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# BERN-FRIBOURG GRADUATE SEMINAR

a seminar for Master and PhD students

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Thursday 6<sup>th</sup> October, 2022: 17:15 - 18:00

Room 2.52, Perolles 08, Fribourg

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## Stochastic chemical reaction networks

### **Abstract**

Chemical reaction networks aim to model the behaviour of real-world chemical reactions and are used in biochemistry but also in population and epidemics models. While a deterministic framework enables to describe the average behaviour of large systems, we will construct a stochastic framework to model random aspects, which become crucial when the number of reactants is low. After that we will discuss the convergence of the stochastic model, its steady states and simulation algorithms.