

筑波大学 テニュアトラック普及・定着事業 第24回若手セミナー

講師: Yves Dermenjian
(Aix-Marseille University)

日時: 2014年2月12日(水曜日) 15:30 - 17:30

講演タイトル: The guided states of 3D biperiodic Schroedinger operators

アブストラクト: Let us consider the Laplacian $H_0 = -\Delta$ perturbed by a non-positive potential V , which is periodic in two directions, and decays in the remaining one, x_1 . We are interested in the characterization and decay properties of ground states, defined as the eigenfunctions of the reduced operators in the Bloch-Floquet-Gelfand transform, in the periodic variables, of $H = H_0 + V$. If V is sufficiently small and decreases fast enough in the infinite direction x_1 , we prove that the guided waves are generically characterized by quasi-momenta belonging to some one-dimensional real analytic submanifold of the Brillouin zone. Moreover they decay faster than the inverse polynomial function in the infinite direction. This is a joint work with F. Bentosela, C. Bourrely and E. Soccorsi.

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大学院生ならびに教員の方々のご参加をお待ちしています。

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