



International Society for Advancement of Cytometry

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Till Bretschneider employs computational modelling and quantitative image analysis to study cellular dynamics, in particular cell motility. In his PhD with Kees Weijer, Dundee, he developed models for how complex waves of chemoattractant organise cell movements during Dictyostelium morphogenesis. As postdoc at the University of Bonn (Theoretical Biology, Wolfgang Alt) he became increasingly interested in quantitative image analysis, and after being awarded a Schloessmann fellowship he joined the group of Guenther Gerisch at the Max-Planck-Institute of Biochemistry in 2001. There he worked on different aspects of actin dynamics, most notably propagating actin waves. Till Bretschneider is the inventor of QuimP software (now used by leading cell motility labs worldwide) to correlate spatio-temporal patterns of cortical fluorescence distributions with cell motility. Quantitative analysis of transcription factor dynamics has become the second major pillar of his work since he moved to Warwick in 2007.