

Session Program

12-17 Jul 2026



**European Conference on Mathematical and Theoretical
Biology (ECMTB 2026)**

Modeling of neural dynamics and neurodegeneration

University of Graz

Thursday 16 July

17:00

Modeling of neural dynamics and neurodegeneration

Session | Location: University of Graz, 15.12 - HS

17:00–17:20

Control treatments on surface-dependent formation and dissolution of amyloid plaques in Alzheimer's disease

Speaker

Francesca Acotto

17:20–17:40

Tonic-clonic seizure transitions as bifurcations in a neural field model

Speaker

Roberto Barrio

17:40–18:00

A Functional Network Method for Monitoring State Changes in Neural Activity

Speaker

Richard Bertram

18:00–18:20

Modeling the formation of perinuclear crowns made of agglutinated ATM proteins observed in fibroblasts from patients affected by Alzheimer's disease

Speaker

Laurent Pujol-Menjouet

18:20

Friday 17 July

10:40

Modeling of neural dynamics and neurodegeneration

Session | Location: University of Graz, 15.12 - HS

10:40–11:00 **A Multimodal Mathematical Model of Iron and Amyloid- β in Alzheimer's Disease**

Speaker

Ilaria Stura

11:00–11:20

Folded node canard dynamics as a mechanism for delay in astrocytic evoked- Ca^{2+} responses

Speaker

Matteo Martin

11:20–11:40

How neuromodulation shapes breathing: from cellular dynamics to network rhythmogenesis

Speaker

Yangyang Wang

11:40–12:00

A Chemical Reaction Network-based approach to mTOR signaling dysregulation in drug-resistant epilepsy

Speaker

Silvia Berra

12:00