Speaker: Daya Gaur

Title: Randomized Approximation Algorithm for Scheduling Tasks with a Choice of Start Times

Room: A 580
Date: Friday, 14 November 2003
Time: 2:00 - 3:00

Abstract:

We address the problem of scheduling n tasks on a single processor. Each task i has a processing time tau(i), and has a choice of k starting times. It has been shown that the problem is strongly NP-complete even when tau(i)=2, and k >= 3. It has also been established that unless P = NP there does not exist any polynomial time approximation scheme for the problem for all k >= 2. In this talk we describe a fast randomized approximation algorithm with a performance ratio of 4/7 for the case when k=2, and there is no restriction on tau(i), i=1,2,...,n.

Joint work with Ramesh Krishnamurti.