



Synthetic Biology Workshop 20th–22th July 2011 St Anne's College University of Oxford

The Robust Synthetic Biology Network (RoSBNet) brings together systems/control engineers, electrical, chemical, computer engineers, physicists, mathematicians, biologists and biochemists, but also researchers from the social sciences and humanities to discuss Synthetic Biology research. It aims at addressing the theoretical and practical challenges of designing new robust biological networks or modifying existing ones, which have to function inside uncertain biological environments, all the way from parts to whole systems. The Network also focuses on the Ethical, Legal and Societal Issues that are raised by advances in Synthetic Biology, aiming to create a fruitful discussion on how such concerns can be balanced by the potential usefulness of the many applications, such as environmental cleanup, energy and healthcare. The objective is to transfer knowledge and develop a fruitful discussion and cross-fertilization of ideas on modelling, analysis, design and construction of synthetic biological networks.

Topics:

"Higher Level Structures"

- **Biology Theme:** Bottom up and top down approaches for constructing artificial cells and multi-cellular systems.
- **Electrical/Computer Engineering Theme:** Organizational principles and protocols in computer networked systems.
- **Control/Systems Engineering Theme:** Architectural principles of complex networked systems—how to build large networks.
- **Ethical, Legal, Societal Implications:** The danger of 'dual use', i.e., use of Synthetic Biology constructs both for peaceful and military aims.

Confirmed Speakers:

Dr Jo Husbands (U.S. National Academy of Sciences, USA)
Dr James Revill (University of Sussex, UK)
Dr Piers Millett (United Nations, Geneva, Switzerland)
Professor Stefan Eriksson (Uppsala University, Sweden)
Dr Jim Whitman (University of Bradford, UK)
Dr Alex Kelle (University of Bath, UK)
Professor Koichi Takahashi (RIKEN, Japan)
Professor Michael Jewett (Northwestern University, USA)
Professor Ricard V. Solé (University of Papeu Fabra, Spain)
Professor Dek Woolfson (University of Bristol, UK)
Professor Mauricio Barahona (Imperial College London, UK)
Dr Orkun S. Soyer (University of Exeter, UK)

Registration Deadline: 1st June 2011

Website: <http://www.rosbnet.org>
Wiki: <http://sysos.eng.ox.ac.uk/control/RoSBNet/>
Mailing List: rosbnet-subscribe@maillist.ox.ac.uk

Email: rosbnet@eng.ox.ac.uk
Tel: +44(0)1865 283384
Fax: +44(0)1865 283394

