Non-Hausdorff Topology and Domain Theory

This unique book on modern topology looks well beyond traditional treatises, and explores spaces that may, but need not, be Hausdorff. This is essential for domain theory, the cornerstone of semantics of computer languages, where the Scott topology is almost never Hausdorff. For the first time in a single volume, this book covers basic material on metric and topological spaces, advanced material on complete partial orders, Stone duality, stable compactness, quasi-metric spaces, and much more. An early chapter on metric spaces serves as an invitation to the topic (continuity, limits, compactness, completeness) and forms a complete introductory course by itself.

Graduate students and researchers alike will enjoy exploring this treasure trove of results. Full proofs are given, as well as motivating ideas, clear explanations, illuminating examples, application exercises, and some more challenging problems for advanced readers.

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