Junior Researcher, Gaku HOSHINO

・Papers

[1] G. Hoshino and T. Ozawa,
Analytic smoothing effect for the cubic hyperbolic Schrödinger equation in two space dimensions,
Electron. J. Differential Equations (2016).
[2] G. Hoshino and T. Ozawa,
Space-time analytic smoothing effect for the pseudo-conformally invariant Schrodinger equation,
NoDEA Nonlinear Differential Equations Appl., 23 (2016).
[3] G. Hoshino and T. Ozawa,
Analytic smoothing effect for a system of Schrodinger equations with three wave interaction,
J. Math. Phys., 56 (2015).
[4] G. Hoshino and T. Ozawa,
Analytic smoothing effect for a system of Schrodinger equations with two wave interaction,
Adv. Differential Equations 20 (2015).

・Presentations

[1] The Mathematical society of Japan, Autumn meeting in 2015,
G. Hoshino and T. Ozawa,
Analytic smoothing effect for a system of nonlinear Schrödinger equations under the mass resonance,
2015/9/15.
[2] International Workshop on “ Fundamental Problems inMathematical andTheoretical Physics ” ,
G. Hoshino and T. Ozawa,
Space-time analyticsmoothing effect for pseudo-conformally invariant Schrödingerequations,
2015/10/1.

・Results

We obtain the results on analytic smoothing effect in both space-time variables for solutions to nonlinear Schrödinger equations, joint work with Professor Tohru Ozawa. In particular, if the nonlinear terms are pseudo-conformally invariant, we have been shown the existence of space-time analytic solutions globally in time with data which satisfying exponentially decaying condition at spatial infinity. In this study, we use the generalized analytic function space with respect to pseudo-conformal generator, introduced by Professor Nakao Hayashi and Professor Keiichi Kato.