

“Analyticity of Solutions to Nonlinear Schrödinger Equations”

Top Global University Project, Waseda University

REPORT ON STUDY ABROAD

Date: February, 2015

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- 1. Study abroad destination: Universidad Nacional Autonoma de Mexico, UNAM, Mexico**
- 2. Dates of stay: February 1, 2015 – February 21, 2015 (21days)**
- 3. Purpose: To Study analyticity of solutions to nonlinear Schrödinger equations**
- 4. Host Professor: Prof. Pavel I. Naumkin and Elena I. Kaikina (Centro de ciencias Matemáticas UNAM Campus Morelia)**

I. Research Results:

Professor Pavel I. Naumkin have been obtained a number of important results in scattering theory of nonlinear dispersive equation, including the nonlinear Schrödinger equation. Some that also includes a result of the application of the analyticity of it was thought that he is allowed to more developed research by incorporating we led the unique perspective and ideas that have been cultivated in the nonlinear scattering theory. The nonlinear Schrödinger equation with the gauge invariance then Galilei invariance holds, analytic smoothing effect in the sense of Galilei generator occurs is that with respect to the initial value was exponential decay from the goodness of compatibility with Galilei generator is well known. But little research has been made for non-gauge invariant Nonlinear Schrödinger equation. In collaboration with this Professor Pavel I. Naumkin , by While it could hardly touching the negative expected that the use of function space in the auxiliary, called analytic smoothing effect of in a sense is happening things turned out.

5. Other comments:

It was concerned about the security of such when compared to Japan regard to stay this time in Mexico. But stay the Morelia City I think as tourists security was good for the traveler. However it and sidewalks stray often the outer than in Japan it was found that it is necessary to note that out a car speed not been much improvement. The Mexico native language as caveat is a Spanish. English not through almost even during or within a university and town.