

Topological spaces

Zdeněk Frolík; Miroslav Katětov; Josef Novák

Foreword

In: Eduard Čech (author); Zdeněk Frolík (author); Miroslav Katětov (author): Topological spaces. (English). Prague: Academia, Publishing House of the Czechoslovak Academy of Sciences, 1966. pp. 5–6.

Persistent URL: <http://dml.cz/dmlcz/402624>

Terms of use:

© Zdeněk Frolík

© Miroslav Katětov

Institute of Mathematics of the Czech Academy of Sciences provides access to digitized documents strictly for personal use. Each copy of any part of this document must contain these *Terms of use*.



This document has been digitized, optimized for electronic delivery and stamped with digital signature within the project *DML-CZ: The Czech Digital Mathematics Library* <http://dml.cz>

FOREWORD

“Topological Spaces” by Eduard Čech was published in Czech in 1959; the book contained two supplements: “Construction of Certain Important Topological Spaces” by J. Novák, and “Fully Normal Spaces” by M. Katětov. In the foreword, Prof. Čech wrote “The present book arose from a seminar on topology which I directed in Brno from May 1936 until November 1939, when the Czech universities were forcibly closed by the Nazi occupation. The substance of the book was essentially completed during the German occupation. A number of minor changes was made prior to publication; however, I was unable to make a complete revision to parallel the extremely rapid development of general topology from the time the original manuscript was written, because the years immediately after the war found me intensely occupied in differential geometry, and later, because of ill-health. This book is dedicated to the memory of Bedřich Pospíšil, whose whole brilliant but lamentably brief scientific career was intimately connected with the topological seminar”.

In 1962, two years after Prof. Čech’s death, we began to consider the publication of an English version of “Topological Spaces”. In the course of work on the new version it gradually became clear that it was necessary to revise the original version completely and, while retaining most of its content (including the supplements) to rearrange and enlarge it substantially, modernizing the exposition throughout.

Thus, the decision was made to re-write the whole book in a manner which was felt to be in agreement with the views of E. Čech as he had expressed them in numerous conversations. We wish to emphasize that all merits which the present book may possess should be ascribed to Eduard Čech and to his profound and thoroughly modern conception of mathematics, whereas all shortcomings are due solely to our failing to fulfil his intentions. Thus, this revised edition cannot appear under any other name than that of Professor Čech, it being understood that we accept the responsibility for any defects in the present version.

The content of the present book is described in the Introduction. Here we shall indicate only some of the more important changes from the original version.

In the first edition, objects were studied, as a rule, under suppositions as general as possible. This is stressed still more in the revised edition. In addition, along with topological spaces we consider uniform and proximity spaces and their interrelations;

continuous algebraic objects are given some attention, although they are not investigated systematically.

To keep the size of the book within reasonable limits, it was necessary to concentrate on general spaces, allotting to special classes of spaces no more coverage than had been given in the first edition. Therefore compact spaces are treated only briefly in spite of their great importance, and most topics concerning connected and locally connected spaces are omitted. To give an adequate treatment to special types of spaces, a further book would be necessary (as a matter of fact, the undersigned consider writing a kind of free continuation of the present book).

Besides, for reasons explained in what follows, the present edition includes a rather detailed exposition on an axiomatic basis of the theory of sets and classes as well as a brief treatment of some basic algebraic notions.

Finally, in contradistinction to the original version the present book is not intended as a text-book.

The revision of the original version has been done by Z. Frolík and M. Katětov who jointly assume complete responsibility for the whole text. Chapters I and II have been written by M. Katětov, Chapters III–VII and the Appendix by Z. Frolík.

The undersigned consider it their pleasant duty to thank all those who contributed toward the present edition; and in particular, O. Hájek, J. Hejzman, M. Hušek and M. Matula.

Z. Frolík
M. Katětov
J. Novák