

27th IFIP TC7 Conference 2015 on System Modelling and Optimization

Numerical Analysis for PDE-Constrained Optimal Control Problems

Optimal Control of a Chemotaxis System

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Abstract: Chemotaxis describes a biological phenomenon of self organization and pattern forming of cell populations caused by chemical substances. It can be modelled by a two component reaction diffusion system in which the equations are coupled by a quasilinear cross-diffusion term. In this talk, we consider an optimal control problem with Neumann boundary control for the chemoattractant.

This is joint work with Arnd Rösch (Universität Duisburg-Essen) and Michael Winkler (Universität Duisburg-Essen).