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## **CS-Colloquium**

### **Images of life: How visual computing is shaping plant biology (and vice versa)**

**Prof. Przemyslaw Prusinkiewicz**

University of Calgary, Kanada

**Wann?** 18. Juni 2014, 15:00 Uhr

**Wo?** Hörsaal 3  
Währinger Straße 29  
1090 Wien

#### **Abstract**

Over the last decade, the use of sophisticated imaging techniques for acquiring and processing microscopic data, combined with computational models and simulations, has revolutionized developmental biology of plants. Genetic techniques make it possible to visualize and track tagged molecules in living cells and tissues. These data are used to construct computational models that simulate, visualize, and help analyze mechanisms of plant development. In my talk, I will show a series of models that have contributed to the understanding of a fundamental aspect of plant development, patterning and growth regulation by the plant hormone auxin. I will then analyze some of the features that have made these models useful to biologists, and highlight current challenges related to the design and application of computational models in developmental biology.

#### **Bio**

Przemyslaw Prusinkiewicz is a Professor of Computer Science at the University of Calgary, Canada. He holds an M.Sc. and Ph.D. from the Technical University of Warsaw, Poland. He is a pioneer of computational modeling and visualization of plant development, and co-author of the book, *The Algorithmic Beauty of Plants*, which opened this area to a wide audience. His current research is focused on computational models of development that link molecular-level processes to the macroscopic form of plants. Professor Prusinkiewicz's contributions to modeling and visualization of biological structures have been recognized with the SIGGRPAH Achievement Award, the Canadian Human Computer Communications Society Achievement Award, and an honorary doctorate from the University of East Anglia.

#### **Contact**

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