Topological Algebras

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Continuity of the operations of a topological group makes them topologically very special. In these lectures we will analyse the topological behaviour of topological groups and explain how most of the results can be extended to more general topological algebras. Among these results we will study products and quotients, connected, Hausdorff, compact and locally compact algebras, semidirect products and split exact sequences.

Our study will be mainly focused on the global behaviour of the structures, and for that we will start by a brief incursion in the categorical notions, techniques and results that will be used throughout.

Some prior knowledge on basics of algebraic structures, general topology, and category theory would be helpful, although the notions needed will be recalled briefly throughout the lectures.

References


