



The Electromagnetics Centre Seminar

School of Electrical & Electronic Engineering,
The University of Manchester,
PO Box 88, Sackville Street, Manchester, M60 1QD

In Co-operation with IEEE UKRI (MTT/ED/AP/LEO)
Societies Joint Chapter
& IEEE University of Manchester Student Branch

‘High-Resistive n- & p- type InGaAs layers produced by cold Fe-ion bombardments’

By: Mr Suba Subramaniam
The E.M. Centre, The University of Manchester

- **Date: Tuesday 9 May 2005**
- **Venue: room G37 Sackville Street Building**
- **Time: 1.30 pm**
- **All welcome to attend**

Abstract: We have investigated the effects of Fe-ion bombardment at 77K temperature in the electrical isolation of n- and p- type InGaAs layers. Maximum resistivity of $\sim 4 \times 10^6$ and $\sim 7 \times 10^6$ Ohm/sq at optimum annealing temperature of ~ 250 and 600°C has been recorded for p- and n- type InGaAs materials, respectively. Also, low dissipation loss comparable to S.I. InP substrate has been observed. Thermally stable high resistive regions close to intrinsic value of InGaAs ($\sim 10^7$ Ohm /sq) and good RF dissipation loss have been achieved. To the best of our knowledge these results are reported here for the first time.