Join Radboud Summer School 2019!
Complexity Methods for Behavioural Science
change perspective
Radboud University
Complexity research transcends the boundaries between the classical scientific disciplines and is a hot topic in physics, mathematics, biology, economy as well as psychology and the life sciences and is collectively referred to as the Complexity Sciences.

The focus of many analyses is to quantify the degree of periodicity, nonlinearity, context sensitivity or resistance to perturbation by exploiting the fact that “everything is interacting” in complex systems. This requires mathematics and rules of inference that are very different from the mathematics underlying traditional statistical analyses. The complex systems approach to behavioural science often overlaps with the idiographical approach of “the science of the individual”, that is, the goal is not to generalise properties or regularities to universal or statistical laws, but to apply general principles and universal laws that govern the adaptive behaviour of all complex systems to study specific individuals in specific contexts at a specific moment in time.

This course will discuss techniques that allow for the study of human behaviour from the perspective of the Complexity Sciences, specifically, the study of complex physical systems that are alive and display complex adaptive behaviour such as learning, development and creativity. Complexity research is often about finding simple models or explanations that are able to describe a wide range of qualitatively different behavioural phenomena.

After this course you are able to

• Simulate linear, nonlinear and coupled dynamics using simple models
• Conduct (multi-fractal) Detrended Fluctuation Analysis and related techniques to quantify global and local scaling relations
• Conduct Recurrence Quantification Analysis and related techniques to quantify temporal patterns, synchronisation and coupling direction
• Conduct analyses on (multiplex) Recurrence Networks to quantify structure and dynamics of (multivariate) time-series

Number of EC
2 ECTS credits

Entry level
Master, PhD, Postdoc and Professional
Course leader
Fred Hasselman, Assistant Professor,
School of Pedagogical and Educational Sciences,
Radboud University

For whom is this course designed
Researchers who are interested in acquiring hands-on experience with applying research methods and analytic techniques to study human behaviour from Complexity Science. Prior knowledge is not required, some experience using R is recommended.

Admission document
Short biography with research interests

More course details on our website

Course date
Monday 8 July - Friday 12 July 2019

Course fee
€ 400 for Master and PhD
€ 600 for Postdoc and Professional

Deadline application
1 May 2019

Discounts
- 10% discount for early bird applicants. The early bird deadline is 1 March 2019.
- 15% discount for students and PhD candidates from partner universities. Please note that these discounts can be combined if you apply before 1 March 2019.
What is the RSS experience?

RSS is more than just a course!

Radboud Summer School offers you a unique opportunity to meet other students and researchers from all over the world with different cultural and academic backgrounds. You will also get to know Radboud University and the city of Nijmegen.

Our social programme includes a welcome reception, guest lecture and farewell drinks. And for a small fee you can join our BBQ, River Cruise on a pancake boat, a Pub Quiz, Sports Activities or a City Game.

Want to know more?
Have a look at what participants have said about their experience on our website!

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www.ru.nl/radboudsummerschool