



PUBLIC LECTURE

Dr Aleksandar Radu

**Associated Professor in Analytical Chemistry
University of Lincoln**

<https://staff.lincoln.ac.uk/9b42b100-49cc-4464-89df-69801996b72d>

Low-Cost, User-Friendly Sensors for Measuring Plant Nutrients with Excellent Spatio -Temporal Resolution

This talk's key aim is to initiate discussion about research opportunities that can arise between the University of Lincoln and Sokoine University of Agriculture. This will be done through introducing the School of Chemistry at Loughborough while providing details of my own research in the field of analytical chemistry and more specifically in sensors. I will provide details from some of my projects relevant to, for example, development of low-cost sensors for monitoring air quality, and measuring plant nutrients in water and soils both in discrete and long-term measuring modes. During the talk, I will also try to outline possibilities for generating collaborations between our universities.

Dr Aleksandar Radu obtained his PhD in 2005 at Auburn University, USA. This was followed by a period as a postdoc at Dublin City University, Ireland. Aleks has spent his independent research career as lecturer at Universities of Portsmouth and Keele. Since 09/2022, he is an Associated Professor in Analytical Chemistry at the University of Lincoln. His main research focus is on the development of tools that will enable more frequent measurements with more granularity that is currently possible with the view of nutrient/pollutant monitoring, increasing standards of water and soil quality, and offering tools for more efficient water/waste management. The fundamental aspect of his research revolves around development of methodologies for improvement of selectivity and sensitivity of ionophore-based sensors (IBSs), and simplification of their preparation and handling protocols. This is done by utilization of fundamental theoretical principles of IBS response and by development of new materials capable of tuning sensor response. Real-life application aspect of the research involves interaction with engineers and scientists with wide variation of backgrounds and have strong international links mainly in low-to-middle income countries.



PUBLIC LECTURE

Dr Tanja Radu

BEng MCE FHEA PhD

**Reader in Environmental Engineering. WEDC Group Lead
Loughborough University**

<https://www.lboro.ac.uk/departments/abce/staff/tanja-radu>

Engineered Solutions for the Provision of Renewable Energy, Clean Water and Unpolluted Environment for Under-Served Communities

This talk's key aim is to initiate discussion about research opportunities that can arise between Loughborough University and Sokoine University of Agriculture. This will be done through introducing Environmental Engineering theme at Loughborough while providing details of my own research in the fields of water quality, wastewater treatment and generation of energy from waste. I will provide details from some of my projects relevant to, for example, community scale, decentralised anaerobic digestion for energy and resource recovery, safely transforming mercury phytoremediation crops into bioenergy and/or unlocking renewable energy potential of lignocellulosic wastes from food production. During the talk, I will also try to outline possibilities for generating collaborations between our universities.

Dr Tanja Radu obtained her PhD at Auburn University, USA in 2007. She then spent 4 years as a Postdoctoral Researcher at Dublin City University, Ireland followed by transition to Loughborough University in 2012. There, she continued her research initial as Research Associate, followed by promotions to Lecturer, Senior Lecturer and most recently to Reader in 2024. Tanja's research is highly multidisciplinary, focusing on engineered solution for provision of renewable energy, clean water and unpolluted environment for under-served communities, as well as provision of solutions for low-carbon fuels, integrated with waste management, valorisation and resource recovery. She has a strong network and has established collaborative cross-disciplinary research projects and publications with academics, industries and NGOs from across the Globe. Her research collaborators include academics and industries from the UK, Indonesia, UAE, Tanzania, Thailand, India, China, Bahrain, and across Europe.