

Summer School on Dynamical Systems and Reaction Kinetics Networks

Yeditepe University & Piri Reis University, Istanbul, Turkey
June 15 – 19, 2026

PROGRAMME

Monday, 15 June 2026 (Yeditepe University)

9:00 - 9:30	Registration
9:30 - 9:45	Welcome & opening remarks Local organisers: İlknur Kuşbeyzi Aybar & Orhan Özgür Aybar; DSYREKI Coordinator: Brigita Ferčec
9:45 - 10:00	Welcome address by the Vice-Rector for Academic Affairs/Projects TBA
10:00 - 11:30	Lecture 1 (WP2) Topological classification and equivalence of generic equilibria and fixed points Vesna Županović
11:30 - 12:00	Transition / walk to the lunch venue
12:00 - 13:00	Lunch
13:00 - 14:30	Lecture 2 (WP2) 1-parameter bifurcations of equilibria in discrete and continuous-time dynamical systems Vesna Županović
14:30 - 15:00	Coffee break
15:00 - 16:30	Lecture 3 (WP2) 2-parameter bifurcations of equilibria in continuous-time dynamical systems Mihaela Sterpu
16:30 - 16:40	Announcements / practical information

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Tuesday, 16 June 2026 (Yeditepe University)

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| 9:00 - 10:30 | Online session - How to Prepare a Successful MSCA PF Proposal: An Analysis of the Most Common Weaknesses Related to the Criteria of Excellence, Impact, and Implementation
Stojan Sorčan |
| 10:30 - 10:45 | Break |
| 10:00 - 11:30 | Lecture (Wp1) Dynamical Models of Biochemical Networks: Theory and Applications
Alessandro Borri |
| 12:00 - 13:00 | Lunch |
| 13:00 - 19:00 | Excursion — Çamlıca Tower |

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Wednesday, 17 June 2026 (Yeditepe University)

9:00 - 9:45	Lecture (WP1) Derivation of Dynamical Systems from Chemical Reaction Networks İlknur Kuşbeyzi Aybar
9:45 - 10:30	Lecture (WP1) Bifurcation of Limit Cycles in Chemical Reaction Models Brigita Ferčec
10:30 - 11:00	Break
11:00 - 12:30	Lecture (WP3) Compartmental Epidemiological Models: Mathematical Foundations, Dynamics, and Modern Developments Raluca Efrem
12:30 - 13:30	Lunch
13:30 - 14:15	Lecture (WP3) Pitfalls in Mathematical Model Building Andrea DeGaetano
14:15 - 14:30	Break
14:30 - 15:15	Lecture (WP3) Mathematical Modeling of Metabolism: Beyond ODEs Andrea DeGaetano
15:15 - 15:30	Break
15:30 - 17:00	Lecture (Wp3) Tumor Modeling Based on Formal Reaction Kinetics: From ODEs to Hybrid Simulations Dániel András Drexler
17:00 - 17:10	Announcements / practical information (Thursday transfer to Piri Reis University, student project day, meeting point, etc.)

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Thursday, 18 June 2026 (Piri Reis University)

9:00 - 10:00	Transfer to Piri Reis University
10:30 - 11:00	Campus tour
11:00 - 13:00	Student Project Workshop (Part 1) (Project work: modelling / simulation tasks) PhD students
13:00 - 14:00	Lunch
14:00 - 16:00	Student Project Workshop (Part 2) (Project work continuation) PhD students
16:00 - 17:00	Discussion / mentoring / Q&A (project feedback)
17:00 - 18:00	Transfer back to Yeditepe University

Friday, 19 June 2026 (Yeditepe University)

10:00 - 11:30	Student project presentations & closing remarks
11:30 - 12:00	Short break / wrap-up
12:00 - 13:00	Lunch
13:00 - 18:00	Cultural programme / city visit (details TBA)