
0. Sunday July 30, 2017 Python

- 9:00 – 10:30 Welcome, (James A Glazier), Python Training I (Andy Somogyi)
Python installation + programming concepts
- 10:30 – 10:45 Break
- 10:45 – 12:15 Python Basics (Andy Somogyi)
- 12:15 – 1:00 Lunch [provided]
- 1:00 – 2:30 Python functions and file management (Andy Somogyi)
- 2:30 – 2:45 Break
- 2:45 – 4:15 Python examples and exercises (Andy Somogyi)
- 4:15 – 4:30 Break
- 4:30 – 6:00 Python examples and exercises (Andy Somogyi)
After Class—Start Installing CC3D and COPASI on people's computers
[Dinner on your own]
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1. Monday July 31, 2017 Modeling Biological Networks w/ ODEs & SBML

- 9:00 – 10:30 Welcome and Intro to Modeling (James A Glazier)
- 10:30 – 10:45 Break
- 10:45 – 12:15 Install COPASI + intro networks/SBML (Andy Somogyi)
- 12:15 – 1:00 Lunch [provided]—Three mini-presentations during lunch (~10 minutes each)
- 1:00 – 2:30 ODEs (Andy Somogyi)
- 2:30 – 2:45 Break
- 2:45 – 4:15 ODEs analysis (Andy Somogyi)
- 4:15 – 4:30 Break
- 4:30 – 6:00 ODEs analysis (Andy Somogyi)
- 6:15 Optional Group Dinner and Drinks [at participant expense, location to be announced]
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2. Tuesday Aug 1, 2017 SBML

- 9:00 – 10:30 PBPK modeling using SBML (Jim Sluka)
- 10:30 – 10:45 Break
- 10:45 – 12:15 PBPK—SBML parameter fitting, parameter sensitivity (Jim Sluka)
- 12:15 – 1:00 Lunch [provided]—Three mini-presentations during lunch (~10 minutes each)
- 1:00 – 2:30 CC3D background + Twedit++ and cell sorting (Julio Belmonte)
- 2:30 – 2:45 Break
- 2:45 – 4:15 Cell sorting + plots (Julio Belmonte)
- 4:15 – 4:30 Break
- 4:30 – 6:00 Basic CompuCell3D model definition (Julio Belmonte)
[Dinner on your own]
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3. Wednesday Aug 2, 2017 Mitosis + CC3D-SBML integration

- 9:00 – 10:30 Growth + mitosis (Julio Belmonte)
- 10:30 – 10:45 Break
- 10:45 – 12:15 Demo: Intestinal crypt (Julio Belmonte)
- 12:15 – 1:00 Lunch [provided]—Three mini-presentations during lunch (~10 minutes each)
- 1:00 – 2:30 Linking SBML to CC3D (Julio Belmonte)
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- 2:30 – 2:45 Break
2:45 – 4:15 Demos + exercises with SBML (Julio Belmonte)
4:15 – 4:30 Break
4:30 – 6:00 Demos + exercises with SBML (Julio Belmonte)
[Dinner on your own]
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4. Thursday Aug 3, 2017 Links/Compartments

- 9:00 – 10:30 Intro to Links (Julio Belmonte)
10:30 – 10:45 Break
10:45 – 12:15 Deep cell movement and CE (Julio Belmonte)
12:15 – 1:00 Lunch [provided]—Three mini-presentations during lunch (~10 minutes each)
1:00 – 2:30 Cell compartments and epithelial folding (Julio Belmonte)
2:30 – 2:45 Break
2:45 – 4:15 Gradients (Julio Belmonte)
4:15 – 4:30 Break
4:30 – 6:00 Demos + exercises with gradients (Julio Belmonte)
6:15 Optional Group Dinner and Drinks [at participant expense, location to be announced]
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5. Friday Aug 4, 2017 CC3D finish & Exercises/Projects

- 9:00 – 10:30 Cancer stem cells (Julio Belmonte)
10:30 – 10:45 Break
10:45 – 12:15 Assign projects (Julio Belmonte)
12:15 – 1:00 Lunch [provided]—Three mini-presentations during lunch (~10 minutes each)
1:00 – 2:30 Demos + exercises with CC3D (Julio Belmonte)
2:30 – 2:45 Break
2:45 – 4:15 Demos + exercises with CC3D (Julio Belmonte)
4:15 – 4:30 Break
4:30 – 6:00 Demos + exercises with CC3D (Julio Belmonte)
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6. Saturday Aug 5, 2017 Private tutorials and collaborations

Held in Simon Hall 047—Contact Somogyi, Belmonte and Glazier for access information

- 9:00 – 4:00 Start, flexible schedule for the rest of the day
[Meals on your own]
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Course Instructors

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