

**EPIC2006AIVC conference to be held in Lyon, France between 20<sup>th</sup> and 22<sup>nd</sup> November**

**Session:**

**Low exergy systems for heating and cooling of buildings**

**Chair: Dr. Markku J. Virtanen, Finnish Development Centre for Building Services**

**Co-chair: Professor Masanori Shukuya, Musashi Institute of Technology**

**Session description**

The implementation of exergy analyses paves the way for new potentials of increasing the overall energy supply-demand chain efficiency. Exergy analysis can support the development and selection of new technologies and concepts with the potential for lowering exergy consumption for built environments. It can also quantify this potential. Up to now, a considerable effort has been made to reduce the energy demand of the building stock. The low exergy approach aims at satisfying the remaining thermal energy demand using only low quality energy. This creates the potential for reducing the total amount of exergy needed by the energy supply-demand chain, and for providing a more customised distribution of exergy to consumers with different exergy requirements. In this conference session the state-of-art, recent research achievements, future potentials on innovative component development and on implementation of low exergy technologies to community and building structures will be highlighted.

**Session programme (15 min presentations)**

Increased energy efficiency and improved comfort

VIRTANEN J. Markku, Finnish Development Centre for Building Services

Low exergy systems for high performance built environments

SCHMIDT J. Dietrich, Fraunhofer-Institute for Building Physics Project Group Kassel

Comfortable high performance and low exergy built environments

SHUKUYA, Masanori, Musashi Institute of Technology

Technologies for low exergy systems in buildings - environmental and economic parameters.

JOHANNESSON, Gudni, Royal Institute of Technology

Exergy analysis as an assessment tool of heat recovery of dwelling ventilation systems,

SAKULPIPATSIN, Poppong, Faculty of Architecture, Delft University of Technology

Energy and exergy analysis of facility energy systems and central energy plants for international and national policy

SOLBERG, David P.W., HVAC Systems Technology, Inc