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## DK Seminar

June 8, 2016, 14:15 - 15:45  
Vienna University of Technology,  
Freihaus, green area, 4th floor, 101C

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### **Cross-diffusion systems and fast-reaction limit**

In this talk we present our recent work with L. Desvillettes and A. Juengel on cross-diffusion systems and fast reaction limit, where we derive a new class of cross-diffusion systems possessing an entropy structure. Our method can be described in the following way. We start with a microscopic model of very general reaction-diffusion equations for which an entropy naturally appears as a generalization of the physical entropy of systems coming out of reversible chemistry. Then by performing the fast-reaction limit, we can show that this system converges rigorously towards a system of cross diffusion equations for which an entropy exists.