

New patterns of higher order rogue waves

Jingsong He

Department of Mathematics, Ningbo University, Ningbo, Zhejiang 315211, P.R.China.
email: hejingsong@nbu.edu.cn

Abstract:

Rogue wave is one kind of a localized solution both in x and t directions of many partial differential equations. This solution gives a very good model of extreme short-lived event in the physical system. In this talk we shall summary the study of the rogue wave, then provide the outline of the proof about the two conjectures regarding the total number of peaks, as well as a decomposition rule in the circular pattern of an order n rogue wave. We also provide several new patterns of higher order rogue waves.

Reference:

1. J.S.He, H.R. Zhang, L.H. Wang, K. Porsezian and A.S.Fokas, A generating mechanism for higher order rogue waves(arXiv:1209.3742v3)