

# SEMINÁRIO

## ANÁLISE E EQUAÇÕES DIFERENCIAIS

**30 de Maio | 13h30 | sala 6.2.38**

### **Relaxation of variational problems by convex compactifications**

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**Abstract:**

The theory of convex compactifications (or, more general, convex local compactifications) will be surveyed. When applied to Lebesgue spaces, it may offer convex, locally sequentially compact envelopes on which Nemytskii operators can be continuously and smoothly extended. The local compactness and convex structure immitates finite-dimensional spaces, and can be used in various ways either separately (e.g. for existence and optimality conditions, respectively) or jointly (e.g. for fixed-point theorems). Various applications for relaxation in optimization problems and variational calculus will thus be mentioned.

CMAF **10**