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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Light Coherence and Quantum Mechanics

Speaker : N.D. Hari Dass, TIFR Centre for Interdisciplinary Sciences, Hyderabad

Date : Wednesday, January 16, 2019

Time : 11:00 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Starting from the standard treatment of Young's double-slit experiment, I shall discuss the modern viewpoints and introduce various degrees of coherence of light. I shall describe in detail both the classical and the quantum descriptions of the Hanbury-Twiss intensity interference and its deep consequences. I shall then describe variants of the Hanbury-Twiss effect and the notions of bunching and antibunching. I shall conclude by discussing the implications of all these interference experiments for our understanding of quantum mechanics, and by identifying some future directions.