


Event:

	<p>ENDORSED BY</p> 	<p>HEALTH in BUILDINGS</p> <h1 style="margin: 0;">HYGEIA 2026</h1> <p style="font-style: italic; margin: 0;">where the medical &amp; engineering professions collaborate &amp; innovate</p>	  <p style="font-weight: bold; margin: 0;">Hellenic Chapter</p>
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May 27-29, 2026 - Island of KOS, Greece

#	<p style="font-weight: bold; font-size: 1.2em; margin: 0;">Prof. dr. Aleksandar Andjelkovic</p> <p style="margin: 0;">PhD, Mechanical Engineer</p>	
Title:	<p style="margin: 0;">Full Professor, Director of Energy Innovation Center, Head of Thermal Engineering Chair and Laboratory, Faculty of Technical Sciences, University of Novi Sad, Serbia</p>	
email:	<p style="margin: 0;">aleksa@uns.ac.rs</p>	•
Presentation title:	<p style="font-weight: bold; margin: 0;">Performance Evaluation of Low-Cost Sensors for Indoor Environmental Quality: Evidence from Selected Case Studies</p>	
<p style="color: blue; margin: 0;">The built environment has a significant impact on human health, well-being, and productivity. Indoor Environmental Quality (IEQ), which includes air quality, thermal conditions, lighting, and acoustics, plays a crucial role in shaping occupants' comfort and health outcomes. Numerous studies have demonstrated that inadequate IEQ is associated with adverse effects ranging from reduced cognitive performance to serious long-term health risks. Among these factors, indoor air quality is particularly critical, as pollutant concentrations indoors often exceed those found outdoors, while remaining largely imperceptible to occupants.</p> <p style="color: blue; margin: 0;">In recent years, low-cost sensors have emerged as a promising solution for continuous, real-time monitoring of IEQ parameters. However, concerns remain regarding their accuracy, reliability, and suitability for scientific and practical applications. This paper presents a performance evaluation of selected low-cost sensors used for monitoring key IEQ indicators, with a particular focus on indoor air quality parameters.</p> <p style="color: blue; margin: 0;">The study is based on selected case studies conducted in real indoor environments, where low-cost sensors were deployed alongside reference-grade instruments. The analysis compares sensor performance in terms of accuracy, stability, responsiveness, and data consistency under varying environmental conditions. Special attention is given to the ability of these sensors to detect fluctuations in pollutant levels and to provide meaningful data for occupant-centered building management.</p> <p style="color: blue; margin: 0;">The results highlight both the potential and the limitations of low-cost sensing technologies. While these sensors can provide valuable insights into temporal trends and spatial variability of IEQ, calibration strategies and data interpretation frameworks are essential to ensure reliable application. The findings contribute to a better understanding of how low-cost monitoring solutions can support healthier indoor environments and inform energy-efficient building operation strategies.</p>		
Short CV:	<p style="color: blue; margin: 0;">Full Professor, researcher and consultant focusing on: Sustainable building design, IEQ, HVAC systems; energy efficiency; operation; renewable energy; energy audits and management; district heating and cooling systems. Active in ASHRAE, REHVA, IBPSA, and Serbian national HVAC society. Published more than 100 papers/articles and made more than 150 presentations on IEQ, HVAC energy efficiency, sustainability, and renewable energy throughout the world.</p>	

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May 27-29, 2026 - Island of KOS, Greece

CV:

Full Professor, researcher and independent consultant focusing on: Sustainable building design, IEQ, HVAC systems; energy efficiency; performance and operation; renewable energy; energy audits and management; district heating and cooling systems. A highly motivated mechanical engineer with an expertise in HVAC&R systems and renewable energy with a broad and acute interest in developing energy efficient buildings. Collaboration with experienced scientists from prestigious universities resulted in developing new skills such as performing research independently, as well as strong writing/publishing and teaching skills. Active in ASHRAE, IBPSA, and reviewer of three international and national journals. Published more than 100 papers/articles and made more than 150 presentations on IEQ, HVAC energy efficiency, sustainability, and renewable energy throughout the world.

#### MEMBERSHIP/POSITIONS OF RESPONSIBILITY

- ASHRAE REGION XIV RVC for Research Promotion
- Member of ASHARE
- Member of Society for HVAC&R of Serbia
- Member of IBPSA
- Member of Steering committee of Union of Mechanical and Electrical Engineers and Technicians of Serbia
- Member of Steering committee of Serbian HVAC Society
- Member of Organizing Committee of International Congress on Heating, Refrigerating and Air-Conditioning, Belgrade, Serbia (2012 - )
- Editorial board member of International Journal of Sustainable Energy, Taylor & Francis