

**Call for Papers**



**International Forum on Engineering Decision Making  
12<sup>th</sup> IFED**

# **Knowledge, Memory and Intelligence for Decision-Making in in Today's Changing Society**

**5-8 December 2023**

**Stoos Lodge**

<https://stoos-lodge.ch/>

**Stoos, Switzerland**



**Chair: Michael Havbro Faber**

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**IFED web: <http://ifedforum.weebly.com>**

## ***Call for Papers***

### **Theme of the 12<sup>th</sup> IFED forum**

IFED forums feature issues in engineering decision making. The quantification and understanding of risk is critical in risk-informed decision making. The 12th IFED Forum focuses primarily on how knowledge, memory, observations and predictive models may best be developed and applied to support the development of strategies for governance and management of risk, resilience and sustainability of engineered societal systems. This includes emerging challenges related to effects of climate change, geopolitical instability, cyber security, as well as how to establish and balance tradeoffs between decisions aiming to improve welfare, and their associated negative impacts to the environment.

#### **Topics addressed (non-exhaustive list)**

- Objectives in engineering decision making – asking the right questions?
- Public policy decision-making
- Modelling of preferences of decision-makers and stakeholders
- Global risks and governance
- Climate change
- Multi-stakeholder and politically-influenced decision-making
- Socio-economic impacts on decision-making
- Intergenerational effects in decision making
- Resilience and sustainability of infrastructure systems
- Security of societal infrastructure systems
- Natural and man-made hazards
- Information, knowledge and modeling in decision making
- Memory and strategic knowledge preservation in risk management
- Decision ranking in the face of competing systems
- Epistemic uncertainty in decision ranking
- Probabilistic digital twins
- AI in risk informed decision making – threat or tool?
- Accuracy of long-term predictions
- Value of Information

Discussion, dialogue, collegiality, and careful framing of relevant issues are the pillars of a successful IFED forum. The single-session IFED format facilitates continuation of discussions during breaks, excursion, and evenings. At the end of each IFED forum consensus conclusions are formulated by all IFED participants together with an outlook for the future. These are subsequently published and made widely accessible.

### **Venue and program of the 12<sup>th</sup> IFED forum**

The 12<sup>th</sup> IFED forum will be held in Switzerland at the Stoos Lodge (<https://stoos-lodge.ch/>) in Stoos, in a car free environment just on top of the Vierwaldstätter lake, the scene of the adventures of Wilhelm Tell – and the initiation of the Swiss confederation. This is also the site of the inaugural IFED Forum event in 2004 (and subsequent events in 2010 and 2016) and has due to its relative isolation and picturesque surrounding become known to the IFED community as a unique setting for in depth discussions both inside and outside of the conference room.



The Stoos Lodge is located in Stoos, about 2 hours from Zurich airport by means of train and cable train.

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35 rooms have been reserved at the price of 200 SFR per night including breakfast. These rooms will be held for IFED attendees until **November 1, 2023**. After this date there is no guarantee of room availability.



The 12<sup>th</sup> IFED forum will start with the reception in the afternoon on Tuesday, December 5. The technical program will start Wednesday morning and ends at noon on Friday, December 8. On Thursday after lunch, an outdoor group activity – hike/or gondola trip to the mountains will be organized – depending on weather.



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**The registration** fee for the forum includes all lunches, all refreshment-breaks, the Tuesday evening reception, refreshments during the group hiking/gondola mountain event and the banquet dinner on Thursday evening. The registration fee is expected to be approximately 550 SFR for delegates and 200 SFR for partners. Registration to the IFED event is undertaken directly by the participants – with the hotel through e-mail to: [seminar@stoos-hotels.ch](mailto:seminar@stoos-hotels.ch) with cc to [mfn@build.aau.dk](mailto:mfn@build.aau.dk) (please write under Subject: IFED2023). Likewise, the payments for registration and rooms – as well as dinners - are made by the participants directly with the hotel. The hotel will prepare separate bills for registration, rooms and dinners. For any further enquiries either contact Michael Havbro Faber ([mfn@build.aau.dk](mailto:mfn@build.aau.dk)) or the hotel on +41 41 817 44 59.

