Discrete Morse Functions: In Theory and Practice

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Discrete Morse Theory is a relatively new tool in the topological combinatorics arsenal. The goal, much like its older cousin Morse Theory, is to reduce a space to something much simpler that can be more easily utilized in applications. In this talk, we will introduce the ideas of Discrete Morse Theory (as well as the original Morse Theory) with an eye towards Discrete Morse Functions. The principal source of material for this talk is Robin Forman's "A User's Guide to Discrete Morse Theory".