



UNIVERSIDAD TECNICA  
FEDERICO SANTA MARIA

DEPARTAMENTO  
DE MATEMÁTICA

## **Próximo Seminario DMAT**

**Jueves 26 de Septiembre de 2024, 12:30 - 13:30**

SALA DE SEMINARIOS, DMAT

ALVARO ALMEIDA  
(CENTRO DE MODELAMIENTO MATEMÁTICO)



### **Manifold Learning, Diffusion-Maps and Applications**

We introduce the nonlinear dimensionality reduction problem known as Manifold Learning and present the diffusion maps algorithm (Coiffman and Lafon, 2006), a practical method in this framework. Diffusion maps exploits the connectivity of data points through a diffusion process on the dataset. Additionally, we explore applications of this technique to 2D tomography reconstruction.