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## DK Seminar

Nov 23, 2016, 14:15 - 15:00  
University of Vienna,  
Oskar-Morgenstern-Platz 1, HS 2.

Cong Shi

University of Vienna

### A signal separation technique for sub-cellular imaging using dynamic optical coherence tomography

In this talk I will discuss how to image the dynamics of metabolic activity of cells. Using dynamic optical coherence tomography, we introduce a new multiparticle dynamical model to simulate the movements of the collagen and the cell metabolic activity and develop an efficient signal separation technique for sub-cellular imaging. We perform a singular-value decomposition of the dynamic optical images to isolate the intensity of the metabolic activity. We proved that the largest singular value corresponds to the collagen. In the end of the talk I will present some numerical simulations to illustrate and validate our approach.