

Plant Systems Biology UK Workshop – 1-3 June 2010
Jubilee Campus, University of Nottingham
Hosted by the Centre for Plant Integrative Biology and SIGNET

Programme

- Registration, all refreshments and the poster session will take place in the Atrium of the Computer Science Building, Jubilee Campus (please note: this is **not** the same as the Atrium Building!)
- All talks will take place in Lecture Theatre BLT1, in the Exchange Building, Jubilee Campus.

Tuesday 1 June

13:00-14:00 Registration and buffet lunch – Atrium, Computer Science Building

Session 1 – Project Updates

14:00-14:10 Welcome

14:10-14:30 ROBuST *Karen Halliday*

14:30-14:50 PRESTA *Jim Beynon*

14:50-15:10 CPIB *Charlie Hodgman*

15:10-15:50 ONDEX *Chris Rawlings & Keywan Hassani-Pak*

15:50-16:30 Tea/coffee & networking

Session 2 – Simple networks and their parameterisation

16:30-17:10 Auxin redistribution during root Gravitropism: a systems biology approach
Leah Band, Jianyong Sun, Antoine Larrieu & Darren Wells

17:10-17:30 Estimating periodicity of oscillatory time-series through resampling techniques
Maria Costa, B. Finkelstädt, P. Gould, J. Foreman, K. Halliday, A. Hall & D. Rand

18:00-20:00 Poster session and buffet dinner – Atrium, Computer Science Building

Wednesday 2 June

Session 3 – Modelling genetic to metabolomic networks

09:00-09:40 Network inference of the lateral root developmental pathway
Kim Kenobi & Ute Voß

09:40-10:00 Creation of a root localisome: location! location!! location!!!

Ranjan Swarup

10:00-10:20 Network flux analysis in plants: experimental and modelling strategies to analyse compartmented and perturbed systems

Shyam K. Masakapalli, N.R. Kruger & R.G. Ratcliffe

10:20-11:00 Tea/coffee & networking

Session 4 – Network inference 1

11:00-11:40 Using network inference to refine the identification of key stress regulators

Claire Hill, Christopher Penfold, Oliver Windram, PRESTA Consortium

11:40-12:00 Integrated knowledgebase for investigation of regulatory processes in

Arabidopsis thaliana

Artem Lysenko, A. Miller, T.C. Hodgman & C. Rawlings

12:00-14:30 Buffet lunch and drop-in demo session – Atrium, Computer Science Building

Demos: CPIB image analysis tools ***Andy French***

12:30-14:30 ONDEX tutorial (registration required)

Session 5 – Network inference 2

14:30-15:10 Network Inference with VBSSM

David Wild

15:10-15:30 A Bayesian network analysis of genes in the regulatory network of *SHOOT*

MERISTEMLESS

Alex Murison

15:30-15:50 Gene expression networks regulating Arabidopsis seed germination and dormancy

George W. Bassel

15:50-16:30 Tea/coffee & networking

Session 6 – Network validation

16:30-16:50 Analysis of Plant Promoter-Linked Elements (APPLES)

L. Baxter, R. Hickman, Sascha Ott & PRESTA Consortium

- 16:50-17:10 Text-mining analysis within ONDEX to identify proteins involved in stress response in *Arabidopsis thaliana* as prior information for network modelling
*K. Hassani-Pak, **Roxane Legaie**, C. Canevet, H. A. van den Berg, J.D. Moore & C. Rawlings*
- 17:10-17:50 Global control of rhythmic gene expression by the transcription factor LHY
Sally Adams, Siren Veflingstad, S. Ott, B. Finkelstädt, D. Rand & I. Carré
- 20:00 Conference Dinner at Mem Saab in City Centre (transport from campus available)

Thursday 3 June

Session 7 – Time management

- 09:20-09:40 CSBE project update
Andrew Millar
- 09:40-10:20 The cryptochromes and phytochrome A regulate temperature compensation of the circadian clock
*P. Gould, **Julia Foreman, Mirela Domijan**, D. Macgregor, A.P. Fernández, M. Costa, K. Sidaway-Lee, T. Zielinski, C. Moran, J. Young, K. Stewart, G. Steel, S. Bird, D. Rand, B. Finkenstädt, A. Millar, S. Penfield, A. Hall & K. Halliday*
- 10:20-10:40 A high-throughput screen identifies light and temperature induced alterations in circadian architecture
Peter D. Gould & Anthony Hall
- 10:40-11:20 Tea/coffee & networking

Session 8 – Multiscale modelling

- 11:20-11:50 Multiscale modelling at CPIB with OpenAlea
Mike Stout & Leah Band
- 11:50-12:20 Multiscale 3D modelling of lateral root emergence
Andrew French, A. Middleton & B. Péret
- 12:20-14:00 Buffet lunch and departure