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Career Objectives

I view myself as an early career lecturer with competence in teaching courses like Calculus (introductory and advanced), Linear Algebra (introductory and advanced), Linear Programming (UG), Business Statistics (UG), Differential Equations (both graduate & undergraduate), Operations Management (both graduate and undergraduate).

In research front I have developed some fascination in an applied area of operations management. I have completed a MS thesis in this topic and would like to develop advanced pedagogical as well as research knowledge for a meaningful academic career.

Educational Qualifications

 University of Dhaka, Bangladesh (2013) — MS in Applied Mathematics (NST funded); Research Area Operations Management.

- I secured second highest CGPA(3.97/4.00) among the fifteen thesis students in my batch.[1]

Thesis Title: Impact of Lot Sizing Problems in Real Life.

 University of Dhaka, Bangladesh (2012) —BS (Hons.) in Mathematics**.**

- I secured a competitive CGPA(**3.71**/4.00) and placed 7th best among 97 students.

Project Title: Interior Point Method: A Technique to Solve Linear Programming Problems.

 Dhaka City College, Bangladesh (2007)—Higher Secondary Certificate (H.S.C.).

- I was in the Science group
- I secured GPA 5.00/5.00.

 Chan Gazi High School, Bangladesh (2005) — Secondary School Certificate (S.S.C.).

- I was in the Science group
- I secured GPA 4.75/5.00.

[1] At University of Dhaka only a few competent students are allowed to undertake a research based MS study.

Awards & Distinctions

- Awarded National Science and Technology (NST) Fellowship from the Ministry of Science and Technology for the Master's thesis on 'Impact of Lot Sizing Problem in Real Life' in 2015.

Research Engagement

Working papers:

– *An efficient optimization method and its application using Lot Sizing Problem.*(Babul Hasan and Shahina Naznin).

We revisit the well known Lot Sizing Problem in operations management. Lot Sizing Problem is one of the most appealing problems in operations management. It can be classified in various ways such as – single level dynamic lot sizing, multi-level dynamic lot sizing problem. These two can also be categorized as capacitated and uncapacitated. We are focusing on capacitated single level dynamic lot sizing problem since uncapacitated problems do not have existence in practical. In this paper, a comparative study in between models is shown and a method is proposed which requires less iteration and time to come up with an optimized solution. Sensitivity analysis is explored with the use of LINDO, a mathematical programming tool, in details for several problems. Finally, the proposed method is scrutinized with real life examples.

– *Revisiting Interior Point Method as a tool to Solve Linear Programming Problems*
(Sanwar Uddin Ahmad and Shahina Naznin)

Interior Point Method (IPM) has been one of the most active research areas in the Science of optimization after its introduction by Karmarkar in 1984. In recent years the introduction and development of Interior-Point Methods has had a profound impact on optimization theory as well as practice, influencing the field of Operations Research and related areas. Development of these methods has quickly led to the design of new and efficient optimization codes particularly for Linear Programming. In this project we have studied this method particularly for solving Linear Programming problems.

Computational and Linguistic Skills

I have working knowledge in various computational and programming packages. I have extensively worked with Microsoft Office Suit (Word, Excel, Power Point); have completed number of courses on *Mathematica*; worked in *FORTRAN* and *C Programming*; and finally gained some depth knowledge in using *LINDO*.

Language Skill: Good knowledge in reading, writing, listening and speaking both in Bengali and English

References

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