On Generalised Gradient Flows

Oliver Tse
Eindhoven University of Technology
o.t.c.tse@tue.nl

Evolution equations in spaces of measures describe a wide variety of natural phenomena. The theory for such evolutions has seen tremendous growth in the last decades, of which resulted in general metric space theories for analysing variational evolutions—evolutions driven by one or more energies/entropies. On the other hand, physics and large-deviation theory suggest the study of *generalised* gradient flows—gradient flows with non-homogeneous dissipation potentials—which are not covered in metric space theories. In this talk, we introduce a framework for these generalisations and provide examples of why and how they play a central role in a large class of variational evolutions.