

## SYNOPSIS

This workshop is a multi-disciplinary meeting aimed at discussing the need for a new way of conceiving building retrofit that integrates structural safety, environmental/thermal and economic performances in a sustainable perspective. The event will be focused on different fields of scientific study and research, bringing together experts of structural engineering, energy performance, economic values and life time thinking with the purpose to define a Roadmap for the retrofit of Multi-storey Concrete Buildings across Europe.

The two-days meeting is articulated in four plenary sessions devoted to **Structures, Energy, Sustainability** and **Case Studies**. Each session is introduced by a *Keynote Lecture* and is concluded at the end of all the oral presentations by a *Rapporteur*.

## VENUE

The Workshop is hosted by the *Joint Research Centre* in Ispra which is a small town located in Northern Italy, in the province of Varese in the Lombardy region on the shore of Lake Maggiore.

Ispra is about 60 km far from Milan and it is very close to Malpensa Airport. There will be no participation fees and the Joint Research Centre will take care of the transportation of the participants from/to the airport and to the meeting place. Moreover it will provide the meals for the duration of the workshop and will assist for the accommodation in nearby hotels.

## SCIENTIFIC COMMITTEE

**dr. Paolo Negro** - European Commission - Joint Research Centre

**dr. Ornella Iuorio** - University of Leeds

**prof. Dan Dubina** - 'Politehnica' University of Timisoara

**prof. Raffaele Landolfo** - University of Naples 'Federico II'

**dr. Chris Jofeh** - Arup (UK)

**prof. Laura Bellia** - University of Naples 'Federico II'

**prof. Andy Gouldson** - University of Leeds

**prof. Helena Gervasio** - University of Coimbra

**dr. Stuart Matthews** - BRE Associate (UK)

**prof. Paolo Riva** - University of Bergamo

# SAFESUST 2

## - SURECON Workshop -

*A roadmap for a **S**ustainable integrated  
**R**etrofit of **C**ONcrete buildings*



**Joint Research Centre**  
Ispra (VA) - Italy

**October 23 - 24, 2018**

PLEASE REGISTER AT:

<https://web.jrc.ec.europa.eu/remjrc/screen/meeting/707/registration-form>

VISIT THE WEBSITE AT:

<https://engineering.leeds.ac.uk/events/event/20131/school-of-civil-engineering/350/surecon-conference>

INFO CONTACTS: [surecon@leeds.ac.uk](mailto:surecon@leeds.ac.uk)

## ORGANIZING COMMITTEE



European Commission  
Joint Research Centre

*dr. Paolo Negro*  
*Francesca Gadusso*



University of Leeds

*dr. Ornella Iuorio*  
*Elvira Romano*

# SAFESUST 2 - SURECON Workshop

23<sup>rd</sup> OCTOBER

## AGENDA

- 10:00 **Opening & Welcome to JRC**  
Dr Dan Chirondojan – *Director of Dir. E: 'Space, Security and Migration' - Joint Research Centre*
- 10:15 **Introduction to SAFESUST 2 - SURECON Workshop**  
Dr Paolo Negro - *Joint Research Centre*  
Dr Ornella Iuorio - *University of Leeds*
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- STRUCTURES**  
*Session Rapporteur*
- 10:30 **KEYNOTE LECTURE**  
**Using steel solutions to enhance seismic resilience of reinforced concrete buildings**  
Prof. DAN DUBINA - *'Politehnica' University of Timisora*
- 11:00 **Measures for reducing vulnerability of building structures due to explosions**  
F. Dinu, I. Marginean, E. Ghicioi, V. Pasculescu, E. De Iulii, A. Khalil & D. Dubina
- 11:15 **Risk assessment procedure for RC frame structures caused by extreme events**  
K. Szyrak
- 11:30 **Towards performance-based engineering of building structures subjected to extreme hazards**  
F. Parisi
- 11:45 **Degradation of concrete**  
L. Black
- 12:00 **Retrofit of existing RC buildings with diagrids adopting a holistic-sustainable design framework**  
S. Labò, C. Passoni, J.Zanni, A. Marini, A. Belleri & P. Riva
- 12:15 **Design criteria to enhance the robustness of flush end-plate beam-to-column connections**  
M. D'Aniello & R. Landolfo
- 12:30 **LUNCH**
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- ENERGY**  
*Session Rapporteur*
- 14:00 **KEYNOTE LECTURE**  
**Automated overcladding for improved energy efficiency – a UK perspective**  
Dr CHRIS JOFEH - *Arup (UK)*
- 14:30 **Renovation solutions for buildings with large precast reinforced concrete panels – Case Study**  
S. Pescari, V. Stoian & C. Măduta
- 14:45 **Technology overview of prefab facade systems for multi-objectives building renovation**  
S. Avesani, A. Andalaro, F. Babich & R. Lollini
- 15:00 **Combined energy upgrading of buildings at local/regional/national scale**  
M.C. Caruso, M. Lamperti Tornaghi & P. Negro
- 15:15 **Structural and thermal intervention for rehabilitation of precast large concrete panels for residential buildings**  
V. Ungureanu, L.A. Fülöp, A. Ciutina, A. Botici & D. Dubina
- 15:30 **Rapporteurs wrap up**
- 15:45 **ELSA Laboratory visit**
- 16:30 **First day Closure**

24<sup>th</sup> OCTOBER

## SUSTAINABILITY

*Session Rapporteur*

- 9:00 **Welcome & Introduction**  
Paolo Negro & Ornella Iuorio
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- 9:15 **KEYNOTE LECTURE**  
**The Economics of Low Carbon Cities**  
Prof. ANDY GOULDSON - *University of Leeds*
- 9:45 **Sustainability and marketing for the future of the precast concrete industry**  
A. Colombo
- 10:00 **A Life Cycle-based methodology to integrate seismic risk into combined energy-structural retrofit strategies**  
C. Menna, U. Vitiello, G. M. Mauro, D. Asprone, N. Bianco & A. Prota
- 10:15 **Introducing a holistic design framework for the sustainable renovation of existing buildings**  
C. Passoni, A. Marini, A. Belleri & C. Menna
- 10:30 **A potential methodology for a sustainable integrated retrofit of existing buildings**  
E. Romano, O. Iuorio & P. Negro
- 10:45 **COFFEE BREAK**
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- CASE STUDY**  
*Session Rapporteur*
- 11:15 **KEYNOTE LECTURE**  
**Structural assessment of existing large panel system-built (LPS) residential blocks for accidental loads – Background to the development of the current UK guidance**  
Dr STUART MATTHEWS - *BRE Associate (UK)*
- 11:45 **Seismic assessment and retrofit of typical pre-code school masonry building – Case study**  
R. Apostolska
- 12:00 **A case study: seismic retrofitting of an existing multi-storey r.c. building in Northern Italy**  
F. Mola & E. Mola
- 12:15 **Retrofitting the existing reinforced concrete buildings for seismic resistance and energy efficiency**  
D. Bournas
- 12:30 **Opportunities and barriers to the deep rehabilitation of the collective buildings in East Europe**  
L. A. Fülöp, V. Ungureanu, Z. Nagy & D. M. Muntean
- 12:45 **Opportunities and barriers to integrated retrofit in UK: the case of Leeds**  
O. Iuorio, N. Nikitas, E. Romano & P. Negro
- 13:00 **Rapporteurs wrap up**
- 13:15 **LUNCH**
- 14:00 **RoundTable**
- 15:00 **Acknowledgments & Future steps**  
Paolo Negro & Ornella Iuorio
- 15:30 **Workshop Closure**