

1. Record Nr.	UNINA9910584596303321
Autore	Parthasarathy K. R.
Titolo	Topology : an invitation / / K. Parthasarathy
Pubbl/distr/stampa	Singapore : , : Springer, , [2022] ©2022
ISBN	9789811694844 9789811694837
Descrizione fisica	1 online resource (271 pages)
Collana	Unitext ; ; v.134
Disciplina	660.05
Soggetti	Topology Topologia Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- References -- Contents -- About the Author -- 1 Apéritif: The Intermediate Value Theorem -- 1.1 Intermediate Value Theorem -- 1.2 Biographical Notes -- 1.2.1 Bolzano -- References -- 2 Metric Spaces -- 2.1 Metrics -- 2.2 Continuity and Open Sets -- 2.3 Biographical Notes -- 2.3.1 Fréchet -- References -- 3 Topological Spaces -- 3.1 Topologies and Open Sets -- 3.2 Basic Open Sets -- 3.3 Closed Sets -- 3.4 Biographical Notes -- 3.4.1 Riemann -- 3.4.2 Weyl -- 3.4.3 Hausdorff -- 3.4.4 F. Riesz -- References -- 4 Continuous Maps -- 4.1 Limit Points -- 4.2 Continuity -- 4.3 Biographical Notes -- 4.3.1 Cauchy -- 4.3.2 Weierstrass -- 4.3.3 Dirichlet -- References -- 5 Compact Spaces -- 5.1 Compactness in $\mathbb{R}^n$ -- 5.2 Compactness in Metric Spaces -- 5.3 Compactness in Topological Spaces -- 5.4 Biographical Notes -- 5.4.1 E. Borel -- 5.4.2 Heine -- 5.4.3 Lebesgue -- 5.4.4 Cantor -- 5.4.5 Vietoris -- References -- 6 Topologies Defined by Maps -- 6.1 Initial and Final Topologies -- 6.2 Product Topology -- 6.3 Quotient Topology -- 6.4 Biographical Notes -- 6.4.1 R. L. Moore -- 6.4.2 Möbius -- 6.4.3 Klein -- References -- 7 Products of Compact Spaces -- 7.1 Tychonoff's Theorem -- 7.2 Appendix: Axiom of Choice -- 7.3 Biographical Notes -- 7.3.1 Bourbaki -- 7.3.2 ech -- 7.3.3 Tychonoff -- 7.3.4 Kelley -- References -- 8 Separation

Axioms -- 8.1 Hausdorff Spaces -- 8.2 Normal Spaces -- 8.3 Regular Spaces -- 8.4 Completely Regular Spaces -- 8.5 Biographical Notes -- 8.5.1 Tietze -- 8.5.2 Urysohn -- 8.5.3 Carathéodory -- 8.5.4 M. H. Stone -- References -- 9 Connected Spaces -- 9.1 Path Connected Spaces -- 9.2 Connected Spaces -- 9.3 Locally Connected Spaces -- 9.4 Biographical Notes -- 9.4.1 Jordan -- 9.4.2 Hahn -- 9.4.3 Kuratowski -- 9.4.4 Knaster -- References -- 10 Countability Axioms -- 10.1 Countability Properties.  
10.2 Urysohn Metrisation -- 10.3 Biographical Notes -- 10.3.1 Lindelöf -- References -- 11 Locally Compact Spaces -- 11.1 Local Compactness -- 11.2 One-Point Compactification -- 11.3 Biographical Notes -- 11.3.1 Alexandroff -- 11.3.2 Dieudonné -- References -- 12 Complete Metric Spaces -- 12.1 Completeness and Ascoli-Arzelà -- 12.2 Bourbaki, Baire and Banach -- 12.3 Completion -- 12.4 Biographical Notes -- 12.4.1 Ascoli -- 12.4.2 Arzelà -- 12.4.3 Baire -- 12.4.4 Banach -- References -- 13 Combinatorial Methods in Euclidean Topology -- 13.1 Convex Sets and Balls -- 13.2 Cubes and Simplices -- 13.3 Sperner's Lemma, the Cubical Version -- 13.4 Poincaré and Brouwer -- 13.5 Invariance of Domain and Dimension -- 13.6 Borsuk and the Sphere -- 13.7 Biographical Notes -- 13.7.1 Bohl -- 13.7.2 Hadamard -- 13.7.3 Ulam -- 13.7.4 Sperner -- 13.7.5 Mazurkiewicz -- 13.7.6 Brouwer -- References -- 14 Homotopy -- 14.1 Retracts and Deformation Retracts -- 14.2 Homotopy of Maps and Paths -- 14.3 Biographical Notes -- 14.3.1 Borsuk -- References -- 15 Fundamental Groups and Covering Spaces -- 15.1 The Fundamental Group -- 15.2 Examples and Applications -- 15.3 Covering Spaces -- 15.4 Biographical Notes -- 15.4.1 Poincaré -- References -- Appendix Appendix: Selected Exercises-Suggestions and Hints -- -- Index.

---