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DK Seminar

December 10, 2014

14:00 - 15:30

University of Vienna,
Faculty of Mathematics, OMP 1, HS 2

Pedro Aceves-Sanchez

University of Vienna

A journey from kinetic transport models to fractional-diffusion-advection equations

Motivated by the recent discovery that *E. coli* behave, under certain conditions, in a superdiffusive manner, we shall introduce some kinetic models with a given chemoattractant concentration. And perform the rigorous passage to the macroscopic limit, obtaining fractional-diffusion-advection equations. The coefficients of the latter equations depend on the microscopic quantities governing the movement of the agents.