

NYU
上海SHANGHAI
纽约大学NYU-ECNU
Institute of Mathematical Sciences
at NYU Shanghai

ANALYSIS/PDE SEMINAR

- TOPIC:** Symmetrization Inequalities and some Extensions to the Fractional Setting
- SPEAKER:** Prof. Hichem Hajaiej, NYU Shanghai
- TIME:** 13:30-14:30, 18 September 2014
- VENUE:** Room 264, Geography Building, 3663 Zhongshan Road North, Shanghai
(中山北路校区, 地理楼 264 室)

ABSTRACT OF THE TALK

In this talk, we will review some rearrangement inequalities arising in nonlinear optics. These inequalities are the key ingredient to prove existence and symmetry of the ground state solutions of the differential equation governing the propagation in the wave-guide. We will then discuss some extensions to the Riesz-type rearrangement inequalities and fractional ones.

BIOGRAPHY

Hichem Hajaiej is also an Associate Professor at the Preparatory Engineering School of Tunis (IPEIT). He holds a PhD and an MS from the Swiss Federal Technology School of Lausanne (EPFL).

Professor Hajaiej's research interests include Nonlinear Schrödinger Equations and the calculus of variations. He has publications in prestigious journals like the Archive for Rational Mechanical Analysis, the Journal of Functional Analysis, Mathematical Models and Methods in Applied Sciences, Annales Henri Poincaré, Proceedings of the London Mathematical Society, Transactions of the American Mathematical Society, and Nonlinear Analysis: Theory Methods and Applications.

Professor Hajaiej has obtained fellowships from the Swiss National Foundation (2004 and 2007) and the Alexander Von Humboldt Foundation (2006-2007).