#	**Marko Ignjatović, PhD** Mechanical Engineer	
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Presentation title:	**Impact of Masonry Block Type on Energy Performance of Office Building Equipped with Low Temperature Radiant System**	

Various types of clay blocks were analyzed in terms of construction thermal inertia and the impact they would have on the energy performance of an office building located in Niš. A new type of combined clay block with increased mass is proposed, and a specific approach for determining all relevant dynamic indicators is described, intensively relying on building energy performance simulations. Different configurations of external walls made of various types of clay blocks were simulated using EnergyPlus to determine time lag and decrement factor. The results show the average decrement factor of less than 1% and the average time lag of approximately 9h for the combined clay block, values in the same range as obtained for commercially available blocks. Furthermore, energy performance was simulated, for the same model building equipped with a low temperature radiant system, with different wall configurations made from analyzed blocks. The results show the tendency of reducing heating energy consumption by 3.65% by adding mass to preinsulated clay block, while keeping wall U-values to similar values.

Short CV:

Marko Ignjatović is an associate professor at the University of Niš, Faculty of Mechanical Engineering in Niš. Involved in the educational process at all levels at the faculty. 15+ years of experience as expert, consultant, and energy auditor in energy efficiency projects. Starting from 2015 oversees Faculties district heating system serving more than 120.000m^2 of residential, educational and commercial buildings. ASHRAE Member, Danube Chapter.

CV:	

Marko Ignjatović, lives in Niš, Serbia.

After graduating in 2004 at Faculty of Mechanical Engineering in Niš, he was employed by Faculty as the best student of his generation, where, at the moment, holds the title of associate professor. During his teaching career he was involved in subjects related to HVAC&R, district heating, building energy efficiency, building energy performance modeling and simulation.

He participated in numerous international and national scientific and commercial project related to energy efficiency in buildings and industry, RES utilization, energy auditing. He is highly involved in building energy modelling and building energy performance simulation. Author and co-author of many peer-reviewed papers, training programs and guidelines considering energy audits in buildings and software solutions.

Very active in Serbian HVAC&R Society (SMEITS-Društvo za KGH Srbije) where currently serves on the Board of Governors. Also, very active in ASHRAE through ASHRAE Danube Chapter and ASHRAE Region XIV (Regional Nominating Alternate). Member of IBPSA (International Building Performance Simulation Association).