

Sophia University

Mathematics Colloquium

When: Friday, May 31, 2019, 17:30–18:30

Where: Room No. 102, Main Bldg., Ichigaya-Campus

Speaker: Hiroyuki Hirayama (University of Miyazaki)

Title: Well-posedness results for a system of quadratic derivative nonlinear Schrödinger equations

Abstract:

In this talk, we consider a system of quadratic derivative nonlinear Schrödinger equations introduced by M. Colin and T. Colin (2004) as a model of laser-plasma interaction. We prove the well-posedness (existence of solution, uniqueness of solution, and continuous dependence of solution on initial data) of this system for low regularity initial data. In particular, we can see that the structure of this system depends on the coefficients of Laplacian in linear terms. We also talk about the well-posedness for radial initial data. This talk is based on the joint work with Shinya Kinoshita (Universität Bielefeld) and Mamoru Okamoto (Shinshu University).

Colloquium committee:

Fabien Trihan

f-trihan-52m@sophia.ac.jp

Kanako Oshiro(大城 佳奈子)

oshirok@sophia.ac.jp