Spring 2024

Optics & Photonics Group Lunchtime Seminar Series

University of Nottingham

Nanocoated and Nanostructured Optical Fiber Sensors and Biosensors

Prof Mateusz Smietana

Warsaw University of Technology

13:30 Wednesday 28 February 2024

Life Sciences Building - B3

OPTICS & PHOTONICS
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Mateusz Smietana

Nanocoated and Nanostructured Optical Fiber Sensors and Biosensors

This seminar will discuss nanocoating deposition methods and advanced materials developed at Warsaw University of Technology to enhance the properties of various optical fiber sensors. Special attention will be given to label-free biosensors based on long-period fiber gratings, various interferometers, and lossy-mode resonance devices. A subjective review of the most promising optical fiber-based biosensing devices will be presented, focusing on biomolecules of different sizes, such as DNA, proteins, viruses, and bacteria. Finally, highly promising nanostructured fibers designed and manufactured at the Lukasiewicz Research Network - Institute of Microelectronics and Photonics will be introduced and discussed.

Mateusz Smietana received his B.Sc., M.Sc., Ph.D. (with distinctions), and D.Sc. in the field of Electronics from Warsaw University of Technology (WUT), Poland, in 2000, 2002, 2007, and 2014, respectively. Since March 2006, he has been working at the Institute of Microelectronics and Optoelectronics, WUT. Since October 2022, he has held the position of Full Professor at WUT. Additionally, since May 2023, he has served as the Leader of Area at the Łukasiewicz Research Network – Institute of Microelectronics and Photonics, Warsaw, Poland.

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All are welcome

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