



A workshop entitled **Evaluating the Physical and Structural Performance of a Closed Cavity Façade**, will take part at New York Build Conference held on 08-09th, March 2023, in Javits Centre. The workshop is going to be dedicated to the **Development of a double facade with hermetically sealed cavity H-CCF** project funded by the European Union from the European Regional Development Fund.

With the greater demands in energy efficiency, elements of the building envelopes, including glass facades, are becoming technologically more complex. Understanding dynamic and mutually dependent physical processes occurring inside close cavity facades requires insight into the thermal, hygrothermal and structural behavior of the façade element. The most relevant factors included in the sustainability assessment of new types of CCF are climate conditions on the site, thermal behavior of various elements in the façade, pressure and the hygroscopic behavior in the cavity, stress, deflection of the glass panels etc. CCF itself represents a complex system in which all mentioned behaviors must be considered mutually. An accurate model allows for various component combinations and types of CCF to be analyzed before real scale test models are assembled, considering the entire lifetime of a façade element in an environmental aspect.

The four main **outcomes** presented at the workshop will be assessment of the:

1. thermal behavior of various elements in the façade,
2. pressure and the moisture control in the cavity,
3. stress and deflection of the glass panels,
4. energy efficiency, durability, and life cycle of a closed cavity façade in a software created model.

The project responds to the recognized requirements of the market of glass and aluminum facades and aims to develop an innovative product - a closed cavity facade with passive maintenance of dry air, in order to increase energy efficiency, reduce resource consumption, save energy, and protect the environment. Project activities include a research and development part, strengthening the capacity of the company KFK d.o.o. for research, development, and innovation, together with cooperation with the research and development institution Faculty of Architecture, University of Zagreb.

Project team members from KFK are Marijo Tomić, as project manager, Ivica Kušević, Ph.D., as coordinator and Jelena Jurić. From the Faculty of Architecture team members are Zoran Veršić, Ph.D., as scientific project manager, Josip Galić, Ph.D., Marin Binički, Lucija Stepinac, Ivona Cvitković, Hrvoje Vukić, Antonia Bošnjak, Mateja Nosil Mešić and Dora Petrac.



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