



**IFAC MIM 2019, August 28 - 30, 2019, Berlin, Germany**

**MIM 2019 Conference invited session on:**

**Emerging Technologies in Humanitarian Supply Chain Management (code tq494)**

**Session Chair and Co-chairs:**

Chair: Prof. Xiao Liu, Department of Industrial Engineering, Shanghai Jiao Tong University (CN)

Co-chairs:

Dr. Xiang Song, Department of Mathematics, University of Portsmouth (UK)

Dr. Meimei Zheng, Department of Industrial Engineering, Shanghai Jiao Tong University (CN)

Dr. Peng Jiang, Department of Industrial Engineering, Shanghai Jiao Tong University (CN)

Dr. Aakil Caunhye, University of Edinburgh Business School (UK)

**Background:**

Following the 2008 Wenchuan earthquake in China and the 2010 Haiti earthquake, the world has witnessed devastating disasters like the 2011 earthquake and tsunami in Japan, the 2013 typhoon Haiyan, the 2014 Ebola pandemic, and the current on-going fire disaster in California, USA. The performance improvement of humanitarian supply-chain management has emerged as a hot research topic of global interest. The challenge facing the global community is to become more effective in addressing problems with uncertainties and imperfect information in the disaster environment.

**Objective:**

The objective of this session is to gather emerging technologies that are well-grounded in practical foundation and attempt to using them to solve specific challenging problems that the humanitarian supply-chain is facing, such as machine learning models, data-driven stochastic/robust optimization, automatic control methods, and other state-of-art technologies. OR models that aim at system complexity of humanitarian operations are particularly welcomed. This session will be mainly focused on emerging technologies in performance improvement of humanitarian supply chain management, which will be of interest to both academics and practitioners. We invite authors to contribute theoretical and applied research papers in areas including but not limited to the following topics:

- Machine-learning forecasting models with real data of various disasters.
- Data fusion technologies in the humanitarian relief environment.



- Emerging humanitarian logistics integrating location, prepositioning and distribution.
- Optimal decision-making under uncertainty and imperfect information.
- Effective mitigation strategies that reduce the efforts and resources required.
- Empirically-grounded analytical modelling methods.
- New tools that are efficient and user-friendly for practitioners.
- Multidisciplinary topics inspired by practical applications.
- Practical experience and successful case in humanitarian supply-chain management.
- Etc

### **Keywords:**

Humanitarian supply chain management; Optimization methods and simulation tools; Decision support system

### **Contacts:**

[x\\_liu@sjtu.edu.cn](mailto:x_liu@sjtu.edu.cn); [xiang.song@port.ac.uk](mailto:xiang.song@port.ac.uk); [miqi@sjtu.edu.cn](mailto:miqi@sjtu.edu.cn); [p\\_jiang@sjtu.edu.cn](mailto:p_jiang@sjtu.edu.cn);  
[aakil.caunhye@ed.ac.uk](mailto:aakil.caunhye@ed.ac.uk)

### **Submission :**

For author guidelines, please refer to [www.ifac-control.org](http://www.ifac-control.org) . All papers must be submitted electronically at <https://ifac.papercept.net/> . All papers must be prepared in a two-column format in accordance with the IFAC manuscript style. Please use the official IFAC instructions and template to prepare your contribution as full-length draft paper and submit it online by December 15, 2018. Submission details are available on the symposium website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as an **invited session paper**. Submission as an invited paper requires **the submission code tq494**. Several international journals are associated with the MIM 2019 for publication of special issues.

### **Important dates:**

Deadline for submissions: December 15, 2018

Notification of acceptance: February 20, 2019

Final paper Submission: March 15, 2019

Expiration of Early Registration: March 31, 2019

IFAC MIM 2019 Conference in Berlin: 28/29/30 August 2019