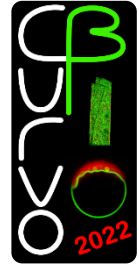


CurvoBio 2022

PROGRAM

24th-26th August 2022
Berlin, Germany



Wednesday 24/08/2022

10h – 10h30 *Welcome with coffee*
10h30 – 10h45 *Opening Remarks*

10h45 – 12h45 **Part I – Membrane geometries and functions**

Rumiana Dimova - MPI-CI Potsdam, Germany - *Membrane remodeling in artificial cells: to bud or not to bud*

Dimitrios Stamou - University of Copenhagen, Denmark - *Less is more. Extremely shallow membrane curvatures determine the formation of membrane-protein domains at the plasma membrane.*

Marija Jankunec - Vilnius University, Lithuania - *Tethered bilayer lipid membranes: a versatile platform for protein-lipid interactions*

Lisa Hua - Albert-Ludwigs-Universität Freiburg, Germany - *Relaxation of Asymmetry Stress through Vesicle Budding*

12h45 – 14h00 LUNCH break

13h30 – 16h30 **Part II – Cellular membranes and single cells**

Feng-Ching Tsai - Curie Institute, France - *Mechanisms of curved membrane protein IRSp53 mediated initiation and stabilization of cellular protrusions*

Joachim Moser Von Filseck - University of Heidelberg, Germany - *Membrane remodelling by a dynamic protein spiral spring*

15h00 – 15h30 *Coffee break*

Ewa Sitarska - EMBL, Germany - *Curvature sensing allows migrating cells to navigate complex environments*

Anna Węgrzyn - Faculty of Biology, University of Warsaw, Poland - *Possible factors inducing lamellar to cubic membrane transformation in chloroplasts of higher plants*

16h30 – 17h00 **A biomechanics perspective**

Marcelo Dias - University of Edinburgh, UK - *A tale of two arches: structure and evolution of the human foot*

17h00 ***Free time: Networking and Social activity: Guided Tour of Dahlem Campus***

9h – 10h30

Part III – Tissues and collective behavior of cells

Monika Dolega - IAB Grenoble, France - *Which way to fold?*

Kay Schneitz - Technical University of Munich, Germany - *Exploring the cellular basis of organ curvature using 3D digital ovules*

Sara Barrasa-Ramos – LadHyX. Paris, France - *Mechanical Regulation of Angiogenic Sprouting*

10h30 – 11h

Coffee break

11h – 12h30

Berenike Maier - University of Köln, Germany - *How mechanical forces shape bacterial biofilms*

Marek Cebecauer - Institute of Physical Chemistry, Czech Republic - *Nanotopography of T-cell microvilli*

Carmen Maria Gordillo Vásquez - University of Seville, Spain - *Natural variation in 3D curved tissue organization*

12h30 – 13h30

LUNCH break

13h30 – 15h

Poster session

15h – 16h30

Part IV – Modelling curvature and its effects

Roman Vetter - ETH Zürich, Switzerland - *Curvature in morphogenesis: active driver or passive side-effect?*

Ljubica Velimirovic - University of Niš, Serbia - *On Shape and Energy Consideration and Application*

Alejandra M. Foggia - MPI-MCB, Dresden, Germany - *Numerical solution of reaction-diffusion models in image-derived curved biological surfaces*

16h30 – 17h

Coffee break

17h – 19h

Poster session & Networking

19h

CONFERENCE DINNER

9h30 – 10h30

Part V – Artificial models

Uroš Tkalec - University of Ljubljana, Slovenia - *The interplay of curvature, chirality, and topological defects in liquid crystals under confinement*

Mina Aleksanyan - MPI-CI Potsdam, Germany - *Modulating membrane shape and mechanics by light*

10h30 – 11h00

Coffee break

Vasileios Vavourakis - University of Cyprus - *In Silico Models to Investigate Cancer Mechanobiology and Quantify Effective Drug Delivery*

11h30 – 12h00

A designer perspective

Karola Dierichs – MPI-CI Potsdam, Germany - *Shape-changing particles in designed granular materials*

12h – 13h30

LUNCH break

13h30 – 15h00

Part VI – Controlling and quantifying curvature

Felix Sima - National Institute for Laser, Romania - *Shaping 2D and 3D transparent materials with sub-micron precision by ultrafast laser technologies: application to cancer research*

Waseem Kitana – University of Bayreuth, Germany - *4D Biofabrication of T-Shaped Junctions as a Small-Diameter Vascular Substitutes*

Lorenzo Guiducci - Matters of Activities, Germany - *A (re)programmable auxetic sheet for morphing applications*

15h00 – 15h30

Concluding remarks

With the support of:

MAX PLANCK INSTITUTE
OF COLLOIDS
AND INTERFACES

