

# SEMINAR

## Grupo de Análise Funcional e Aplicações Functional Analysis and Applications Group

### Regularity theory for fully nonlinear free boundary problems

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#### Abstract

We consider free boundary problems driven by fully nonlinear elliptic equations and examine the regularity of the solutions. Our focus relies on free transmission models as well as on unconstrained free boundary problems. Resorting to methods in the realm of viscosity solutions, we prove optimal regularity estimates, both in the interior and on the fixed boundary. We discuss the main ideas behind the regularity results and provide some context on related open problems.

**Room Sousa Pinto**  
**February 20, 2025 - 11:00**

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