

**StoMP 2009: Noisy bugs: modelling and microbiology. Provisional programme 22-06-2009**

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**Monday 13<sup>th</sup> July**

1-2pm registration

2pm start. Welcome and introduction

2.15-3.15 **Mark Goulian**

Dynamic range and specificity in bacterial two-component signalling

3.15-3.45 tea / coffee

3.45-4.30 **Pete Lund**

Strategies for analysis of a complex regulatory network in *E. coli* – the acid stress response

4.30-5.15 **Martin Howard**

How does the ParABC system segregate low copy number plasmids in bacteria?

5.15 cheese and wine

**Tuesday 14<sup>th</sup> July**

9.10-9.30 **Phil Aldridge**

The characterisation of the dynamics of the FliT:FliD:FliH4C4 interaction and its role in regulating flagellar assembly

9.30-10.30 **Sunney Xie**

Single molecule and systems biology of *E. coli*

10.30-11.00 tea / coffee

11.00-11.45 **Peter Swain**

Modelling stochastic biochemical networks

11.45-12.30 **Judy Armitage**

Tuning bacterial behaviour

12.30-2.00 Lunch

1.55-2.00 Introduction by Igor Goryanin

2.00-2.20 **Alison Graham**

A systems approach to understanding microbial responses to oxygen

2.20-2.40 **Guido Sanguinetti**

Switching regulatory models of cellular stress response

2.40-3.00 **Ewan Murray**

Abh, a novel activator of biofilm formation by *Bacillus subtilis*

3.00-3.30 tea / coffee

- 3.30-4.15 **Marjan van der Woude**  
How to switch from "off" to "on" and back again with OxyR, DNA modification and a replication fork
- 4.15-4.35 **Dirk Husmeier**  
Network inference in systems genetics
- 4.35-5.35 poster session with beer

### Wednesday 15<sup>th</sup> July

- 9.10-9.30 **Marco Morelli**  
Modelling the bacteriophage lambda genetic switch: the role of the DNA looping interaction
- 9.30-10.30 **Pieter Rein ten Wolde**  
Information transmission in signal transduction pathways
- 10.30-11 tea / coffee
- 11-11.45 **Leendert Hamoen**  
Binding to the negatively curved cell membrane
- 11.45-12.30 **James Moir**  
Respiratory pathway choice in *Neisseria meningitidis*
- 12.30-1.55 lunch

- 1.55-2.00 Introduction by Nigel Brown
- 2.00-2.20 **Steven Porter**  
Identification of a phosphorelay in bacterial chemotaxis predicted by mathematical modeling
- 2.20-2.40 **Maciej Dobrzynski**  
Swift and robust response of two-component signalling networks
- 2.40-3.00 **Dominique Chu**  
Modelling sialic acid metabolism
- 3.00-3.20 **Paolo Visco**  
Statistical physics of switching bacteria

3.20-3.50 tea / coffee

- 3.50-4.35 **Gavin Thomas**  
Metabolic modelling of a bacterial/animal symbiosis
- 4.35-5.35 **Barry Wanner**  
EcoliFunGen project: Tacking the *Escherichia coli* unknowneome

Conference dinner (Apex hotel)

### Thursday 16<sup>th</sup> July

- 9.10 **Ekkehard Ullner**  
Multi-stability of synthetic genetic networks with repressive cell-to-cell communication
- 9.30-10.30 **Mustafa Khammash**

## Stochastic gene expression: modelling, analysis and identification

10.30-11 tea / coffee

11-11.45 **Wilson Poon**

Bacteria as colloids

11.45-12.30 **Ian Stansfield**

Ribosome traffic on messenger RNAs: stochastic control of gene expression