

Office of the Media Coordinator Jamia Millia Islamia

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Press Invite/Release

'Develop your own way of doing Physics'- Prof. De Felice leading international expert on modified theories of gravity tells GIAN participants at Jamia Millia Islamia

Prof. Antoni De Felice, a renowned Professor at Yukawa Institute for Theoretical Physics, Kyoto University, Japan today asked students to develop their own way of doing Physics. "When you are looking for a job people want to see some expertise. Theoretical physics is not easy but try to build up your own knowledge. There are new theories that keep coming up every now and then but they must be tested for their sense and applicability", he added.

Prof. De Felice is at Jamia Millia Islamia to deliver a week long course on, 'Introduction to Cosmological Perturbation Theory' at Centre for Theoretical Physics (CTP) under the aegis of MHRD's Global Initiative for Academic Networks (GIAN) in Higher Education.

Prof. Talat Ahmad, Vice Chancellor presiding over the inaugural session said that it was satisfying to note that this was "the third GIAN programme being hosted by the Centre for Theoretical Physics. The fact that Jamia has bagged 24 GIAN courses so far goes to show that the university is doing well in terms of international exchange and collaborations." He added that the Cosmological Pertubation Theory was an exciting area of science and hoped that the students of Jamia will learn a lot from Prof de Felice and develop long term associations with him.

The 6-day lecture series has been designed with the objective to "help students understand the foundation of perturbation theory in a gauge invariant formulation", Prof. Sami, Centre for Theoretical Physics and Course coordinator of the programme said before a packed hall full of participants.

Prof. Sami introduced the centre and its work while fleshing out the importance of research exchange for centres like CTP. Enunciating the work of Prof Felice, he discussed the scope and objectives of his workshop and introduced the foreign faculty to the students of the GIAN course from December 16-23, 2016.

The course has attracted over 55 participants from across the country.

Emeritus Professor A. N. Mitra, University of Delhi who has a three decade old association with Jamia said that he was elated to see the growth of the Centre and the magnitude of work that has come from the university. Prof Mitra further added that the presence of Prof. Felice will provide tremendous impetus to scholars in the field of perturbation theory.

The main objectives of this course are to: understand the Lagrange approach of perturbation theory in order to study both the background and the perturbation fields; know how to build gauge invariant variables and why gauge invariance is central idea for studying cosmological perturbations and understand the ghost conditions in GR and modified theories. Innovative

and integrated approaches to understand the cosmological perturbation theory will also be deliberated in the lectures.

Prof. De Felice is known for his work on modified gravity models, namely massive gravity, bigravity, f(R) theories and non-gaussianities for general models of one scalar field. He has published more than 80 papers in highly acclaimed international journals. Dr. De Felice is regarded as one of the leading experts on modified theories of gravity internationally and has lectured on cosmological perturbations worldwide.

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