



## RESEARCH SEMINAR

NIDA Business School cordially invites you to  
**Scheduling Research**



by

**Shrikant Panwalkar**  
John Hopkins Carey Business School

**09 February 2016 (Tuesday)**

**06:00 pm to 08:00 pm**

NIDA Business School (8<sup>th</sup> Floor Meeting Room)

### **Abstract / Synopsis**

This study examines the two-machine no-wait open shop minimum makespan problem in which the determination of an optimal solution requires an optimal pairing of the jobs followed by the optimal sequencing of the job pairs. We show that the required enumeration can be curtailed by reducing the pair sequencing problem for a given pair set to a traveling salesman problem which is equivalent to a two-machine no-wait flow shop problem solvable in  $O(n \log n)$  time. We then propose an optimal  $O(n \log n)$  algorithm for the proportionate problem with equal machine speeds in which each job has the same processing time on both machines. We show that our  $O(n \log n)$  algorithm also applies to the more general proportionate problem with equal machine speeds and machine-specific setup times. We also analyze the proportionate problem with unequal machine speeds and conclude that the required enumeration can be further curtailed (compared to the problem with arbitrary job processing times) by eliminating certain job pairs from consideration.

### **About the Speaker**

Shrikant S Panwalkar is an Associate Professor at the Johns Hopkins Carey Business School. He joined the school after a long career in academics and consulting. His expertise is in the areas of operations research and scheduling. He received his Ph.D. in Industrial Engineering from the University of Oklahoma.

### **Registration**

Kindly make your reservation by 02 February 2016 by sending an email to Ms. Intira Jedsadapitak at [ijedsadapitak@gmail.com](mailto:ijedsadapitak@gmail.com) or at 02-727-3937. We look forward to seeing you at this event!

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