**16/12/2016** ***InterCity - seminar***

# Bern - Fribourg/Freiburg **Neuchâtel**

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| Time | Speaker | Talk |
|---|---|---|
| 14:00 | Meritxell Sáez (Copenhagen) | **Algebraic Geometry in Chemical Reaction Network Theory** |
| | | **Abstract:** The formalism of chemical reaction network theory (CRNT) puts chemical reaction networks into a mathematical, particularly algebraic, framework. In this framework, the steady states of a chemical reaction network with mass-action kinetics are solutions to a system of polynomial equations. Even for small systems, finding the steady states of the system is a very demanding task and therefore methods that make progress i this direction are desirable.<br>In this talk I will first describe the translation from chemical reaction networks to ODE systems in the context of CRNT and then give an overview of the different techniques coming from algebraic geometry that are being used to address the problem of parametrizing the steady state variety associated to the system. |
| 15:30 | Alessandro De Stefani (KTH Stockholm) | **Globalizing F-invariants** |
| | | **Abstract:** The Hilbert-Kunz multiplicity and the F-signature are two important numerical invariants, defined for local rings of prime characteristic. They are subtly connected with the theory of singularities, and they often provide a good measure of how ill-behaved a ring can be. We will survey some classical results on these invariants. We will discuss how to extend these notions to rings that are not necessarily local in a way that still detects meaningful information about the ring.<br>This is based on joint work with Thomas Polstra and Yongwei Yao. |

The talks will take place in Room B217 of the *Institut de mathématiques* (Rue Emile Argand 11) of the *Université de Neuchâtel* .

For further informations please refer to the seminar's webpage

www.combinatorialmethods.ch/intercity/

or contact the organisers:

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