**Title:** A neuroscience-inspired approach to large-scale communication network monitoring

**Author(s):** Luc Berthouze

**Affiliation(s):** University of Sussex (UK)

**Abstract:**

Much of our lives today, both at work and at home, relies on the continuous and reliable provision of ICT infrastructure. Network outages are extremely disruptive and very costly. However, preventing outages (or indeed, identifying their cause), is extremely challenging because of how complex and large today’s infrastructures have become. With services, traffic workloads and user needs ever-growing, new approaches are needed. In this talk, I will discuss how we are leveraging and adapting methods typically used to understand another large-scale complex system -- the brain -- to (a) detect unknown, unseen and continuously changing inter-dependencies and (b) exploit this knowledge to develop scalable and data-driven approaches for anomaly detection and root cause analysis in both large-scale networks and microservice architectures.

**Keywords**: Communication Networks, Functional Connectivity, Root-Cause Analysis

**Author Profiles (s):** <https://scholar.google.com/citations?user=WvYeh5IAAAAJ&hl=en&oi=ao>