

Dynamics of Social Behaviour

An introduction to novel quantitative techniques to record and analyse social behaviour online and offline

Hosted by CORE: The Complex Systems Research Centre

Venue: NUI Galway

Date: Tuesday 6th of August to Thursday 8th of August, 2013

Organizer: Dr. Denis O'Hora, School of Psychology

Human behaviour is fundamentally social. Even when isolated, our concerns relate to the concerns of others and are articulated through a language created with others. The quantitative analysis of social behaviour raises some particular difficult challenges, with the result that much behavioural science focuses on the behaviour of single individuals in isolation. Recent advances in computing and mathematics provide new avenues through which to record, characterise and analyse social behaviour. These advances allow us to conceive of novel metaphors that can be applied to human social behaviour; detailed models that are carefully constructed and tested. This workshop will focus on novel dynamical models of human social cognition and behaviour and specifically on techniques to capture complex human activity and to quantitatively analyse it.

This workshop will consist of, (i) introductory lectures on relevant theoretical material from cognitive, behavioural and information sciences, and (ii) hands-on workshops during which participants will design experiments and analyse data. Our primary goal is to train basic techniques from an introductory level but more advanced techniques will also be demonstrated.

The intention of the workshop is that attendees will be introduced to new techniques and develop new skills in data collection and analysis of social behaviour. These techniques will focus on three different types of questions. First, participants will learn how to develop experiments to track cursor movements during choice using Mousetracker and to analyse the data obtained. Second, participants will learn how to analyse dyadic verbal interactions between people. Finally participants will learn how to download and analyse social network data. In this way, attendees will gain skills to analyse social behaviour at both individual and group level and using both online and offline data collection techniques.

Cost:

Students €30

Academics €50

Register at ...TBA

Speakers

Dr. Christopher Kello **University of California at Merced**

Christopher Kello is a Professor of Cognitive and Information Sciences at University of California, Merced. He is Director of the Cognitive Mechanics Lab, and Acting Dean of Graduate Studies.

Dr. Kello completed his Ph.D. at University of California, Santa Cruz, and B.S. in Cognitive Science at the University of Rochester. His research is aimed at understanding how cognitive functions are soft-assembled from neural and behavioral interactions. His lab collects behavioral data from experiments and corpora, and builds computational models to simulate the underlying neural and cognitive processes. His interests span many domains of cognitive science, but his work and collaborations have focused on speech, reading, dyadic interaction, memory and visual search, and neural network modeling. His lab uses analytic tools adopted from statistical physics and the mathematics of fractals, including power law analyses of time series, frequency distributions, and spatial data, as well as complexity matching in dyadic interaction. Dr. Kello has received a number of awards, including NSF's CAREER and Director awards.

Dr. Jonathan Freeman **Dartmouth College**

Jon Freeman is Assistant Professor of Psychological & Brain Sciences at Dartmouth College. His research focuses on the cognitive and neural basis of person perception, and specifically on how the brain extracts and represents social information from facial, vocal, and bodily cues. He is interested in the dynamic and interacting processes that underlie basic perceptions of other people, including social categories and group membership (e.g., gender, race), personality traits, and emotion. In particular, he studies how such perceptions are influenced by multiple complex cues; how perceptions cross-talk and combine; and how visual processing interacts with social cognitive factors and prior social and cultural knowledge to shape the basic ways we see and understand other people. He takes an integrative and multi-level approach in examining these phenomena, incorporating insights across social psychology and the cognitive, vision, and neural sciences. His studies use a wide range of methodologies, including neuroimaging, event-related brain potentials, real-time behavioral techniques (e.g., computer mouse-tracking), and computational modeling. He is also the developer of the data collection and analysis software package, MouseTracker.

Dr. Kello and Dr. Freeman are supported by the millennium fund at NUI Galway

Dr. Fred Cummins
University College Dublin

Fred Cummins is a lecturer in cognitive science at University College Dublin where he has been the Co-Director of the Cognitive Sciences programme since 2001.

Dr. Cummins completed his PhD at Indiana University, before undertaking postdoctoral research at Northwestern University and IDSIA laboratories in Lugano, Switzerland. His principal professional interests lie in helping to develop a cognitive science that does justice to the reality of subjective experience. He has particular interests in rhythm, speech, language, enaction, coordination and the metaphysical basis of experience. Dr. Cummins sees his work as a small contribution to exploration of the thesis that mind and life are inseparable. An unreformed anti-representationalist, he thinks in terms of dynamic systems theory. His current research is focussed squarely on the ubiquitous behaviour of joint speech (prayers, protests, oaths, etc).

Dr. Denis O'Hora
National University of Ireland Galway

Denis O'Hora is an experimental psychologist at NUI Galway. His research focuses on the dynamics of learning and decision-making. This work ranges from fundamental analyses of relational cognition (e.g., how we structure time and categories) to applications to organizational issues (e.g., goal setting) and special education (e.g., autism). Core to his concern with learning is an attempt to characterise the moment-to-moment evolution of decisions from uncertain to certain and to track the development of decisions across choices. He employs a variety of techniques to collect and analyse behaviour and the neural correlates of behaviour.

Dr. Maciej Dabrowski
National University of Ireland Galway

Maciej Dabrowski combines his passion for research and teaching working as a Postdoctoral Research Fellow at Digital Enterprise Research Institute and Adjunct Lecturer at J.E. Cairnes School of Business & Economics at National University of Ireland Galway. His research combines innovative use of technology with focus on the effects on user behaviours in various environments that include decision making, online shopping or online collaboration in large organizations. Maciej has over 10 years of experience in research and development of Web applications and information systems in a number of domains, such as e-commerce, social networking or recommender systems. His background includes degrees in Computer Science, Business, and Information Systems. His research interests include Recommender Systems, Decision Support Systems and Decision Theory, as well as Social Networking tools and analysis, both in enterprise and Web context.

Preliminary Schedule (subject to change)

Day 1

9 – 9.30am Registration and Payment (pay on site – cash only)

9.30 – 10:30am An Introduction to Action Dynamics – Denis O’Hora

10:30 – 11am Break

11 – 12:30 Action Dynamics of Social Construal – John Freeman

12:30 – 1:30 Lunch

1:30 – 3:00 Workshop 1 (Mousetracker)

3:00 – 3:30 Break

3:30 – 5:00 Workshop 2 (Mousetracker)

Day 2

9.30 – 10:30am An Introduction to Dynamical Cognitive Science – Fred Cummins

10:30 – 11am Break

11 – 12:30 Dynamics of Social Cognition – Chris Kello

12:30 – 1:30 Lunch

1:30 – 3:00 Workshop 3 (Dyadic interaction)

3:00 – 3:30 Break

3:30 – 5:00 Workshop 4 (Dyadic interaction)

Day 3

9.30 – 10:30am An Introduction to Social Networks – Maciej Dabrowski

10:30 – 11am Break

11 – 12:30 Social Network Analysis and Collecting Data – Maciej Dabrowski

12:30 – 1:30 Lunch

1:30 – 3:00 Workshop 5 (Social Networks)

3:00 – 3:30 Break

3:30 – 5:00 Workshop 6 (Social Networks)