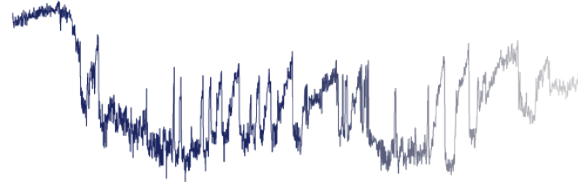


# Critical Transitions in Complex Systems

*Mathematical theory and applications*

1<sup>st</sup> CRITICS Workshop and Summer School, Kuhluse, Denmark



## **PRELIMINARY PROGRAMME Summer School**

**August 23, 2016**



<b>Sunday 28 August</b>		
9:00-20:00	Arrivals and reception	
20:00-21:00	Dinner	

<b>Monday 29 August</b>		
8:30-9:00	<i>The organising committee</i>	Introduction to the summer school
9:00-10:30	<i>Jan Sieber</i>	Introduction to bifurcation theory: Center manifold, normal forms, with examples: Part 1
10:30-11:00	Coffee break	
11:00-12:30	<i>Jan Sieber</i>	Introduction to bifurcation theory: Center manifold, normal forms, with examples: Part 2
12:30-14:00	Lunch	
14:00-15:30	<i>Jan Sieber</i>	Exercise
15:30-16:00	Coffee break	
16:00-17:00	<i>Jan Sieber</i>	Topic seminar
17:00-19:00	<i>Jan Sieber</i>	Work on project
19:00-20:00	Dinner	

<b>Tuesday 30 August</b>		
9:00-10:30	<i>Greg Pavliotis</i>	Stochastic differential equations (incl. non-autonomous differential equations): Part 1
10:30-11:00	Coffee break	
11:00-12:30	<i>Greg Pavliotis</i>	Stochastic differential equations (incl. non-autonomous differential equations): Part 2
12:30-14:00	Lunch	
14:00-15:30	<i>Greg Pavliotis</i>	Exercise
15:30-16:00	Coffee break	
16:00-17:00	<i>Greg Pavliotis</i>	Topic seminar
17:00-19:00	<i>Greg Pavliotis</i>	Work on project
19:00-20:00	Dinner	

<b>Wednesday 31 August</b>		
9:00-10:30	<i>Martin Rasmussen</i>	Intro to non-autonomous differential equations: Part 1
10:30-11:00	Coffee break	
11:00-12:30	<i>Martin Rasmussen</i>	Intro to non-autonomous differential equations: Part 2
12:30-14:00	Lunch	
14:00-15:30	<i>Martin Rasmussen</i>	Exercise
15:30-16:00	Coffee break	
16:00-17:00	<i>Martin Rasmussen</i>	Topic seminar
17:00-19:00	<i>Martin Rasmussen</i>	Work on project
19:00-20:00	Dinner	



<b>Thursday 1 September</b>		
9:00-10:30	<i>Henk Dijkstra</i>	Simple models in the climate system (Energy Balance, AMOC, El Nino): Part 1
10:30-11:00	Coffee break	
11:00-12:30	<i>Henk Dijkstra</i>	Simple models in the climate system (Energy Balance, AMOC, El Nino): Part 2
12:30-14:00	Lunch	
14:00-15:30	<i>Henk Dijkstra</i>	Exercise
15:30-16:00	Coffee break	
16:00-17:00	<i>Henk Dijkstra</i>	Topic seminar
17:00-19:00	<i>Henk Dijkstra</i>	Work on project
19:00-20:00	Dinner	

<b>Friday 2 September</b>		
9:00-10:30	<i>Peter Ditlevsen</i>	Applications in climate. Data-statistics-time series analysis: Part 1
10:30-11:00	Coffee break	
11:00-12:30	<i>Peter Ditlevsen</i>	Applications in climate. Data-statistics-time series analysis: Part 2
12:30-14:00	Lunch	
14:00-15:30	<i>Peter Ditlevsen</i>	Exercise
15:30-16:00	Coffee break	
16:00-17:00	<i>Peter Ditlevsen</i>	Topic seminar
17:00-19:00	<i>Peter Ditlevsen</i>	Work on project
19:00-20:00	Dinner	

<b>Saturday 3 September</b>			
9:00-10:30		<i>Students</i>	Transport to Niels Bohr Institute
10:30-12:30	Room: Auditorium A	<i>Students</i>	Student presentations: Groups 1 and 2
12:30-13:30		Lunch	
13:30-15:30	Room: Auditorium A	<i>Students</i>	Student presentations: Groups 3 and 4
15:30-16:00		Coffee break	
16:00-17:00	Room: Auditorium A	<i>Students</i>	Student presentations: Group 5
17:00-			Dinner and Copenhagen at night

<b>Sunday 4 September</b>		
10:00-17:00	-	Copenhagen during the day
17:00-18:00	-	Transport back to the venue
19:00-20:00	Dinner	