Tata Institute of Fundamental Research
School of Mathematics
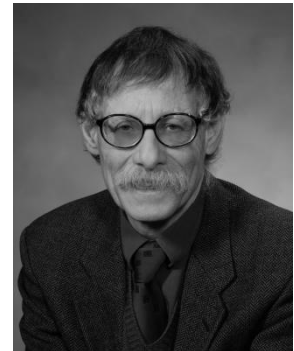
Lecture Series on

Index Theory

by

Professor Paul Baum

Venue: AG 77, Tata Institute of Fundamental Research

Dates: 18 February, 2013 to 21 February, 2013.

About the Speaker: Professor Paul Baum is the Evan Pugh Professor of Mathematics at Pennsylvania State University. He works in the field of non-commutative geometry. He is known for formulating the Baum-Connes conjecture with Professor Alain Connes in the early 1980s.

In 2007, a meeting in honor of his 70th birthday was held in Warsaw by the Polish Academy of Sciences. In 2011, the University of Colorado awarded him an honorary doctorate. In 2012 he became a fellow of the American Mathematical Society and in the same year, he was awarded an honorary doctorate by the Australian National University, Canberra.

Abstract: Goal of this miniseries is to prove Atiyah-Singer as a corollary of Bott periodicity and then show how to extend Atiyah-Singer to certain non-elliptic operators. It may be the case that ellipticity is not the really essential point for formulas of Atiyah-Singer type.

Title of Talks:

Day/Date	Time	Title
Monday 18/2/2013	4:00–5:00 pm	Atiyah–Singer Revisited
Tuesday 19/2/2013	2:00 pm to 3:00 pm	What is K-Homology?
Wednesday 20/2/2013	4:00 pm to 5:00 pm	The Riemann–Roch theorem
Wednesday 21/2/2013	2:30 pm to 3:30 pm	Beyond Ellipticity

All Are Welcome