

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING

Website: <https://cde.nus.edu.sg/ece>

Area: Microelectronic Technologies & Devices (MTD)

Host: Assoc Prof Aaron James Danner

TOPIC	:	Photoacoustic instrument development for various industries and research purposes
SPEAKER	:	Prof Bozóki Zoltán Head of Department, Institute of Physics, Faculty of Science and Informatics, University of Szeged
DATE	:	Monday, 7 July 2025
TIME	:	4:00PM-4:45PM
VENUE	:	E5-03-20

ABSTRACT

Over the last 30+ years we have developed the photoacoustic gas and aerosol detection method into various types of instruments for very challenging applications including the oil and gas industry, airborne monitoring of atmospheric water vapour and total water, exhaled air analysis, measurement of ground-atmosphere gas exchange, real time chemical analysis of urban aerosol pollution etc. These applications require the very deep understanding of the photoacoustic signal generation process based on which we have developed various self-checking and self-correcting algorithms ensuring the outstanding analytical performance of our photoacoustic systems including wide measurement range, high stability and robustness, fast response time extreme stability.

BIOGRAPHY

Zoltán Bozóki received his MSc, PhD and DSc degrees in physics in 1989, 1997 and 2012, respectively. He has been working at the University of Szeged from 1994 to present, currently as a professor. He is also the head of the HUN-REN Research Group on Photoacoustic Monitoring of Environmental Processes. His primary research activity is the application of the photoacoustic detection method for various areas including source apportionment of atmospheric aerosols, airborne water vapour and total water measurements, gas permeability measurements of polymers and measurement of pollutants in natural gas. Zoltán Bozóki is the CEO of Hilase Ltd., a spin-out company of the University of Szeged.



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