

**Abstract** : Sobolev Mappings are basic analytical objects that are employed in the studies of many geometrical and physical problems. The aim of this series of lectures is to give a brief survey on some recent works concerning analytical and topological properties of Sobolev mappings. We shall explain, in particular, what kinds of topological information are carried by such maps, topological singularities, the weak and strong density properties of smooth mappings and their implications in related variational problems. We shall emphasize on several new analytic ideas and techniques that may be useful for many other problems.