

Principal maps, Burkholder functionals and quasiconvexity

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The Burkholder functionals give perhaps the main candidates for the study of Morrey's question in two dimensions, i.e. whether in 2-d rank-one convexity implies quasiconvexity.

In this talk, based on joint work with Jan Kristensen, Daniel Faraco, Andre Guerra and Aleksis Koski, we discuss the interaction of these functionals with the so-called principal maps. This leads us, for instance, to local quasiconvexity results for the Burkholder functionals, even in a setting beyond the case of linear boundary values.