

ICTS Seminar

- Title** : Numerical relativity in cosmology, and constraints on the geometry of the Universe from observational data
- Speaker** : Nigel Bishop, Rhodes University, South Africa
- Date** : Tuesday, November 22, 2016
- Time** : 4:00 PM
- Venue** : Amal Raychaudhuri Room, ICTS Campus, Bangalore
- Abstract** : In the characteristic formalism of numerical relativity, coordinates are based on null cones generated by radial null geodesics. In numerical relativity, the major interest in the characteristic formalism is for gravitational wave extraction from another numerical simulation; but it is also important in cosmology, since nearly all data comes from observations on our past null cone. It is in principle possible to measure the initial data required in order to calculate an evolution into the interior of the past null cone, and codes have been implemented to perform the evolution. In the case of spherical symmetry, it is now possible to apply this process using actual observations leading to constraints on the geometry of the Universe.