Monday, 27 July 2015

13:00  Registration
14:00  Welcome Address

Session: Mirror Biology and Orthogonal Biosystems Chair: Erwin Frey / Ulrich Gerland
14:20  Jörg Hoheisel
   Establishment of a Fully Synthetic, Mirror-Image Biological
15:05  Liedewij Laan
   Evolutionary Recovery after Crippling Cell Polarization Follows Reproducible Trajectories
15:50  Simon Lanzmich
   A Synthetic Codon Replicator with tRNA
16:15  Coffee
16:45  Zan Luthey-Schulten
   Stochastic Simulations of Cellular Processes: From Single Cells to Colonies
17:10  Beatrix Süß
   Engineered Riboswitches: Convenient Building Blocks for the Construction of Synthetic Genetic
   Circuits
17:55  Uri Alon
   Evolutionary Tradeoffs and the Geometry of Biological Shape Space
18:40  Welcome Night / Poster Session

Tuesday, 28 July 2015

Session: Enabling Technologies for Synthetic Biology I Chair: Andreas Ladurner / Dieter Braun
9:00   Roman Jerala
   Structural Synthetic Biology: Designed Bionanostructures Based on Non-Natural Folding Motifs
9:45   Timothy Lu
   Massively Parallel Combinatorial Genetics in Bacteria and Human Cells
10:30  Anne Meyer
   Bacteria-Mediated Fabrication of Artificial Nacre
10:55  Group Photo
11:05  Coffee
11:35  Bruce Turnbull
   Engineering Lectins for Synthetic Glycobiology
12:20  Tobias Großkopf  
Mutational Reshaping of Metabolism is Necessary for Microbial Inter-Species Cooperation

12:45  Mislav Oreb  
Engineering Subcellular Compartmentalization in *Saccharomyces Cerevisiae*

13:10  Lunch

**Session: Enabling Technologies for Synthetic Biology II**  
*Chair: Martin Parniske / Thorsten Mascher*

14:15  Luis Rubio  
Engineering Nitrogenase in Eukaryotes

15:00  Andrew Horwitz  
Multiplex Metabolic Engineering of Yeasts with CRISPR

15:45  Isabelle Meynial-Salles  
Rational Design, Evolution and Characterization of an Optimized Cell Factory for the Continuous Production of 1, 3-Propanediol

16:10  Coffee

16:40  iGEM Team UC Davis  
Fast, Inexpensive and Reproducible Quality Control of Olive Oil through Enzyme-Mediated Aldehyde Profiling

17:05  iGEM Team Heidelberg  
The Ring of Fire

17:30  Poster Session

19:30  Dinner

**Wednesday, 29 July 2015**

**Session: Synthetic Cells / Genome Engineering**  
*Chair: Zan Luthey-Schulten*

9:00  Joel Bader  
Synthetic Yeast Genome Rearrangement and Minimization System

9:45  Floyd Romesberg  
A Semi-Synthetic Organism with an Expanded Genetic Alphabet

10:30  Clyde Hutchison III  
Minimizing a Bacterial Genome by Global Design and Synthesis

11:15  Coffee

**Session: Metabolic Engineering**  
*Chair: Joachim Rädler*

11:45  Jochen Förster  
Microbial Polyphenol Production

12:30  Anne Sawyer  
Microalgae as Solar-Cell Factories

13:15  Lunch

**Session: Translational Aspects of Synthetic Biology**  
*Chair: Kirsten Jung*

14:15  Paul Freemont  
Unlocking the Potential of Synthetic Biology – the Development of Standardized Processes and Platform Technology to Establish a Systematic Design Framework

14:40  Annette Kremser  
International Funding Opportunities in Synthetic Biology: Development and Future Perspectives

15:05  Simone Furini  
Reducing Phenotypic Variability in Synthetic Biology Applications Via Post-Transcriptional Control of Noise in Gene Expression

15:30  Coffee

16:00  Jens Klein  
Synthetic Biology as Source for New Chemical Matter in Drug Discovery

16:45  Conclusion

17:00  End