

# 5th International Conference on Dynamics of Disasters, DOD 2021

Conference Program

July 16-18, 2021  
Athens, Greece

Link to conference: [Conference](#)

Extra Q&A room: [Q&A room](#)

# Friday, July 16

4:00 pm – 4:30 pm, Athens time  
9:00 am – 9:30 am, Eastern Standard Time

**Welcoming & Opening remarks by DOD organizing committee**

ANNA NAGURNEY, ILIAS KOTSIREAS, PANOS PARDALOS, CHRYSAFIS VOGIATZIS

4:30 pm – 5:30 pm, Athens time  
9:30 am – 10:30 am, Eastern Standard Time

## Plenary Talk

Session chair: ILIAS KOTSIREAS

*Doing More with Less: The Impact of Preparedness and Coordination on Humanitarian Aid*

Prof. Maria Besiou, Kühne Logistics University, Germany

5:30 pm – 5:45 pm, Athens time  
10:30 am – 10:45 am, Eastern Standard Time

**15-minute break**

5:45 pm – 7:15 pm, Athens time

10:45 am – 12:15 pm, Eastern Standard Time

**Session A: Session chair: SOFIA PAPADAKI**

**A meta-analysis of supply chain disruption research**

Lydia Novoszel and Tina Wakolbinger

**Relief Food Supply Network Modelling for Disaster Preparedness and Response when Disasters Occur Frequently**

Stephan Onggo, Christine Currie and Duc-Cuong Dang

**An Integrated Multitiered Supply Chain Network Model of Competing Agricultural Firms and Processing Firms**

Deniz Besik, Anna Nagurney and Pritha Dutta

7:15 pm – 7:30 pm, Athens time

12:15 pm – 12:30 pm, Eastern Standard Time

**15-minute break**

7:30 pm – 9:30 pm, Athens time

12:30 pm – 2:30 pm, Eastern Standard Time

**Session B: Session Chair: CHRYSAFIS VOGIATZIS**

**Design of an AI toolkit based on UAV on-board multi-sensor data for emergency response**

Ilias Gkotsis, Paraskevi Petsioti, George Kampas and George Eftychidis

**Earthquakes: from Twitter detection to EO data processing**

Stelios Andreadis, Ilias Gialampoukidis, Andrea Manconi, David Cordeiro, Vasco Conde, Manuela Sagona, Fabrice Brito, Nick Pantelidis, Thanassis Mavropoulos, Nuno Grosso, Stefanos Vrochidis and Ioannis Kompatsiaris

