

## Seminar in Nonlinear Systems

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*Dirichlet Problem and Choquet's Theory*

Thursday, October 17, 2002

3:30 pm

Pierce 218

*Abstract:* In the introduction several examples of assertions from different fields of mathematics will be presented. They will seem to have little in common, but they are based on the same very general principle: the complicated can be expressed in terms of the elementary. Basic notions like extreme points, representing measures etc. will be defined. The most important of them playing the key role in the theory is convexity. Some applications on the classical problems of mathematical analysis like the Dirichlet problem for harmonic functions will open not only the way to better understanding of the old results but also to proofs of theorems providing solutions of long standing problems.

The lecture will be based on an article by J. Lukes, I. Netuka and J. Vesely which just appeared in *Expo. Math.*