



Politecnico
di Torino

Dipartimento
di Automatica e Informatica



Talk@DAUIN

FROM CELLS TO CIRCUITS

Finding latent signals of neural
degenerations



Open to: **everyone**



30 June, 2025 - 10:00 am



Sala CIMINIERA (5th Floor)



Genevieve
STEIN-O'BRIEN

Johns Hopkins University

Neurodegenerative diseases show complex, heterogeneous pathologies with eight shared hallmarks, including protein aggregation, synaptic dysfunction, altered proteostasis, and neuroinflammation, leading to neuronal death. Dr. Stein-O'Brien will discuss available data types and opportunities for multimodal integration. Drawing on her expertise in latent space techniques, she will highlight successes with matrix decomposition, transfer learning, and ongoing work using transformers.

Dr. Stein-O'Brien is a Bloomberg Assistant Professor at Johns Hopkins in Neurology, Neuroscience, Genomic Medicine, and Oncology, with ties to Kavli, Convergence, and IDIES. She co-founded and is Assistant Director of the Single-cell Training and Analysis Center. A leader in computational biology, she advances transfer learning, matrix factorization, and spatial multi-omics for dynamic cellular systems.