

Monday 9.09**Session #1: Mechanics and patterning (tissue scale) [Chair: A. Maizel]**14:00 - 14:15 **Opening: A. Maizel / K. Schneitz**

- 14:15 - 14:45 O-1 **O. Hamant** Suboptimal microtubule response to mechanical stress buffers growth variation
- 14:45 - 15:05 O-2 **K. Schneitz** Cellular growth patterns shaping the Arabidopsis ovule
- 15:05 - 15:20 O-3 **C. Baroux** Role of ovule growth dynamics on germline fate establishment in Arabidopsis
- 15:20 - 15:35 O-4 **R. Simon** A peptide pair coordinates regular ovule initiation patterns with seed number and fruit size
- 15:35 - 16:05 O-5 **G. Ingram** The mechanical conundrum of seed shape regulation

16:05 - 16:50 **Coffee break**

- 16:50 - 17:20 O-6 **M. Heisler** Control of plant morphogenesis by adaxial-abaxial cell type boundaries
- 17:20 - 17:40 O-7 **T. Greb** Exploring the Morphodynamics of Radial Plant Growth
- 17:40 - 18:00 O-8 **M. Tsiantis** A growth-based framework for leaf development and diversity.
- 18:00 - 18:20 O-9 **J. Lohmann** Plant self-organisation by feedback from tissue mechanics

18:20 - 18:45 **Transfer to the Alte Aula**

- 18:45 - 19:45 K-1
- E. Coen**
- From Planes to Cups: The Development and Evolution of Leaf Shape

19:45 - 22:00 **Welcome reception****Tuesday 10.09****Session #2: Mechanics and patterning (cell scale) [Chair: K. Schneitz]**

- 09:00 - 09:30 O-10 **C. Rasmussen** Division plane orientation in plant cells
- 09:30 - 09:50 O-11 **A. Maizel** Cytoskeleton dynamics and lateral root morphogenesis
- 09:50 - 10:05 O-12 **P. Vaddepalli** Molecular and cellular mechanisms regulating the cell division orientation during early plant embryogenesis
- 10:05 - 10:35 O-13 **M. Ueda** Live-cell imaging of the intracellular dynamics of Arabidopsis zygote

10:35 - 11:20 **Coffee break****Session #3: Quantifying and modelling cell and tissue growth [Chair: K. Schneitz]**

- 11:20 - 11:50 O-14 **V. Grieneissen** Polar transport in growing plants: from maxima to minima, phytohormones and nutrients
- 11:50 - 12:05 O-15 **C. Kirchhelle** Two mechanisms control growth anisotropy in Arabidopsis lateral roots
- 12:05 - 12:30 **Flash talks**
- F-1 **J. Alonso Serra** Mechanical control of secondary growth in trees
- F-2 **S. Robinson** Visualising hypocotyl elongation in response to stress-induced microtubule reorientation
- F-3 **Y. Meroz** Towards a Framework for Collective Behavior in Plant-Inspired Growth-Driven Systems
- F-4 **J. Derr** Fluttering of growing leaves as a way to reach flatness: Experimental evidence on *Persea americana*
- F-5 **R. Andrade Buono** Tight regulation of programmed cell death in the Arabidopsis root cap regulates cellular turnover while maintaining organ integrity
- F-6 **L. Colin** Contribution of PI(4,5)P2 in Arabidopsis Shoot Apical meristem development
- F-7 **L. Riglet** Deciphering the Mechanisms Underlying Petal Growth & Patterning in *Hibiscus trionum*
- F-8 **K. Yalamanchili** Lateral Root Priming Synergistically Arises from Root Growth and Auxin Transport Dynamics

12:30-13:30 **Lunch**13:30-16:00 **Poster Session****Session #3, part 2: Quantifying and modelling cell and tissue growth [Chair: T. Greb]**

- 16:00 - 16:20 O-16 **S. Strauss** Harnessing organ-centric coordinate systems for 4D biological image analysis.
- 16:20 - 16:35 O-17 **A. Geitmann** From polysaccharide to polyhedron - Cell morphogenesis in the leaf epidermis

16:35 - 17:20 **Coffee break**

17:20 - 17:50	O-18	P. Andrey	Deciphering cell division patterns in plant early embryogenesis by combining 3D image analysis and computer modelling
17:50 - 18:20	O-19	L. Cerrone & A. Wolny	Automating Cell Segmentation
18:20 - 18:35	O-20	P. Durant-Smet	Quantitative evaluation of feedback mechanisms between cell shape and cytoskeleton organization

20:00 - 22:00 **Speakers dinner**

Wednesday 11.09

Session #3 part 3, Quantifying and modelling cell and tissue growth [Chair: J. Lohmann]

09:00 - 09:30	O-21	H. Jönsson	A multi-scale approach to understand morphogenesis and differentiation
09:30 - 09:50	O-22	K. Alim	Plant self-organisation by feedback from tissue mechanics
09:50 - 10:05	O-23	Y. Long	Cellular heterogeneity in turgor pressure and growth in the shoot apex
10:05 - 10:35	O-24	C. Godin	Scrutinizing auxin dynamics at the shoot apical meristem ... what does it mean to phyllotaxis ?

10:35 - 11:20 **Coffee break**

Session #4: Form and Adaptation [Chair: M. Tsiantis]

11:20 - 11:50	O-25	M. Fendrych	Root gravitropism: a chain of unresolved events
11:50 - 12:10	O-26	A. Hay	Creating an explosion
12:10 - 12:25	O-27	G. Grossmann	Form follows function - shaping a cell designed to invade.

12:25-13:45 **Lunch**

Session #4, part 2: Form and Adaptation [Chair: M. Tsiantis]

13:45 - 14:45	K-2	D. Bergmann	Multiscale investigations of leaf patterning
14:45 - 15:15	O-28	N. Nakayama	Informed dispersal? Environmental responses of seeds, fruits, and diaspores
15:15 - 15:45	O-29	L. Dupuy	Understanding limitations to root growth under mechanical stress
15:45			Closing & departure