

# On fractional Sobolev, Isoperimetric and Poincaré inequalities

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**Abstract.** My aim is to give a comprehensive overview on fractional Sobolev, Isoperimetric and Poincaré Inequalities. I will explain some analogies and differences with the corresponding local inequalities, symmetrization techniques, best constant problems, and other current challenges. If time permits, I shall briefly mention in the end one recent result on regional fractional Poincaré inequality on unbounded domains (work in collaboration with Chowdhury I., Firoz S. and Roy P.).