



**ECCS'10 - European Conference on Complex Systems
Lisbon, September 13-17, 2010**

Satellite Meeting

“Emergence, Path dependence and Transitions in Geographical Space”
Lisbon, September 15, 2010

Organisers: Denise Pumain, Arnaud Banos and Lidia Diappi

Description

By their very nature, social sciences handle complex systems, characterised by: a large number of entities and interactions between them, creating non linear relationships (the same causes do not give the same effects according to the local or historical context) and producing new macro structures from the very micro interactions (emergence), leading to an unpredictable evolution. Complexity is then the normal regime for social sciences when they build theories for explanation

Importantly enough, the concept of emergence in human and social sciences has two distinctive characteristics. First, social and human complex systems share a large dependence regarding the historical and geographical context, including especially a very high speed of their evolutionary processes, when compared to biological or geological evolutions. Second, they rarely admit reductionism in explanation, because the structuring of societies always involve processes of a different nature that are analysed in deep by a given discipline, but that have to be rearticulated in order to make a concrete situation understandable in a satisfying way.

So far, weak emergences only - characterising processes and properties that are already identified – are correctly reproduced by simulation. Strong emergences, producing social innovation, as new artefacts or technologies, ideas or social practices are not yet well understood enough for predictive or prospective simulation – unless a high level of abstraction is accepted, therefore lowering the societal significance of these applications.

Furthermore, the apparent resilience of forms and structures in space forces us to address the processes that maintain these structures, under a large range of perturbations, whatever the diversity and renewal of actors and of social, economic and cultural evolutions at work.

This satellite meeting will address these issues crucial enough to contribute defining the social sciences of the XXI century.



**Spatial
Simulation
for the
Social
Sciences**





Meeting agenda

The workshop will take place September 15, and will focus on a limited number of pre-selected contributions. Ample time will be devoted to group discussions. We anticipate inviting 2 keynote speakers:

- Peter Allen, Emeritus Professor of Cranfield University
- Cyrille Bertelle, Professor in Computer Science, Le Havre University.

Important dates

- 30/4: Deadline for submissions
- 31/5: Notification of acceptance
- 10/6: Final (amended) manuscripts due
- 15/9: Satellite Meeting

Paper Submission

Full paper is expected for the conference. Papers will be evaluated and selected under the authority of the Organising and Program Committee members for publication. For each paper, at least two external reviewers will be suggested and requested.

ECCS'10 accepts the document format templates proposed by Springer-Verlag for the "Lecture Notes in Computer Science" series. Please use the following template when preparing your paper.: [Template for Office 2007 Word](#)

To submit, click [here](#) and follow the instructions. Please note:

* Short papers should have 6 pages maximum, long papers should have no more than 12 pages.

* Papers must be submitted in Word form.

* Deadline for submission is 30/4.

If you encounter any problem, please contact [Dr Arnaud Banos](#)



**Spatial
Simulation
for the
Social
Sciences**





Program committee members

Frédéric Amblard, IRIT, University of Toulouse (FR)
Michael Batty, CASA University College London (UK)
Danièle Bourcier, CERSA, CNRS, Paris (France) and Centre Marc Bloch, Berlin (DE)
Paul Bourgin, CREA, Ecole Polytechnique, Paris (FR)
David Chavalarias, CREA, Ecole Polytechnique, Paris (FR)
Andrew Crooks, Krasnow Institute for Advanced Study at George Mason University (US)
Eric Daudé, IDEES, University of Rouen (FR)
Pierre Frankhauser, THEMA Université de Franche-Comté (FR)
Jeffrey Johnson, The Open University, Warwick (UK)
Tim Kohler, Washington State University (US)
Lael Parrott, Complex Systems Laboratory, University of Montreal (CA)

Organising Committee

Denise Pumain, University Paris 1 - Géographie-cités UMR 8504 - IUF (France),
pumain@parisgeo.cnrs.fr, 13 rue du Four, 75006 Paris, France

Arnaud Banos, CNRS - Géographie-cités UMR 8504 (France),
arnaud.banos@parisgeo.cnrs.fr, 13 rue du Four, 75006 Paris, France

Lidia Diappi, Politecnico di Milano (Italy), lidia.diappi@polimi.it, Via Bonardi, 3 - 20133 Milano



**Spatial
Simulation
for the
Social
Sciences**

