



## Próximo Seminario DMAT

**Jueves 22 de Agosto de 2019, 11:30 - 12:30**

**Sala de Seminarios, DEPARTAMENTO DE MATEMÁTICA**

**PANAYOTIS SMYRNELIS**  
(POLISH ACADEMY OF SCIENCES)

### **An introduction to elliptic systems of phase transition type**

In my talk, I will focus on the vector Allen-Cahn P.D.E., which models coexistence of three or more phases of a substance. I will present several aspects of this equation:

1. The O.D.E. version of the equation, describing the motion of a particle of unit mass under a field of force.
2. The analogy with minimal surface theory suggested for the scalar case, by De Giorgi in 1978.
3. The construction of symmetric solutions and other complex structures.

For more details, I refer to my recently published book: N. D. Alikakos, G. Fusco, P. Smyrnelis: *Elliptic systems of phase transition type*, Progress in Nonlinear Differential Equations and Their Applications Vol. 91, Springer-Birkhauser (2018)