

Student Job (HiWi): Development of a User Interface for our Research Software

The Computational Biology Group (Prof Dagmar Iber, www.cobi.li or www.bsse.ethz.ch/cobi) at D-BSSE, ETH Zürich is developing a research software to simulate biological tissue, which is composed of individual cells. The software enables us to study and explain the emergence of biological structures, such as e.g. the emergence shape of organs during embryogenesis. Since we are aiming to offer the software to people without computational background, we need a simple, intuitive, yet extensible user interface.

We are looking for a student to assess user interfaces of existing cell-based simulations softwares [1-7], and to develop a working prototype user interface for our software.

The student will be paid according to the ETH employment conditions (HiWi). A workplace will be provided at D-BSSE, Basel. The job can be started immediately and needs to be finished by the end of the year.

Your tasks:

- Evaluation existing cell-based simulation softwares w.r.t. user interfacing
- Development of strategies to interface our software
- Implementation of a prototype user interface for our software

Prerequisites:

- Experience with user interface development, ideally with Qt
- Multi-disciplinary grasp and interest

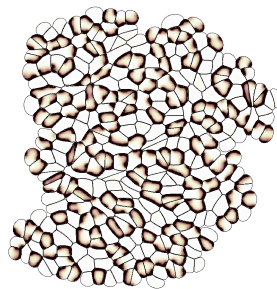


Figure: Simulation of a nonlinear signalling model on a dynamically growing cellular tissue, using our cell-based software.

If you are interested or have further questions, please contact Simon Tanaka (simon.tanaka@bsse.ethz.ch).

- [1] <http://www.cs.ox.ac.uk/chaste/>
- [2] <http://www.compuCell3d.org/>
- [3] <http://tigacenter.bioquant.uni-heidelberg.de/episim.html>
- [4] <https://www.rocq.inria.fr/bang/DD/software/cellsys/index.html>
- [5] <https://code.google.com/p/virtualleaf/>
- [6] <http://biocellion.com/>
- [7] <http://imc.zih.tu-dresden.de/wiki/morpheus/doku.php?id=start>