

# “A photonic Microscope-in-a-Needle takes high-resolution optical microscopy to deep, dark places in tissues”

## Lecturer:

Professor David D. Sampson



## University:

The University of Western Australia, Perth, Australia

## Area:

Optical & Biomedical Engineering Laboratory, School of Electrical, Electronic & Computer Engineering and Centre for Microscopy, Characterisation & Analysis

## Biography:

Professor Sampson is Director of the Centre for Microscopy, Characterisation & Analysis, a core facility of the University of Western Australia, and head of the Optical+Biomedical Engineering Laboratory (OBEL) in the School of Electrical, Electronic & Computer Engineering. He directs the Western Australian nodes of the Australian Microscopy & Microanalysis Research Facility and Australia's National Imaging Facility. He was a 2013-2014 IEEE Photonics Society Distinguished Lecturer. He is a senior member of the IEEE, a Fellow of the OSA and the SPIE, and an Associate Editor of IEEE Photonics Journal, the IEEE Transactions on Biomedical Engineering and on the editorial boards of the Journal of Biomedical Optics and the journals Photonic Sensors, and Photonics & Lasers in Medicine. Prof. Sampson's research interests are in biomedical optical engineering, with an emphasis on photonics, imaging and microscopy. His current main interests are in advancing the Microscope-in-a-Needle and in the emerging area of optical elastography – the optical imaging of tissue mechanical properties. His other interests include anatomical optical coherence tomography for imaging in human airways, and holographic microscopy.