

Topological Analysis

[DOWNLOAD HERE](#)

1;Preface;5 2;1 Introduction;11 3;I Topology and Multivalued Maps;17 3.1;2 Multivalued Maps;19
3.1.1;2.1 Notations for Multivalued Maps and Axioms;19 3.1.1.1;2.1.1 Notations;19 3.1.1.2;2.1.2
Axioms;21 3.1.2;2.2 Topological Notations and Basic Results;27 3.1.3;2.3 Separation Axioms;34
3.1.4;2.4 Upper Semicontinuous Multivalued Maps;53 3.1.5;2.5 Closed and Proper Maps;62 3.1.6;2.6
Coincidence Point Sets and Closed Graphs;65 3.2;3 Metric Spaces;69 3.2.1;3.1 Notations and Basic
Results for Metric Spaces;69 3.2.2;3.2 Three Measures of Noncompactness;77 3.2.3;3.3 Condensing
Maps;85 3.2.4;3.4 Convexity;94 3.2.5;3.5 Two Embedding Theorems for Metric Spaces;99 3.2.6;3.6
Some Old and New Extension Theorems for Metric Spaces;106 3.3;4 Spaces Defined by Extensions,
Retractions, or Homotopies;115 3.3.1;4.1 AE and ANE Spaces;115 3.3.2;4.2 ANR and AR Spaces;117
3.3.3;4.3 Extension of Compact Maps and of Homotopies;124 3.3.4;4.4 UV_8 and R_d Spaces and
Homotopic Characterizations;132 3.4;5 Advanced Topological Tools;139 3.4.1;5.1 Some Covering Space
Theory;139 3.4.2;5.2 A Glimpse on Dimension Theory;143 3.4.3;5.3 Vietoris Maps;150 4;II Coincidence
Degree for Fredholm Maps;155 4.1;6 Some Functional Analysis;157 4.1.1;6.1 Bounded Linear Operators
and Projections;157 4.1.2;6.2 Linear Fredholm Operators;170 4.2;7 Orientation of Families of Linear
Fredholm Operators;179 4.2.1;7.1 Orientation of a Linear Fredholm Operator;179 4.2.2;7.2 Orientation of
a Continuous Family;188 4.2.3;7.3 Orientation of a Family in Banach Bundles;192 4.3;8 Some Nonlinear
Analysis;207 4.3.1;8.1 The Pointwise Inverse and Implicit Function Theorems;207 4.3.2;8.2 Oriented
Nonlinear Fredholm Maps;213 4.3.3;8.3 Oriented Fredholm Maps in Banach Manifolds;214 4.3.4;8.4 A
Partial Implicit Function Theorem in Banach Manifolds;224 4.3.5;8.5 Transversal Submanifolds;230
4.3.6;8.6 Parameter-Dependent Transversality and Partial Submanifolds;236 4.3.7;8.7 Orientation on
Submanifolds and on Partial Submanifolds;239 4.3.8;8.8 Existence of Transversal Submanifolds;241
4.3.9;8.9 Properness of Fredholm Maps;244 4.4;9 The Brouwer Degree;247 4.4.1;9.1 Finite-Dimensional
Manifolds;247 4.4.2;9.2 Orientation of Continuous Maps and of Manifolds;258 4.4.3;9.3 The C^r Brouwer
Degree;265 4.4.4;9.4 Uniqueness of the Brouwer Degree;271 4.4.5;9.5 Existence of the Brouwer
Degree;289 4.4.6;9.6 Some Classical Applications of the Brouwer Degree;303 4.5;10 The Bénévieri-Furi

Degrees;319 4.5.1;10.1 Further Properties of the Brouwer Degree;320 4.5.2;10.2 The Benevieri-Furi C1 Degree;328 4.5.3;10.3 The Benevieri-Furi Coincidence Degree;334 5;III Degree Theory for Function Triples;347 5.1;11 Function Triples;349 5.1.1;11.1 Function Triples and Their Equivalences;351 5.1.2;11.2 The Simplifier Property;365 5.1.3;11.3 Homotopies of Triples;371 5.1.4;11.4 Locally Normal Triples;375 5.2;12 The Degree for Finite-Dimensional Fredholm Triples;377 5.2.1;12.1 The Triple Variant of the Brouwer Degree;377 5.2.2;12.2 The Triple Variant of the Benevieri-Furi Degree;390 5.3;13 The Degree for Compact Fredholm Triples;401 5.3.1;13.1 The Leray-Schauder Triple Degree;401 5.3.2;13.2 The Leray-Schauder Coincidence Degree;414 5.3.3;13.3 Classical Applications of the Leray-Schauder Degree;417 5.4;14 The Degree for Noncompact Fredholm Triples;423 5.4.1;14.1 The Degree for Fredholm Triples with Fundamental Sets;424 5.4.2;14.2 Homotopic Tests for Fundamental Sets;439 5.4.3;14.3 The Degree for Fredholm Triples with Convex-fundamental Sets;447 5.4.4;14.4 Countably Condensing Triples;458 5.4.5;14.5 Classical Applications in the General Framework;466 5.4.6;14.6 A Sample Application for Boundary Value Problems;472 6;Bibliography;475 7;Index of Symbols;485 8;Index;487 EAN/ISBN : 9783110277333 Publisher(s): De Gruyter Format: ePub/PDF Author(s): Vth, Martin

[DOWNLOAD HERE](#)

Similar manuals:

[Topological Analysis](#)