

02

 July
 2026
 Thursday

LECTURE

10:30 - 12:00

MEET AND EAT*

12:30 - 13:30



Revealing secrets hiding in plain sight about the ever-changing brain



ABSTRACT

A grand challenge of modern biology is to understand mechanisms of molecular, cellular and tissue scale physiology across a daunting range of spatial and temporal scales – and how the brain restructures and reforms its structure across scales. Current imaging methods leave significant gaps in our knowledge, limiting our ability to connect information across scales. How multiple methods are now being combined to fill and help bridge critical gaps will be shared; including where recent advances to multi-tilt electron tomography (mtEMT) and development of new probes for correlated light (LM), x-ray microCT (XRM), correlated multi-ion mass spectroscopy imaging (MIMS) and EM (MIMS-EM) and state-of-the-art 3D EM technologies add to our knowledge about structure and function in complex biological systems. Examples of questions being addressed in ongoing research projects will be described to illustrate how development and application of new contrasting methods, imaging tools and data analysis strategies are allowing the observation of otherwise complex or hidden relationships between cellular, subcellular and molecular constituents of cells. For example, how advances in methods apply to ongoing studies on the intact normal brain and to analyze brain cells and synapses during learning (or when cells and tissues respond to stressors inducing degenerative brain disorders like Alzheimer's disease) will be shown.

SPEAKER

Prof Mark Ellisman

Professor of Neurosciences and Neurology

HOST:

Department of Infection and Immunity (LIH)
University of Luxembourg

RESPONSIBLE SCIENTIST:

Alexander Skupin, Gunnar Dittmar

* Please note that registration is mandatory for meeting after presentation by sending an email to michelle.roderes@lih.lu

Location:

Lecture:

House of BioHealth
Big conference room at the ground floor
29, rue Henri Koch,
L-4354 Esch-sur-Alzette

Meet and great:

House of BioHealth
FBS room 2nd floor
29, rue Henri Koch,
L-4354 Esch-sur-Alzette