Joint Geometric Analysis Seminar

Rigidity of the minimal sphere in the Atiyah-Hitchin manifold

Professor Chung-Jun Tsai
National Taiwan University

Abstract: In a hyper-Kahler 4-manifold, holomorphic curves are stable minimal surfaces. One may wonder whether those are all the stable minimal surfaces. Micallef gave an affirmative answer in many cases. However, this cannot be true in general. Micallef and Wolfson proved that the minimal sphere in the Atiyah-Hitchin manifold is strictly stable, but cannot be holomorphic with respect to any compatible complex structure. They conjectured that the minimal sphere in the Atiyah-Hitchin manifold is indeed quite rigid. In this talk, we will first review the construction of the Atiyah-Hitchin manifold, and then explain the rigidity of that minimal sphere. This is based on a joint work with Mu-Tao Wang.

Date: 19 April 2018 (Thursday)
Time: 10:30 a.m. – 11:30 a.m.
Venue: Room 502A, Academic Building No.1,
             The Chinese University of Hong Kong, Shatin

All are Welcome!