

**European Conference for Mathematical and Theoretical Biology (ECMTB)
Plant Modelling**

Andrés Chavarría-Krauser, Lionel Dupuy, Mariya Ptashnyk

Part I: New theories and approaches to model plant systems, Chair: Mariya Ptashnyk

11.40-12.15 Christophe Godin (INRIA, France) (Keynote)
Modeling the mechanical regulation of morphogenesis in plants

12.15-12.35 Eva Deinum (FOM Institute, Netherland)
Understanding the paradoxical effects of katanin microtubule severing on the self-organisation of the plant cortical array

12.35-12.55 Brian Seguin (University of Dundee, UK)
Modeling a Plant Cell Wall: interactions between mechanics and biochemistry

Lunch Break

14.00-14.35 Stan Maree (The John Innes Centre, UK) (Keynote)
At the crossroads: how auxin biases positioning of asymmetric cell divisions in the root meristem

14.35-14.55 Juliane Claus (Heidelberg University, Germany)
Modeling of Zinc Uptake and Transport in Plant Roots

14.55-15.15 Betina Greese (Lund University, Sweden)
Computational Modelling of Planar Cell Polarity in the Arabidopsis Root Epidermis

Coffee Break

16.00-16.35 Henrik Jönsson (Lund University / The Sainsbury Lab, Sweden / UK) (Keynote)
Understanding plant shoot development - a Computational Morphodynamics approach

Part II: From bio-Imaging to analysis and modelling, Chair: Andrés Chavarría-Krauser

16.35-17.10 Richard Smith (Max Planck Institute, Germany) (Keynote)
The effect of geometry on morphogenesis in the Arabidopsis embryo

17.10-17.30 Dimitris Kalogiros (The James Hutton Institute /University of Dundee, UK)
Density-based approaches to interface models and data in root biology

17.30-17.50 Sam Keyes (University of Southampton, UK)
Image-based plant phosphate uptake modelling: a case study for root hairs using synchrotron X-ray CT imaging

Part III: Models of interactions with the environments , Chair: Lionel Dupuy

17.50-18.25 Claude Doussan (INRA, France) (Keynote)
Soil-Root Interactions : Observations and modeling with a specific focus on water uptake

18.25-18.45 Yves Dumont (CIRAD, France)
Modelling Root Growth with PDE, The C-root model.

18.45-19.05 Ansgar Bohmann (Heidelberg University, Germany)
Coupling biochemical models to physics of transport in leaf physiology