1163-AF-285 **Francis Edward Su*** (su@math.hmc.edu), 301 Platt Blvd, Claremont, CA 91106. *Five different proofs of Sperner's Lemma.*

One way to measure the significance of a mathematical result is by considering the other things that are equivalent to it. Sperner's lemma (1928) is the combinatorial equivalent of the Brouwer fixed point theorem in topology, an important theorem by any measure. Another way is to measure a result's significance is to look at how many different proofs it admits. I'll describe at least five delightful proofs of Sperner's lemma that reveal different aspects of the allure of this combinatorial gem. (Received September 01, 2020)