

INVITED SESSION SUMMARY**Title of Session:**

Mitigation technologies to counter climate change and urban heat island effect and to improve comfort in urban environment

Name, Title and Affiliation of Chair:

Dr. Stefano Cascone, Department of Civil Engineering and Architecture, University of Catania

Prof. Antonio Gagliano, Dep. of Electrical, Electronics and Computer Engineering, University of Catania

Prof. Francesco Nocera, Department of Civil Engineering and Architecture, University of Catania

Prof. Gaetano Antonio Sciuto, Department of Civil Engineering and Architecture, University of Catania

Details of Session (including aim and scope):

The temperature of cities continues to increase because of the urban heat island phenomenon (UHI) and the undeniable climatic change. Urban warming has a very significant impact on human life increasing the energy consumption, deteriorating the comfort levels, increasing the pollution concentration, threatening the human health and affecting the urban economy.

To counterbalance the consequences of the increased urban temperatures important research has been carried out resulting in the development of efficient mitigation technologies applied in real scale projects.

The building sector is directly involved in this change and adequate solutions can provide effective benefit at energy and environmental levels.

This session aims to address all aspects of countermeasures to UHI and microclimate mitigation including:

- Cool materials development and characteristics
- Urban vegetation and greenery
- Measurement techniques and standards
- Policies, rating and labelling programs
- Remote sensing of cities and urban climates
- Outdoor comfort and health in the urban environment
- Analysis of UHI and its effects across scales
- Modelling and forecasting urban climate and weather
- Impact of UHI on the urban economy
- Resilient design of buildings in response to changing climates
- Anthropogenic heat and urban morphology
- Implementation of urban heat mitigation strategies

Scientist, engineers, builders, architects, and government officials concerned with improving the urban environment are invited to participate in this session.

Main Contributing Researchers / Research Centres (tentative, if known at this stage):**Website URL of Call for Papers (if any):****Email & Contact Details:**

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