

## PROGRAMME

### Lecture notes about bifurcations in biological dynamics:

<https://staff.fnwi.uva.nl/a.m.deroos/projects/BifurcationTheory/>

#### ***Monday 29 September: Introduction to theory***

10:00 Arrival
10:30 Lecture: Introduction to models
11:30 Coffee / Tea
11:45 Hands-on lecture: 1-dimensional graphical model analysis
12:45 Lunch
13:45 Hands-on lecture: 1-dimensional graphical model analysis
14:45 Computer practical: Explanation of program + Computer lab 1
16:00 Coffee / Tea
16:15 Computer practical: Continuation of Computer lab 1
17:30 Free time
18:30 Dinner
19:30 Discussion: The role of theoretical biology (reading material Grainger et al 2021)

#### ***Tuesday 30 september: Basic bifurcation models***

08:00 Breakfast
09:00 Discussion: Wrap up computer lab 1
10:00 Coffee / Tea
10:15 Hands-on lecture : 2-dimensional graphical model analysis.
12:15 Lunch
13:15 Computer practical: Computer lab 2
15:15 Coffee / Tea
15:45 Computer practical continuation + wrap up computer lab 2
17:00 Free time
18:30 Dinner
19:30 Guest Lecture Spatial Models (Max Rietkerk) (reading material Rietkerk et al 2021)

#### ***Wednesday 1 October: Basic bifurcation models***

08:00 Breakfast
09:00 Lecture on bifurcation theory
10:00 Coffee / Tea
10:15 Computer lab 3: Paradox of enrichment
12:30 Lunch

13:30 Facultative walk Ginkelse Heide / free time
15:00 Facultative math hour
16:30 Catch up time (Reading papers, pen & paper exc. L3/L4, extra computer lab, make your own model, ask questions) OR take a break!
18:30 Dinner

***Thursday 2 October: Bifurcations in structured population models***

08:00 Breakfast
09:00 Guest lecture Bifurcations in structured population models (André de Roos)
10:00 Coffee / Tea
10:15 Guest lecture Bifurcations in structured population models (André de Roos)
12:15 Lunch
13:15 Computer lab 3 continued + wrap up computer lab 3
15:15 Coffee / Tea
15:30 Discussion on the role of theory + poster carousel
16:30 Free time
18:30 Course Dinner
19:30 Feedback on course

***Friday 3 October: Adaptive dynamics***

08:00 Breakfast
09:00 Introduction to adaptive dynamics (Martijn Egas)
10:30 Coffee / Tea
10:45 Introduction to adaptive dynamics (Martijn Egas)
12.30 Course wrap-up
13:00 Lunch
14:00 Departure back home