial flooding	
10:00am-10:30am	Coffee Break		
10:30am-12:00pm	<u>Jean Govet</u> , Antoine Rouhan, Fernando Castanheira, Kazuyoshi Nishijima and Michael Faber	Risk acceptance criteria to be used in risk based inspection planning of FPSO units	Main banquet room (4th floor)
	<u>W. Kanning</u> , S.N. Jonkman and J.K. Vrijling	Optimal investment decisions in flood defenses under uncertain sea level rise	
	<u>Albrecht Lentz</u> and Inger B. Kroon	Oil spill risk and the effect of mandatory pilotage	
12:00pm-1:30pm	Lunch	Restaurant "Grill "(3rd floor)	
1:30pm-3:00pm	<u>M.H. Faber</u> and M. A. Maes	Sustainable strategic and operational management of life safety	Main banquet room (4th floor)
	<u>Kazuyoshi Nisijima</u> and Michael Havbro Faber	A macroeconomic decision framework for sustainable design and maintenance policy making for civil infrastructure	
	<u>Mark G. Stewart</u> and Xiaoli Deng	Greenhouse Gas CO2 Emissions, Increases in Carbonation-Induced Corrosion and Life-Cycle Optimisation of Embodied Energy for RC Concrete Design and Maintenance	
3:00pm-3:30pm	Coffee Break		
3:30pm-4:30pm	<u>E. Bastidas-Arteaga</u> , F. Schoefs, A. Chateauneuf and M. Sanchez-Silva	Probabilistic evaluation of the sustainability of maintenance strategies for RC structures exposed to chloride ingress	Main banquet room (4th floor)
	<u>Makoto Fukuda</u> , Tomohiro Kimura, Makoto Ogawa, Takeshi Akima	Experimental Study on Hexavalent Chromium Pollutant and Geotechnical Remediation	
6:00pm-9:00pm	Dinner	Main Dinning Plat du Jour (4th floor)	

## Friday 15 May, 2009

Friday 15 May, 2009	Program		Room
8:30am-10:00am	<u>Stuart G. Reid</u>	Measures of confidence based on uncertain probability estimates	Main banquet room (4th floor)
	<u>Els Verstrynge</u> , <u>Luc Schueremans</u> , <u>Dionys Van Gemert</u>	A stochastic approach towards long-term behavior and damage accumulation in masonry	
	<u>Tsuyoshi Takada</u> and <u>Shotaro Kunitani</u>	Probabilistic Damage Assessment of Buildings Considering Aftershocks of Earthquakes	
10:00am-10:30am	Coffee Break		
10:30am-12:00pm	<u>Fumio Yamazaki</u> , <u>Yoshihisa Maruyama</u> , <u>Daisuke Suzuki</u>	Damage Assessment of Urban Areas Based on Remote Sensing Technology	Main banquet room (4th floor)
	<u>Zhao-Hui Lu</u> , <u>Yan-Gang Zhao</u> , and <u>Xiao-Gang Zhang</u>	Reliability Based Service Life Prediction of Corrosion-Affected RC Flexural Members: Part I — Time to corrosion initiation	
	<u>Zhao-Hui Lu</u> , <u>Yan-Gang Zhao</u> , and <u>Xiao-Gang Zhang</u>	Reliability Based Service Life Prediction of Corrosion-Affected RC Flexural Members: Part II — Time to cover cracking	
12:00pm-1:00pm	Lunch		Restaurant "Grill "(3rd floor)
1:00pm-2:30pm	<u>Jun Kanda</u> and <u>Keiko Ohnishi</u>	Effects of Higher Moments on Distributions of Annual Maximum Wind Speeds	Main banquet room (4th floor)
	<u>Hiroyuki MIZUTANI</u> , <u>Isao NISHIMURA</u> , <u>Katsu-ichirou HIJIKATA</u> , <u>Kazuhiko YASHIRO</u>	Decision Making Process of Seismic Design Motion for Critical Structure in Japan	
	<u>Yasuhiro Mori</u> , <u>Maya Ooba</u> , and <u>Kota Ibuki</u>	Design Spectra for use in Reliability-based Seismic Design with Equivalent Linearization Technique	
3:00pm-	Excursion ( Starting Hotel Daihakone → Kojiri Cruise on Lake Ashi (15 min.)→ Hakone-en → Mt.Komagatake Aerial Cableway→Japanese-style Dinner → Arriving back Hotel Daihakone)		Assembly point : Entrance Lobby

## Saturday 16 May, 2009

Saturday 16 May, 2009	Program		Room
9:00am-10:00am	<u>Satoshi Katuki</u> , <u>Ryo Katade</u>	Target Reliability Index Determination Method based on Burden Risk Concept	Main banquet room (4th floor)
	<u>Sungwook Yoon</u> , <u>Hang Choi</u>	Development of Quantitative Risk Analysis tool for the fire safety in railway tunnel	
10:00am-10:30am	Coffee Break		
10:30am-11:30am	<u>Nur Endah Nuffida</u>	The city life, architecture and identity : a nation in change	Main banquet room (4th floor)
	<u>Takayuki Minato</u>	Value of Engineering Design and Real Options	
11:30am-12:00pm	Announcemnt for next IFED		
	Closing		

**Author Instructions****Final Papers**

Each presenter is expected to bring about 30 copies of his/her full final paper to the IFED forum for distribution among the participants.

**Equipment**

Presentations should be presented by PC (PowerPoint) only.

The Session room is provided with one Windows laptop computer with LCD (Liquid Crystal Display) projector.

You are requested to bring the data of your presentation on a USB memory or own PC.

## **IFED**

IFED is an international organization with the mission to stimulate new initiatives in engineering decision making and risk analysis for engineering systems. It meets these objectives by organizing on a regular basis open international forums that focus on specific themes, providing widely accessible publication of the contributions and of the conclusions of the forums. Detailed information can be found on the IFED official website,

<http://www.ifed.ethz.ch/>

1<sup>st</sup> IFED December 2004 at Stoos in Switzerland

Theme: Consequence modeling in engineering decision making

2<sup>nd</sup> IFED April 2006 at Lake Louise in Canada

Theme: Decision making involving spatially distributed systems

3<sup>rd</sup> IFED December 2007 at Shoal Bay in Australia

Theme: Optimal strategies for disaster and hazard mitigation

## **IFED consortium**

Jun Kanda, University of Tokyo, Japan (current chair)

Michael Faber, ETH Zurich, Switzerland (current vice-chair)

Marc Maes, University of Calgary, Canada

Mark Stewart, University of Newcastle, Australia

Stuart Reid, University of Sydney, Australia

## **IFED advisory council**

Bazzurro, Paolo, Air-Worldwide, USA

Breysse, Denys, CDGA, France

Corotis, Ross, University of Colorado, Boulder, USA

Dalziell, Erica, University of Canterbury, New Zealand

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