

Session Program

12-17 Jul 2026



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

***Computational and Theoretical Advances in cfDNA and
ctDNA Modeling***

University of Graz

Tuesday 14 July

15:00

Computational and Theoretical Advances in cfDNA and ctDNA Modeling

Session | Location: University of Graz, 15.04 - HS

15:00–15:20

Mechanistic modeling of joint size-dependent cell-free DNA concentrations and tumor kinetics for immunotherapy resistance prediction

Speaker

Linh Nguyen Phuong

15:20–15:40

ctDNA precedes imaging: A predictive model for real-time treatment adaptation in HPV-associated anal squamous cell carcinoma

Speaker

Phebe Havor

15:40–16:00

Coupled SDE-ODE Modeling of Tumor-Immune Dynamics to Infer Biomarker Release

Speaker

Pujan Shrestha

16:00–16:20

Linking cfDNA clearance to fragment length with mechanistic models

Speaker

Thomas Rachman

16:20