**Programme Resilience of living systems: Making it happen! - From fundamental concepts to interdisciplinary applications**

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| **Week 1: What is resilience? And the ABM pre-course** |
|  | **Tuesday June 1, 2021** | **Wednesday June 2, 2021** | **Thursday June 3, 2021:** **ABM pre-course (1)** | **Friday June 4, 2021:****ABM pre-course (2)** |
| 10:30-11:30 | Opening programme | Resilience perspective 1: EcologyFrank van Langevelde | NetLogo tutorial Mark Kramer | NetLogo tutorial Mark Kramer |
| 11:30-12:30 | Keynote: Marten Scheffer | Resilience perspective 2: EpidemiologyMart de Jong | NetLogo tutorial Mark Kramer | NetLogo tutorial Mark Kramer |
| Lunch time |
| 13:30-14:30 | Teams formation | Resilience perspective 3: Gut microbiologyMichiel Kleerenbezem | NetLogo tutorial Mark Kramer | Q&A; Teams work/discuss |
| 14:30-15:30 | Discussion: What is resilience? | Resilience perspective 4: Sociopolitical Gert Jan Hofstede | Q&ATeams work/discuss |  |
| **Week 2: Quantifying resilience** |
|  | **Tuesday June 8, 2021** | **Wednesday June 9, 2021** | **Thursday June 10, 2021** |  |
| 10:30-11:30 | Tatiana Filatova: Tracing resilience, social dynamics and behavioral change: a review of agent-based flood risk models | Gert Jan Hofstede: Artificial Sociality | George van Voorn: Aligning resilience models, mechanisms, and metrics |
| 11:30-12:30 | Volker Grimm: TBD | Jan Jaap Poos: Resilience in social-ecological systems, the case of fisheries management | Gary Polhill: ABM for policy support: the difference between validity and usefulness |
| Lunch time |
| 13:30-14:30 | Emile Chappin: TBD | Els Weinans: Indicators of Resilience | Maja Schlüter: Sustainable natural resource governance under interest group competition in policy-making. |
| 14:30-15:30 | Teams work/discuss | Teams work/discuss | Teams present their concepts |
| **Week 3: Improving resilience** |
|  | **Tuesday June 15, 2021** | **Wednesday June 16, 2021** | **Thursday June 17, 2021** |  |
| 10:30-11:30 | Alternative model demonstrations carrousel:1. Peter van Heijster: Ordinary and Partial Differential Equations
2. Els Weinans: Stochastic DEs
3. Hannah van Zanten
4. Hélène Cecilia: R0 models of Rift Valley Fever in Senegal
 | Niels Anten: Making Cropping systems resilient | Jaap van der Meer: Resilience in Marine systems |
| 11:30-12:30 | Andreas Flache: Opinion polarization and network segregation. Modelling complex relations | Amineh Ghorbani: Commoning toward urban resilience: The role of trust, social cohesion, and involvement in a simulated urban setting |
| Lunch time |  |
| 13:30-14:30 | Arend Ligtenberg: Incorporating spatial components | Synthesis: Making sense of it all |
| 14:30-15:30 | Teams work/discuss | Teams work/discuss | Teams present their progress |
| **Week 4: Synthesis and Presenting resilience** |
|  | **Tuesday June 22, 2021** | **Wednesday June 23, 2021** | **Thursday June 24, 2021** |  |
| 10:30-12:30 | Q&A; Teams work/discuss | Q&A; Teams work/discuss | Four teams present (random order)10:40-11:00, 11:10-11:30, 11:40-12:00, 12:10-12:30 |
| Lunch time |
| 13:30-15:30 | Q&A; Teams work/discuss | Q&A; Teams work/discuss | Three teams present (random order)13:30-13:50, 14:00-14:20, 14:30-14:5014:55 – 15:15 Reflection and take away message 15:15-15:30 Jury decision & Closure |

All times are CET (Central European Time). Mondays are always ‘free’, except Monday May 31st there will be a short technical set-up and say ‘hi’-moment at 11:00 CET.

We assume there will be seven (7) teams of five (5) people each