

Preface

*There should be more math.
This could be mathier.*

B.A. Summers

This book is a revised version of my PhD Thesis [5], supervised by Gabriel Minian and defended in March 2009 at the Mathematics Department of the Facultad de Ciencias Exactas y Naturales of the Universidad de Buenos Aires. Some small changes can be found here, following the suggestions of the referees and the editors of the LNM.

Gabriel proposed that we work together in the homotopy theory of finite spaces at the beginning of 2005, claiming that the topic had great potential and could be rich in applications. Very soon I became convinced of this as well. A series of notes by Peter May [51–53] and McCord and Stong’s foundational papers [55, 76] were the starting point of our research. May’s notes contain very interesting questions and open problems, which motivated the first part of our work.

This presentation of the theory of finite topological spaces includes the most fundamental ideas and results previous to our work and, mainly, our contributions over the last years. It is intended for topologists and combinatorialists, but since it is a self-contained exposition, it is also recommended for advanced undergraduate students and graduate students with a modest knowledge of Algebraic Topology.

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