

Session Program

12-17 Jul 2026



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

Mathematical and Computational Ophthalmology

University of Graz

Thursday 16 July

15:10

Mathematical and Computational Ophthalmology

Session | Location: University of Graz, 01.22 - HS

15:10–15:30 **Drug Release Dynamics from a Three-Layer Composite Contact Lens**

Speaker

Dr Rayanne A. Luke

15:30–15:50 **A mathematical model of fluid and solute transport across the corneal endothelium**

Speaker

Ms Federica Vanone

15:50–16:10 **V-Cornea: A Multi-Scale In Silico Framework for Ocular Toxicology and IVIVE**

Speaker

Dr Joel Vanin

16:10–16:30

Modeling the Ocular Immune Response to Seasonal Allergic Conjunctivitis and the Effects of Treatment

Speaker

Dr Lucia Carichino

16:30

17:00

Mathematical and Computational Ophthalmology

Session | Location: University of Graz, 01.22 - HS

17:00–17:20

A coupled fluid-dynamics-heat transfer model for 3D simulations of the aqueous humor flow in the human eye

Speaker

Prof. Marcela Szopos

17:20–17:40 **Modeling the impact of venous collapsibility on retinal blood flow**

Speaker

Ms Tajkera Khatun

17:40–18:00

Untangling abnormal retinal blood vessels: Integrating computational modelling, image analysis and in vivo imaging

Speaker

Dr Katie Bentley

18:00–18:20 **Mathematical modelling to explore the role of metabolic dysfunction in retinal disease**

Speaker

Dr Paul A. Roberts

18:20