

## **TGV-based flow estimation for 4D leukocyte transmigration**

Lena Frerking (University of Münster, Germany)

Our aim is to track transmigrating leukocytes. Recent results have shown the advantages of the nonlinear and higher order terms of TGV-regularizers especially in static models for denoising and reconstruction. We present TGV-based models for flow estimation with the goal to get an exact recovery of simple intracellular and extracellular flows, as well as its implication on realistic tracking situations. To distinguish and quantify different pathways of transmigrating leukocytes, we use large scale 4D fluorescence live microscopy data in vivo.

Joint work with:

Christoph Brune (University of Twente, Netherlands)

Martin Burger (University of Münster, Germany)

Dietmar Vestweber (MPI Molecular Biomedicine Münster, Germany)