

Supply Chain Network Design using Mixed Integer Linear Programming

Lecture held by Prof. Dr. Mujtaba Hassan Agha

Supply Chains have to address an inherent trade-off between costs and customer service. The course will make use of Mixed Integer Linear Programming to solve and understand topics related to Network Design. The course will start with simple formulations (transportation and transshipment models) and subsequently more complex Network Design Problems (such as robust optimization, multi-commodity flows and multiple time period models) will be discussed. All models will be implemented by the students in hands-on computer exercises.

Target group of the lecture are Master students and doctoral candidates in Engineering and Management with an interest in Supply Chain Modeling and Optimization. The course is offered in cooperation with Prof. Dr. T. Becker of the Production Systems and Logistic Systems work group.

Dr. Mujtaba Hassan Agha is an Associate Professor at the Capital University of Science and Technology, Islamabad, Pakistan. He has more than eleven years of industrial and teaching experience. His teaching and research areas of interest are Production Engineering, Supply Chain Management, Quality Improvement, and Energy Management. He received his PhD in Industrial Systems Engineering from *EN-SIACET - Institut National Polytechnique Toulouse, France*. He is also a Certified Supply Chain Professional (CSCP) and a member of American Productivity and Inventory Control Society (APICS).

Agenda July 2018

Monday 9, 09:00 - 16:30

Value of Network Design

Tuesday 10, 09:00 - 16:30

Using MS Excel to solve Network Design

Wednesday 11, 09:00 - 16:30

Facility Location Problem

Thursday 12, 09:00 - 16:30

Advanced Network Design Problem

Friday 13, 09:00 - 16:30

Advanced Network Design Problem

Monday 16, 09:00 - 16:30

Presentation/Examination

See the course website at <http://www.psls.uni-bremen.de/education.html> for details.

Organizational Hints

The course is open for all students of University of Bremen. Please, register for the course via Stud.IP or by sending an email to courses@IGS.LogDynamics.de

Depending on your study program, 3 CP may be offered for participation in the course including an examination. The course is also open for IGS and Erasmus Mundus fellows as well as for any doctoral candidate of LogDynamics.



Comments from participants

"I liked the support and knowledge of Dr. Mujtaba in the topic of SCM. Additionally, the games he uses in the workshop and the activities with students."

"The way of presentation was excellent. It was organized and understandable."

"I like teaching through playing a simple game. It's very easy to be understood!"



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- Lecture series 'Supply Chain Network Design'
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Please, be aware that the entries in the IGS calendar are always up-to-date and binding. You will receive access to it after registration for a course. If you are not able to attend a specific class, please always inform the organizer in time, i.e. as soon as you get to know a reason or at least two days before the appointed date, by sending an email to

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In order to be polite, please, also inform your group and the lecturer of the concerning course. If the participants do not observe this rule and the lecturer does not have any participants for a class, the group has to pay for the wasted time and money.

If you generally cannot attend class any more or if you want to entirely cancel your participation in a course, please inform the organizer as soon as possible. The IGS will offer your place to someone else.

After any course, the IGS will ask you for an evaluation. Please, fill in the evaluation sheet in time and return it to the main communication channel. IGS reserves all rights to our photos and the use of the content of the evaluation without reference.



Organizer

International Graduate School for Dynamics in Logistics (IGS) at the University of Bremen

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