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**Scott N Armstrong\*** ([armstrong@math.lsu.edu](mailto:armstrong@math.lsu.edu)), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803. *Convexity criteria and uniqueness of absolute minimizers of  $L^\infty$  variational problems.*

I will present results obtained in joint work with Crandall, Julin, and Smart on the uniqueness of absolute minimizers of  $L^\infty$  variational problems for a convex Hamiltonian. Previous proofs of uniqueness have relied on the equivalence of the variational problem and Aronsson's equation, which has been confirmed only for  $C^2$  Hamiltonians. In contrast, our new approach does not make use of viscosity solution machinery, and therefore permits us to completely remove the regularity hypothesis on the Hamiltonian. Our argument is generalization of the recent new proof of uniqueness of infinity harmonic functions obtained in joint work with Smart. (Received January 25, 2010)