From topological entropy to ergodic theory for multivalued maps

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Abstract: The story of topological entropy for multivalued maps begins in 1976, when Mikhail Gromov, in his paper *On the Entropy of Holomorphic Maps*, proposed a possible definition—almost as a byproduct. This definition was independently rediscovered in 2017 by James Kelly and Tim Tennant. In my talk, I will outline how the development of entropy for multivalued maps has unfolded since then, and how I have contributed to this progression so far. Several cautious steps will be taken toward our ultimate goal, which can be described as the emergence of an *ergodic theory for multivalued maps*.