Tata Institute of Fundamental Research On Classification of Quadratic Forms

Date: 6 - 11 December, 2013 (2 lectures per day) Venue: Tata Institute of Fundamental Research

Speaker: Professor Jean Fasel, University of Duisburg-Essen, Germany

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Abstract: The Gersten-Grothendieck-Witt spectral sequence is one of the most useful tools to understand the stable classification of symmetric bundles over smooth

schemes. It relies quadratic forms (in a broad sense) on points of the scheme with global data. One of the problems is to explicitly understand this global data in terms of information on points. In this series of lectures, we will explain how to do it in some situation using some well known matrices discovered by Suslin.

Speaker: Ivan Panin, St. Petersburg Department of V.A. Steklov Institute of Mathematics of the Russian Academy of Sciences, Russia



Abstr<mark>act: The following naive problem was raised in the 70's by Colliot-Thelene. Given a regular local set the set of th</mark>

ring R with fraction field K and given a quadratic space q over R and a unit u in R which is represented by q over K. Does q represent u over R? If R is a discrete valuation ring then the answer is ``yes''. In this series of lectures, we will prove that the answer is ``yes'', provided that R contains a field and the residue field of R is infinite. The original method used algebraic cobordism. A new one does not use them at all.

All are welcome