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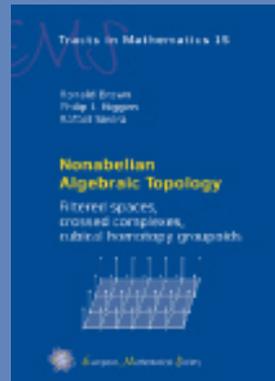
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EMS Tracts in Mathematics Vol. 15

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Nonabelian Algebraic Topology

Filtered Spaces, Crossed Complexes, Cubical Groupoids

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August 2011, 703 pages, hardcover, 17 x 24 cm, 98.00 Euro

The main theme of this book is that the theory of cubical groupoids and filtered spaces allows the development of basic nonabelian algebraic topology; these algebraic structures become more useful than those commonly in use because their composition has been largely overlooked.

The structure of the book is intended to be useful for researchers for learning and evaluating new ideas, as well as in higher category theory and its applications in algebra and computer science. Part I explains the basic theory, with many figures and diagrams, and a detailed treatment of the applications of crossed complexes. Part II develops the applications of crossed complexes to cubical groupoids, and the work of Part III on cubical groupoids, homotopically defined examples for filtered spaces, and further directions and problems, and the applications of category theory. Endnotes for each chapter.

Keywords: Algebraic topology, homotopy theory, cubical groupoids, filtered spaces, crossed complexes, cubical homology groupoids.

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