

ICTS Seminar

Title : Generalised Seiberg-Witten monopoles and de-generate metrics

Speaker : Varun Thakre, ICTS-TIFR, Bangalore

Date : Friday, August 10, 2018

Time : 11:00 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : In this talk I will discuss the Taubes-Pidstrygach generalisation of the Seiberg-Witten equations. In this generalisation, the spinor representation is replaced with an appropriate hyperKahler manifold. I will discuss its relation with many well-known gauge theories. In the Riemannian case, the solutions to the generalised equations admit an interpretation in terms of (de-generate) almost-Hermitian metric on the base manifold. When the underlying manifold is Kahler, I will discuss a Hitchin-Kobayashi -type correspondence for the generalised equations. The novelty in this case lies in the fact that the correspondence narrows down to studying the well-known Kazdan-Warner equations. If time permits, I will talk about an interpretation of the equations on a Kahler surface as equations the condition for invariance of the Hermitian-Einstein equation under a degenerate conformal transformation. I will try to keep the talk elementary in nature, making it accessible to a wider audience.