





SYMPOSIUM

on the occasion of the meeting of the Presiding Board of the German National Academy of Sciences Leopoldina at the Austrian Academy of Sciences

Computational Mathematics - The Quiet Invaders

October 23, 2012

Festive Hall of the Austrian Academy of Sciences

Vienna, Austria

Program:

10:00-12:00 Welcome address

Thomas Lengauer | Department Computational Biology and Applied Algorithmics, Max Planck Institute for Informatics, Saarbrücken *Bioinformatics-assisted HIV therapy – spearheading personalized medicine?*

Martin Nowak | Department of Organismic and Evolutionary Biology and Director of the Program for Evolutionary Dynamics, Harvard University, Cambridge, MA

Evolutionary dynamics of cancer

Christoph Bock | CeMM – Research Center for Molecular Medicine, Austrian Academy of Sciences, Vienna

Quantitative dissection of the epigenome's role in health and disease

12:00-13:00 Lunch break

13:00–15:00 **Olle Nerman** | Department of Mathematical Sciences, Chalmers University of Technology, Gothenburg

What can we learn from comparisons of empirically evaluated and model-based error rates in genomic and phenomic screenings?

Gisbert Wüstholz | Department of Mathematics, ETH Zurich Computational aspects in diophantine geometry

Alexander Stark | IMP – Research Institute of Molecular Pathology, Vienna Regulatory genomics – decoding Drosophila regulatory sequences

15:00-16:00 Coffee break

16:00–17:00 Massimo Fornasier | Faculty of Mathematics, Technical University of Munich Mathematics Enters the Picture – The Restoration of Mantegna's Frescoes in

Padua

Alexia Fürnkranz-Prskawetz | Vienna Institute of Demography, Austrian Academy of Sciences

Agent-Based Computational Demography