

## UniSysCat Colloquium

Dr. Athelstan Cornish-Bowden/Dr. Maria Luz Cardenia

Centre National de la Recherche Scientifique, Marseilles, France

Start Time: Wednesday, May 15, 2019 05:15 pm

End Time: Wednesday, May 15, 2019 06:45 pm

Seminarraum TIB24-004  
TU Berlin, Gustav-Meyer-Allee 25, 13355 Berlin

### **From measurements to models: integrating isolated kinetic measurements into full-scale mathematical models to improve understanding**

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Kinetic equations are important for understanding how and why metabolic pathways are regulated. Aspartate metabolism in Arabidopsis answers many questions. To understand it properly it's necessary to draw it so that the demand for products is emphasized -- omitted from many textbooks. Aspartate metabolism in Arabidopsis involves many examples of feedback and other regulation as well as examples of isoenzymes. Modelling it needs many equations, some of them very complicated, which must allow for reverse reactions and regulatory interactions. The design allows production of lysine, threonine, isoleucine and methionine to satisfy the demand for these products without interfering with one another or consuming more aspartate than necessary.

Prof. Dr. Peter Neubauer

Organizer