The author presents new and known results in the general setting of the theory of manifolds of mappings. The aim is to use C^{∞} throughout and not to use Sobolev spaces in an intermediate way. Topologies on spaces of mappings are studied thoroughly, and a section on transversality on manifolds with corners is included. All the necessary background (jet bundles) is developed in detail, as is a convenient type of differential calculus on locally convex spaces. The core of the book contains those results on manifolds of mappings that can be obtained without the use of a hard implicit function theorem.

Manifolds of Differentiable Mappings will be of primary relevance to mathematicians researching in the fields of global analysis, dynamical systems and singularities, and to physicists with an interest in relativity.

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