

Christiane Rousseau, Université de Montréal (Canada)

*Singularities of analytic dynamical systems depending on parameters*

One basic lesson in bifurcation theory is that the bifurcations of highest codimension in families of dynamical systems depending on parameters organize the bifurcation diagram. Among these, are the bifurcations of equilibrium points, which are studied through normal forms. In analytic families of dynamical systems, the changes of coordinates to normal form generically diverge. The first two lectures, elementary, will illustrate through examples the geometric obstructions to the convergence to normal form. The last lectures will introduce to the geometric methods allowing proving theorems of analytic classification of unfoldings of singularities.