

Centre for Strings, Gravitation and Cosmology presents

CHANDRASEKHAR LECTURE

TOWARDS AN UNDERSTANDING OF THE EVOLUTION OF THE VERY EARLY UNIVERSE

PROFESSOR ROBERT BRANDENBERGER
MCGILL UNIVERSITY, MONTREAL, CANADA

I will discuss the current paradigm of early universe cosmology, its successes and also its conceptual problems. I will argue that we need better insights from fundamental physics to develop an improved understanding of the very early universe, and that these new developments will be testable with cosmological observations. I will indicate a couple of new directions motivated by superstring theory.

— **October 21, 2021** — **5:00 PM IST** —



Professor Robert Brandenberger is presently a Canada Research Chair (Tier 1) at the Department of Physics, McGill University, Montreal. He had completed his Ph.D. at Harvard University (in 1983), after which he had worked as a postdoctoral fellow initially at the University of California, Santa Barbara (during 1983-85) and later at the University of Cambridge (during 1985-87). Prof. Brandenberger had joined the faculty of Brown University in 1986 and moved to McGill University in 2004. He has worked on a wide range of issues in cosmology and he is well known for his work on inflation as well as constructing possible alternatives such as the string gas cosmology. Professor Brandenberger has won numerous awards for his work, including the Alfred P. Sloan Research Fellowship (during 1988-92), the Outstanding Junior Investigator Award from the Department of Energy (during 1988-91), the Killam Research Fellowship (during 2009-11) and the CAP/CRM Prize for Mathematical Physics (in 2011). He is a Fellow of the American Physical Society (since 2002) and a Fellow of the Canadian Royal Society (since 2015).



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