## **Participation and call for abstracts**

Please indicate your interest in participating in the forum by sending a short e-mail (including name, affiliation, address and phone) to [mfn@build.aau.dk](mailto:mfn@build.aau.dk). Feel free to contact others whom you consider to have an interest in the theme of IFED 2023.

**One-page abstracts** of proposed contributions to the 12<sup>th</sup> IFED need to be submitted before **15 July 2023** to [mfn@build.aau.dk](mailto:mfn@build.aau.dk). The final invitations to present contributions at the forum will be based on review and acceptance of the abstracts. Notification of the results of these **reviews** will be given before **15 August 2023**.

The final program of the single-session conference will be available **15 October 2023**. The IFED forum is designed to provide plenty of opportunity for participants to interact. There is sufficient time to present and discuss specific issues.

Final contributions in the form of papers and/or presentations are not due until the **beginning of the Forum, December 5, 2023**. We invite authors to bring along some hard copies which can be distributed to delegates during the conference. However, a written paper is not mandatory.

Following the IFED forum, selected authors will be invited to submit a journal-quality paper of their IFED contribution to a **special issue of a journal** to be designated in early 2024.

## Call for Papers

### What is IFED?

IFED is an international organization with the mission to stimulate new initiatives in decision-making and risk analysis for engineering systems. It organizes on a regular basis open forums that focus on specific themes.

#### Previous IFED forums

2004 - Stoos (Switzerland) Consequence modelling in engineering decision making	2006 - Lake Louise (Canada) Decision making involving spatially distributed systems
2007 - Port Stephens (Australia) Optimal strategies for disaster and hazard mitigation	2009 - Hakone (Japan) Long-term policy makings for a sustainable society
2010 - Stoos (Switzerland) Global catastrophic risk management	2012 - Lake Louise (Canada) Risk for temporary systems, structures, and activities
2013 - Port Stephens (Australia) Uncertain futures under a changing climate	2015 - Hieizan (Japan) Decision making beyond the engineering community
2016 - Stoos (Switzerland) Resilient infrastructures: integration of risk and sustainability	2018 - Lake Louise (Canada) New challenges in DM: big data, messy systems, fake news, professional rigour
2019 - Sydney Harbour (Australia) Decision Making for Extremes	

#### The IFED consortium

Marc Maes University of Calgary, Canada (current co-chair)	Ross Corotis University of Colorado, USA
Mark Stewart University of Technology Sydney	Michael Faber Aalborg University, Denmark (current co-chair)
Stuart Reid University of Sydney, Australia	Paolo Gardoni University of Illinois, USA
Kazuyoshi Nishijima Kyoto University, Japan	Emeritus: Jun Kanda University of Tokyo, Japan

#### The IFED advisory council

Paolo Bazzurro – Pavia, Italy	Yasuhiro Mori – Nagoya, Japan
Denys Breyse – Bordeaux, France	Arvid Naess – Trondheim, Norway
Robby Caspeepe – Gent, Belgium	Enrico Rizzuto – Genoa, Italy
Markus Dann – Calgary, Canada	Mauricio Sanchez Silva – Bogotá, Colombia
David Elms – Canterbury, New Zealand	Erica Seville – Canterbury, New Zealand
Jean Goyet – Paris, France	John Sørensen – Aalborg, Denmark
Jim Hall – Newcastle upon Tyne, UK	Daniel Straub – Munich, Germany
Terje Haukaas – Vancouver, Canada	Bruno Sudret – Zurich, Switzerland
Inger Kroon – Lyngby, Denmark	Tsuyoshi Takada – Tokyo, Japan
Albrecht Lentz – Lyngby, Denmark	Dimitri Val – Edinburgh, UK

#### 12<sup>th</sup> IFED - 2023 organizing committee

Emilio Bastidas-Arteaga – La Rochelle Univ.	Marc Maes – Univ. of Calgary
Michael Havbro Faber – Univ. of Aalborg	Inger Kroon – COWI, Denmark
Matthias Schubert – Matrisk GmbH	