

# Program

**Sunday, 15 August 2021**

15:00 – 18:00    Arrival and registration

18:00 – 19:30    *DINNER*

19:30 – 19:45    Scientific organizers    **Welcome words**

19:45 – 21:00    Tim Lenton    **Positive tipping points to avoid earth  
system tipping points**

21:00 – 23:00    Ice breaker reception with drinks

# Program

**Monday, 16 August 2021**

08:00            *BREAKFAST*

*Earth: tipping dynamics in natural components*

09:00 – 09:15    Stefan Jorda            **About the WE-Heraeus-Foundation**

09:15 – 10:15    Ricarda Winkelmann    **Interacting tipping elements and the risk of domino effects in the Earth System**

10:15 – 10:45    Vasilis Dakos            **Understanding change: Stability and Early warnings**

10:45 – 11:00    *COFFEE BREAK*

11:00 – 11:30    Clara Zemp            **Cascading effects in tropical (agro)forests**

11:30 – 12:00    Anna von der Heydt    **Cascading tipping in past climates: The Eocene-Oligocene transition**

12:00 – 12:30    Jonathan Donges        **Critical conditions for social tipping dynamics towards sustainability**

12:30 – 13:30    *LUNCH*

14:00 – 15:30    **Ignite talks I**

Julius Garbe            **The hysteresis of the Antarctic ice sheet**

Sacha Sinet            **Cascading in a coupled ice-ocean model**

Boris Sakschewski    **Towards testing the uncertainties of the land carbon sink under climate change**

Lucia Layritz            **Towards a multidimensional quantification of resilience change in ecological systems**

# Program

Monday, 16 August 2021

## Ignite talks I

Nico Wunderling	Network dynamics of drought-induced tipping cascades in the Amazon rainforest
Ann Kristin Klose	Cascading tipping behavior of the interacting Greenland Ice Sheet and Atlantic Meridional Overturning Circulation in a model of low complexity
Victor Couplet	Cascade of tipping points: investigating the 'cool Earth' / 'hothouse' narrative with dynamical systems
Emmy Wassénus	Portfolio diversification of earth system risks
Eviatar Bach	Combining multiple physical and data-driven models for data assimilation and forecasting
Ruth Chapman	Stochastic data adapted AMOC box models
Toyo Vignal	Resilience in dry rangelands: how to destock livestock in water-stressed environments?

15:30 – 16:00    *COFFEE BREAK*

16:00– 17:30    Breakout discussions and short plenary on  
“**Doing global systems science in a politicized environment & the role of models**”

19:00 – 21:00    *DINNER*

# Program

**Tuesday, 17 August 2021**

08:00            *BREAKFAST*

World: tipping dynamics in socio-economic components

09:00 – 10:00	Rachael Shwom	<b>Theorizing climate relevant social tipping points</b>
10:00 – 10:30	Jürgen Scheffran	<b>Modeling resource conflicts, climate security cascades and sustainability transitions</b>
10:30 – 11:00	<i>COFFEE BREAK</i>	
11:00 – 11:30	E. Keith Smith	<b>Concern and anticipation of sea-level rise provide grounds for social tipping towards climate action</b>
11:30 – 12:00	Veronika Stolbova	<b>Tipping in climate finance</b>
12:00 – 12:30	Franz Mauelshagen	<b>Social and earth system tipping in industrial transformations</b>
12:30 – 13:30	<i>LUNCH</i>	
14:00 – 15:30	<b>Ignite talks II</b>	
	Fabian Dablander	<b>Overlapping time scales obscure early warning indicators of COVID-19 in Europe</b>
	Sara Ansari	<b>The estimation of citizen commitment to climate change mitigation based on perceptual computing</b>
	Luana Schwarz	<b>Joint environmental action: multi-level dynamics of movement participation</b>
	Niklas Kitzmann	<b>Contagious transformations? Inter-city spreading of sustainability innovations</b>

# Program

**Tuesday, 17 August 2021**

## **Ignite talks II**

Isabell von Falkenhausen	<b>Reproducing the Spreading of Urban Sustainability Innovations using generative models</b>
Petter Bjerser	<b>Utilising social media data to identify social-ecological tipping points in public acceptability and framing of policy problems. The case of Net Zero Climate Targets.</b>
Roger Cremades	<b>The role of cognitive dissonance on social tipping points: Applications to the circular economy</b>
Marvin Lücke	<b>Analyzing tipping behavior of social dynamics on networks using hybrid models</b>
Sina Loriani	<b>Towards systematic screening of tipping points in model intercomparison projects</b>
Tuan Pham	<b>Predicting collapse of adaptive networked systems without knowing the network</b>
Claus Sarnighausen	<b>Methods of risk estimation and propagation for studying cascading tipping dynamics</b>
Juan Rocha	<b>Cascading regime shifts within and across scales</b>

15:30 – 16:00 *COFFEE BREAK*

16:00– 16:45 **Poster session part 1**

## *Tipping interactions and methods I*

17:00 – 18:00 Matthew Ives **Four interventions and a funeral for fossil fuels**

19:00 – 23:00 *HERAEUS DINNER and informal reception with drinks*

# Program

Wednesday, 18 August 2021

08:00            *BREAKFAST*

09:00 – 09:45    **Poster session part 2**

*Tipping interactions and methods II*

10:00 – 10:30    Michel Crucifix            **Earth dynamics, dynamical systems and tipping points : mainstream mathematical background and some speculations**

10:30 – 11:00    *COFFEE BREAK*

11:00 – 11:30    Anne-Sophie Crépin        **Regime shifts in social-ecological systems in the Anthropocene**

11:30 – 12:00    Frank Hilker                **Mathematical models of lake pollution dynamics with both ecological and social tipping points**

12:00 – 12:30    Jobst Heitzig               **Best contributed award  
Closing words and farewell**

12:30             *LUNCH*

**End of the seminar and departure**