Mott transition and Universality at finite temperatures STE- 
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and Astronomy, Iowa State University, RASTKO SKNEPNEK, Ames Laboratory 
and Department of Physics and Astronomy, Iowa State University — We consider 
the finite temperature Mott critical point which has been the subject of recent ex-
perimental investigation. We demonstrate that this critical point is in the Ising 
universality class, consistent with all available experimental data. We show that, 
even though the thermodynamic behavior of the system near such a critical point 
is described by an Ising order parameter, the global conductivity depends on other 
singular observables and, in particular, the energy density, leading to the emergence 
of multiple crossover regimes. Finally, we show that in the presence of weak disorder 
the dimensionality of the system has crucial effects on the size of the critical region 
that is probed experimentally. ArXiv:0710.1627 and in press at Physical Review 
Letters.