1138-53-172 **Lars Martin Sektnan*** (lars.sektnan@cirget.ca). *On some perturbation problems in complex geometry.*

In this talk I will be discussing various perturbation problems for canonical metrics in complex geometry. Two classical such problems are the theorems of Arezzo-Pacard (and their generalizations) for the existence of extremal metrics on blow-ups of Kähler manifolds, as well as theorems of Fine, Hong and Lu-Seyyadali on the existence of constant scalar curvature or extremal Kähler metrics in adiabatic classes on the total space of certain fibrations. In these problems, the basic idea is to construct a good approximate solution, then establish good control over the linearised operator in order to perturb to a genuine solution.

I will be discussing some results in other related settings for constructing canonical metrics on blow-ups and in adiabatic classes. The basic strategy is the same, but I will try to highlight and discuss what the main differences are in each case. This is joint work with R. Dervan. (Received February 08, 2018)