**Household Perception of Ecosystem-Based Measures to Prevent Flood Damage: A Case Study from West Bengal, India**

Kasturi Bhattacharjee

**Post-Earthquake On-Site Research in Nepal: Identifying Best Risk Management Practices in a Developing Country**

Miriam Porter and Situ Chitrakar

# Saturday, July 17

4:00 pm – 5:00 pm, Athens time

9:00 am – 10:00 am, Eastern Standard Time

**Session C: Session Chair:** PANOS PARDALOS

**The Location of Oil Fields in the Mediterranean Sea and the Model of Oil Spills Spread**

Alexey Demin and Sergey Demin

**Influence of Potential Oil Spills on Arctic Fauna**

Sergey Demin, Fuad Aleskerov and Darya Skrylnikova

5:00 pm – 6:00 pm, Athens time

10:00 am – 11:00 am, Eastern Standard Time

**Plenary Talk**

**Session chair:** CHRYSAFIS VOGIATZIS

***Deforestation and Climate Disasters***

Dr. Stavros Siokos, Astarte Capital Partners LLP, London, UK

6:00 pm – 6:15 pm, Athens time

11:00 am – 11:15 am, Eastern Standard Time

**15-minute break**

6:15 pm – 8:15 pm, Athens time

11:15 am – 1:15 pm, Eastern Standard Time

**Session D**

**Session chair:** VICKI BIER

**Refugee Migration Networks and Regulations: A Multiclass, Multipath Variational Inequality Framework**

Anna Nagurney, Patrizia Daniele and Ladimer Nagurney

**Investigating Forecasts of Mixed Migration Flows in Europe by Using Time Series Models**

Vasiliki Mebelli and Maria Drakaki

**Game-theoretic Modeling of Pre-disaster Relocation**

Vicki Bier, Yuqun Zhou and Hongru Du

**COVID-19 Quarantine Measures Efficiency Evaluation by Best Tube Interval Data Envelopment Analysis**

Sergey Demin

8:15 pm – 8:30 pm, Athens time

1:15 pm – 1:30 pm, Eastern Standard Time

**15-minute break**

8:30 pm – 9:30 pm, Athens time

1:30 pm – 2:30 pm, Eastern Standard Time

**Plenary Talk**

**Session chair:** CHRYSAFIS VOGIATZIS

*Critical Elements Detection in Networks: An Optimization Perspective*

Prof. Oleg Prokopyev, University of Pittsburgh, PA, USA

9:30 pm – 10:30 pm, Athens time

2:30 pm – 3:30 pm, Eastern Standard Time

**Session E**

Session chair: ANNA NAGURNEY

**A stochastic network-based optimization model for 5G Coverage in disaster scenarios**

Daniele Sciacca, Patrizia Daniele and Gabriella Colajanni

**Developing Robust Reopening Processes following Natural Disasters**

Anna Svirsko, Christina Domanowski and Tom Logan

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# Sunday, July 18

4:00 pm – 6:00 pm, Athens time

9:00 am – 11:00 am, Eastern Standard Time

## Session F

Session chair: SOFIA PAPADAKI

### **Decision Support System (DSS) for Hierarchical Allocation of Resources and Tasks for Disaster Management**

Shuvrangshu Jana, Rudrashis Majumder, Prathyush P. Menon and Debashish Ghose

### **A data-driven approach to measuring epidemiological susceptibility risk around the world**

Charilaos Mertzanis, Alessandro Bitetto and Paola Cerchiello

### **Interaction dynamics of interconnected networks pair at the start of the COVID-19 pandemic**

Alla Kammerdiner, Alexander Semenov and Eduardo Pasiliao

### **A Comprehensive Approach for the Dynamic Casualty Processing Schedule**

Truong Son Pham, Van Loi Cao, Marian Sorin Nistor, Maximilian Moll and Stefan Pickl

6:00 pm – 6:15 pm, Athens time

11:00 am – 11:15 am, Eastern Standard Time

**15-minute break**

6:15 pm – 7:15 pm, Athens time

11:15 am – 12:15 pm, Eastern Standard Time

## Plenary Talk

Session chair: ANNA NAGURNEY

*Science and Technology in Disaster Management: Past, Present and Future*

Dr. George Karagiannis, General Secretariat for Civil Protection, Greece

7:15 pm – 9:15 pm, Athens time

12:15 pm – 2:15 pm, Eastern Standard Time

## Session G

Session chair: SOFIA PAPADAKI

**A Multiclass, Multiproduct Covid-19 Convalescent Plasma Donor Equilibrium Model**

Anna Nagurney and Pritha Dutta

**SARS-CoV-2 Dissemination using a Network of the United States Counties**

David Wren, Ruriko Yoshida and Chrysafis Vogiatzis

**A Multicountry, Multicommodity Stochastic Game Theory Network Model of Competition for Medical Supplies Inspired by the Covid-19 Pandemic**

Mojtaba Salarpour and Anna Nagurney

**On the applicability of combinatorial methods to disaster exercise generation**

Bernhard Garn, Klaus Kieseberg, Dominik Schreiber and Dimitris E. Simos

9:15 pm – 9:30 pm, Athens time

2:15 pm – 2:30 pm, Eastern Standard Time

**15-minute break**



9:30 pm – 11:00 pm, Athens time

2:30 pm – 4:00 pm, Eastern Standard Time

## Session H

Session chair: CHRYSAFIS VOGIATZIS

### **Abstract Temporally Repeated Flow with Intermediate Storage**

Urmila Pyakurel, Durga Prasad Khanal, and Tanka Nath Dhamala

### **Efficient Algorithms for Abstract Flow with Partial Switching**

Durga Prasad Khanal, Urmila Pyakurel, and Tanka Nath Dhamala

### **Dynamic Multi-Commodity Contraflow Problem with Asymmetric Transit Times**

Shiva Prakash Gupta, Urmila Pyakurel, and Tanka Nath Dhamala

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