

Report on the project
*Strichartz estimates for the Schrödinger
equation on trees/graphs and applications*

V. Banica and L. Ignat

Participants. Valeria Banica (Université d'Evry) and Liviu Ignat (Institute of Mathematics "Simion Stoilow")

Between 31/05/2014 and 11/06/2014 Liviu Ignat visited University of Evry with support from LEA Math-Mode project. During this visit we analyzed the dispersion property in the context of the Schrödinger equation on graphs. In two previous joints papers the authors have considered the case of Kirchhoff's coupling and δ -coupling. Now we have considered various coupling conditions as for example δ' coupling. We also started the analysis on graphs with cycles and the influence of cycles in the behavior of the solutions.

In the context of this collaboration one paper has been published in 2014

1. Banica, V., & Ignat, L. I. (2014). Dispersion for the Schrödinger equation on the line with multiple Dirac delta potentials and on delta trees. *Anal. PDE*, 7(4), 903–927. doi:10.2140/apde.2014.7.903

There are two preprints related with our work

1. Valeria Banica, Dispersion pour l'équation de Schrödinger 1-D avec plusieurs potentiels de Dirac *Seminaire Laurent Schwartz – EDP et applications* (2013-2014), Exp. No. 20, 11 p.

2. Liviu Ignat, The Dispersion property for Schrödinger equations, <http://arxiv.org/abs/1411.5659>