

Lower semicontinuous functionals defined on spaces of multiple-valued maps

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In this talk I will discuss a class of energies defined on spaces of functions taking more than one value. Although the interest in this kind of energies stemmed from geometric analysis, they can be also used to suggest novel multi-scale and multi-field descriptions of material microstructures. After a brief introduction to the motivations and the connections to material science, I will introduce precise definitions and present some results on the semicontinuity of such energies.