

---

**RÉMY RODIAC**, Pontificia Universidad Católica de Chile

*Regularity of limiting vorticities of the Ginzburg-Landau equations*

In this talk I will present some results about the regularity of limiting vorticities of solutions of the Ginzburg-Landau equations with magnetic field. The support of these limiting vorticities gives the limiting repartition of the vortices of a solution of the GL equations. Critical conditions satisfied by these limiting vorticities have been derived by Sandier-Serfaty. These conditions lead us to study some PDE's with measure data for some functions  $h$  which also satisfies an inner variational equations. We will show that under some supplementary hypothesis these conditions implies that the support of a limiting vorticity is locally a curve or a set of full Lebesgue measure.