



CENTRE FOR THEORETICAL PHYSICS
JAMIA MILLIA ISLAMIA, NEW DELHI



COSMOLOGICAL AND THEORETICAL APPLICATIONS OF EXACT SOLUTIONS OF EINSTEIN'S EQUATIONS

February 12-23, 2016

@ Centre for Theoretical Physics
Jamia Millia Islamia, New Delhi-110025



INFORMATION:- <http://www.gian.iitkgp.ac.in/GREGN>

COURSE BY WORLD RENOWNED SCIENTIST PROFESSOR ROBERTO A SUSSMAN

FEES

Participants from abroad: US \$500

Industry/ Research Organizations: INR 10000

Academic Institutions: Faculty members: INR 3000/-

Ph. D. Scholars: INR 1000/- MSc Students: INR 500/-

One time Registration @

<http://www.gian.iitkgp.ac.in/GREGN>

(Registration Fee INR 500)

COURSE FEES PAYMENT

The DD should be prepared in favour of "Registrar, Jamia Millia Islamia", Payable at New Delhi and submit to Centre for Theoretical Physics, JMI.

COURSE OBJECTIVES

Exposing participants to the fundamentals of General Relativity Theory, Cosmology, current theoretical and observational open problems and the methodology and models used to address them Derivation, classification and theoretical properties of exact solutions of Einstein's equations that are favoured for various applications in General Relativity and Cosmology Applications exact solutions in structure formation, cosmic structure modelling and fitting cosmological observations. Importance of relativistic corrections. Relation to linear perturbation theory. Numerical methods based on these models Applications of exact solutions to address open theoretical problems in General Relativity: averaging, back-reaction, gravitational entropy, etc. Numerical methods

Professor Roberto A Sussman is a senior researcher in General Relativity and Theoretical Cosmology at the Institute of Nuclear Sciences of the National University of Mexico (ICN-UNAM (<http://www.nucleares.unam.mx>)). He obtained his PhD in Queen Mary College, University of London, in 1987, under the supervision of Professor Malcolm MacCallum. His area of expertise is the study of inhomogeneous space-times through the properties of exact solutions of Einstein's equations, either in their application to Cosmology or in their usage to probe open theoretical problems in General Relativity. He has published more than 50 extensive articles in peer-reviewed journals (Classical and Quantum Gravity, Physical Review D, Physics Letters B, General Relativity and Gravitation).

COURSE CORDINATOR

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