Preface

Indoor quality of buildings has a direct impact onto inhabitants and users and thus it affects their abilities. The complexity of a building design needs to create a healthy environment and if possible with the application of building materials which are free of harmful substances and allow low energy design.

The building industry nowadays should concentrate on low energy buildings and put emphasis onto natural materials and renewable resources, so todays aim is to decrease the energy requirements and contribute to a healthier indoor environment in buildings and sustainable development. The current trend however is the opposite to this, glazed facades of buildings lead to many problems, especially in summer time which are to be solved by different methods, like the usage of shielding systems or with the application of artificial ventilation and of double facades.

Another focus of the conference is based on the application of new materials and technologies in modernizations and refurbishments of existing buildings while improving their technical parameters like thermal, acoustic etc., with the means to achieve higher quality of the indoor environment.

The aim of this 7th international conference is to inform the general public with the results coming from research and practice related to sustainable design using alternative and renewable building materials.

The conference is intended for designers, building managers, investors, academic experts, researchers and also to those from the ranks of professional communities.

The dean of the Faculty of Civil Engineering of Brno University of Technology Prof. Ing. Rostislav Drochytka, CSc. avouches for the given International Conference Buildings and Environment 2012. The conference is also included within the programs Lifelong Learning Academy of Czech Chamber of Authorized Engineers and Technicians (ČKAIT).

Topics:

- Near Zero Energy Buildings
- Quality of Indoor Environment
- Heat storage and Energy Savings
- Effective Ventilation
- Integration of Renewable Energy Sources
- Natural and Environmental Friendly Building Materials
- Noise Protection

Book includes chapter with the papers of the Building Performance Simulation Conference 2012 held at the Faculty of Civil Engineering, Brno University of Technology, in November 8th and 9th 2012.

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