

The DFG Plant Morphodynamics Unit (FOR 2581: www.for2581.de) is seeking a **post-doctoral scientist** in the area of

Computational Modelling of Development

Key areas of interest are to understand how genetic networks influence cell growth and patterning to produce diverse organ morphologies and how self-organizing processes shape tissue growth. For recent relevant work see:

Kierzkowski, D., Runions, A., et al. A Growth-Based Framework for Leaf Shape Development and Diversity. (2019) Cell 177: 1405-1418.

Ramos, J.R.D., Maizel, A., and Alim, K. (2019). Tissue-wide integration of mechanical cues promotes efficient auxin patterning. BioRxiv 820837.

Wolny, A., Cerrone, L., Vijayan, A., Tofanelli, R., Barro, A.V., Louveaux, M., Wenzl, C., Steigleder, S., Pape, C., Bailoni, A., et al. (2020). Accurate And Versatile 3D Segmentation Of Plant Tissues At Cellular Resolution. BioRxiv 2020.01.17.910562.

Lebovka, I., Mele, B.H., Zakieva, A., Gursansky, N., Merks, R., and Greb, T. (2020). Computational modelling of cambium activity provides a regulatory framework for simulating radial plant growth. BioRxiv 2020.01.16.908715.

We are seeking a scientist who has shown excellent abilities in using **computer science** to understand morphogenesis, particularly through the use of physically-based models. Strong programming skills are required and knowledge of C++ is desirable. Experience with the creative use of biological imaging data to support quantitative studies of development would be an advantage. A demonstrable ability to work smoothly in the context of interdisciplinary projects involving multiple collaborations is essential as are good record keeping skills and the ability to write clearly. The position is for 3 years. Payment and benefits will depend on age and experience. The position would suit early stage researchers who will typically have recently completed or are about to complete a PhD. The post holder will support multiple members of the Research Unit will in particular interact with the Alim's group in München and Tsiantis' group in Cologne. The position will be based in Cologne.

Interested candidates are invited to send applications consisting of:

- i. a brief **cover letter** explaining their background and motivation for applying for this post and detailing how they feel their skills can enrich the group's activities,
- ii. a **full CV** including the contact details of **two referees**

as a **combined pdf** document (your_name_computational.pdf), to Sarah Jabber (coordinator@plantmorphodynamics.com) by **22.09.2020**. Please, mark the **message subject** as **post-doc computational**. Incomplete applications will not be considered. Only shortlisted candidates will be contacted.

The research unit aims to increase the proportion of women in so far underrepresented areas.

