

## PDG I (Tutorium)

### Tutorial 8 (Mollifiers)

In this tutorial we covered the following topics:

- Recalling the definitions and basic properties of  $L^p$  spaces, for  $1 \leq p \leq \infty$ .
- The general definition of a mollifier. Using convolutions with mollifiers to show density of smooth functions in  $L^p(\Omega)$  for  $1 \leq p < \infty$ .
- The Fundamental Lemma of the Calculus of Variations.