Seminar summer term 2015

Mathematics of collective cell migration

Session A: From micro to macro.

Friday, 08.05. 2pm – 5 pm

Speaker	Topic	Tutor
Francesco Alaimo	A continuum approach to modelling cell–cell adhesion	Andreas Deutsch
Karl Hoffmann	Mean-field descriptions of collective migration with strong adhesion	Anja Voß-Böhme
Hannes Weiße	An interacting particle system modelling aggregation behavior: from individuals to populations	Andreas Deutsch

Session B: Single cell tracking.

Friday, 22.05. 2pm – 5 pm

Speaker	Topic	Tutor
Josue Manik Nava Sedeno	Nonequilbrium fluctuations for a tagged particle in one-dimensional sublinear rate zero-range processes	Anja Voß-Böhme
David Reher	Inference of cell-cell interactions from population density characteristics and cell trajectories on static and growing domains	Thomas Buder
Julian Karwowski	Pathlines in exclusion processes	Thomas Buder

Session C1: Bulk motion I.

Friday, 12.06. 9.30am – 12.30 pm

Speaker	Topic	Tutor
Jasper Bathmann	Biomechanics of tissue interfaces (preprint)	Walter de Back
Alexandra Tudozoche	A model for individual and collective cell movement in *Dictyostelium discoideum*	Walter de Back
Carsten Mente	A Measure-Theoretic Model for Collective Cell Migration and Aggregation	Walter de Back

Session C2: Bulk motion II & migration strategies.

Friday, 12.06. 2pm – 5 pm

Speaker	Topic	Tutor
Marius Asal	A cellular automata model of large-scale moving objects	Andreas Deutsch
Angelika Hirrle	Polarization and Movement of Keratocytes: A Multiscale Modelling Approach	Andreas Deutsch
Dirk Walther	Cells as migration players	Andreas Deutsch