1092-55-1 **Michael Hill***, University of Virginia, Department of Mathematics, Charlottesville, VA. Framed manifolds and equivariant homotopy: A solution to the Kervaire Invariant One problem.

The Kervaire Invariant One problem was one of the oldest outstanding problems in algebraic topology, and in 2009, Hopkins, Ravenel, and the speaker announced a solution using a variety of techniques from both classical and equivariant algebraic topology. This talk will describe the problem, explaining what the Kervaire invariant is and some of its importance in differential topology, and then it will explain the ideas that go into the solution. (Received March 18, 2012)