CMUP
Centro de **Matemática**
Universidade do Porto

Dynamical Systems Seminar

Date. September 28, **15h30**

Place. Room M031

Speaker. Mike Field[1] (Rice University, Houston, USA)

Title. Asynchronous Networks

Abstract. Many (if not most) networks in biology, computer science, engineering and technology are asynchronous. In this talk we explain the idea of an asynchronous networks and explain some of the underlying mathematics. In particular, we present some basic examples and results and indicate one or two of the many outstanding questions.

Remark. Coffee with the speaker is served after the talk (**16h30 - 17h00**)

---

[1]Mike Field is a research professor at Rice University (USA). Before this position, he worked at the University of Warwick (UK), University of Sydney (Australia) and University of Houston (USA) and he had several visiting positions in many different countries. Mike Field belongs to the editorial board of scientific journals such as *Nonlinearity* and *Journal of Mathematics and the Arts*, and he also does refereeing work for a wide range of journals, institutions and publishers. He received several international awards and honours. Mike Field also uses mathematics as a tool in artistic creation adapting some of his programs to produce tools for the visualization of rather complex dynamics. Indeed, in 1988 he started using some of his work on symmetry and chaos to create patterns and designs. Early examples and explanations of this work appear in the book 'Symmetry in Chaos' (1992, co-authored with Martin Golubitsky). Michael has used his software and techniques as the basis for interdisciplinary courses for art students as well as seminars for teachers in Houston. His software and techniques are continually evolving, with new series of art works regularly exhibited internationally. His main research interests are ergodic theory and mixing, network dynamics and visualization with special reference to asynchronous dynamics and adaptivity and geometric theory of dynamical systems with symmetry and the mechanisms. Mike Field's homepage is http://math.rice.edu/∼mjf8/