



ICTS

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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

## **ICTS Seminar**

Title : Neutron Stars In Numerical Relativity: Updates from the Jena group

Speaker : Vivek Chaurasia, University of Jena, Germany

Date : Thursday, February 15, 2018

Time : 11:00 AM

Venue : Nambu Discussion Room (Left), ICTS Campus, Bangalore

Abstract : This seminar summarizes recent efforts of the BAM collaboration in pursuing the goal of simulating binary neutron star mergers. In particular, I will highlight recent progress from new simulations of eccentric systems in full general relativity which, for the first time, are based on consistent initial data setting new quality-standard for these simulations. Additionally, I will also give updates on our new BAMPS code, which is based on spectral and Discontinuous Galerkin methods. The main ideas of the Discontinuous Galerkin methods will be summarized and it will be outlined why the numerical relativity community sees Discontinuous Galerkin methods as a promising candidate for future code development.