

## Models and estimation for depolymerising / fragmenting systems

Marie Doumic Jauffret (LJLL, Sorbonne Université, Inria)

Shrinkage, either through depolymerisation (i.e., progressive shortening) or through fragmentation (breakage into smaller pieces) are dynamical phenomena which appear in many applications - our own focus being protein fibrils depolymerisation and/or fragmentation, which are thought to be a key mechanism for many diseases (Parkinson's, Alzheimer's...) as well as many functional biomolecular mechanisms (actin filaments). The dynamic nature of the experiments, as well as their nanoscale, makes it very challenging to estimate their features. In this talk, we will review some results, new progresses and open questions in their estimation.