



KOÇ UNIVERSITY

Science – Math Seminar

Speaker: A. Refik Kortan
OFS Labs (formerly Bell Labs), 600 Mountain Avenue,
Murray Hill, New Jersey 07974

Date: Thursday, Dec. 9, 2004

Time: 16:45 (Tea and cookies will be served at 16:30)

Place: Science building, Room Z42

Title: How Large Would You Like Your Diamonds ? ;
Single-Crystal Diamonds Through Hetero-Epitaxy

Abstract:

Diamond, with its strongest chemical bond, has long been designated as the key material for Nano-Technology. Extraordinary optical, electronic and many other properties of diamond are unrivaled by anything known. Optically it is transparent from deep-UV to far-IR, while a transistor made out of diamond can operate at several hundred degrees C, to mention a few. Emerging chemical vapor deposition methods have produced polycrystalline diamond films, while homo-epitaxial growth has demonstrated limited-growth on single- crystals. As a breakthrough, we have successfully demonstrated epitaxial single-crystal diamond growth on sapphire and STO substrates whose size is only limited by the substrate.

Please visit <http://sci-math.ku.edu.tr/> for a schedule of upcoming Science - Math seminars.