



PLENARY LECTURE: A new era of brain imaging and neuroethics

CLARE ELWELL

July 13, 2026

12:00 to 13:00

ICFO Auditorium

ABSTRACT:

The last decade has seen unprecedented advances in the capability of neuroimaging technologies for studies of the human brain. Many of these advances have targeted increasingly specific investigations of brain function to understand and potentially alter our thoughts, actions and emotions. The advent of low cost, wearable brain imaging technologies which can be implemented in a wide range of settings is changing our ambitions of how, when, where and why we acquire brain data. As a result neurotech has become big business with key growth drivers in gaming, defence and personal brain monitoring. The ethical and societal challenges presented by these developments are wide ranging. In this talk I will reflect on my experiences as a developer of brain imaging systems and consider how these challenges can be addressed.

BIO:

Clare Elwell is a Professor of Medical Physics at University College London (UCL) and Vice Dean for Impact for UCL Engineering. She develops functional near infrared spectroscopy (fNIRS) technologies to image the human brain and her research projects include studies of acute brain injury, infant brain development, autism, migraine and malaria. She currently leads the Brain Imaging for Global Health (BRIGHT) project which delivered the first brain images of infants in Africa. In 2023 she was awarded a Brocher Foundation Fellowship to investigate the responsible use of neuroimaging in disorders of consciousness.

Clare is Past President of the Society for Functional Near Infrared Spectroscopy and the International Society on Oxygen Transport to. She is current President of the London International Youth Science Forum and Founder and Trustee of the charity Young Scientists for Africa. She was a 2018 British Science Association Media Fellow at the Financial Times. In July 2024 she delivered the first UCL Festival of Engineering - Six Days to Change the World which attracted over 10,000 attendees and she was awarded an Honorary UCL Medal in recognition of this achievement.

This plenary lecture is part of the [Hands-on Course on Mindlab 2026 Program](#).

Hosted by: Academic Affairs