

02721 Location and Distribution. Fall 2006. Sep. 4, 2006

Date	Topic	Reference
Sep. 4	Introduction	LMW ch. 1
Sep. 7	Distance Measures	LMW ch. 10
Sep. 11	Single-Facility Location	LMW 2.1
Sep. 14	Non-Euclidean Distance	LMW ch. 2
Sep. 18	Location on a Sphere	LMW 3.1
Sep. 21	Linear Facility, Probabilistic Loc.	LMW 3.3, 3.5
Sep. 25	Multi-facility Location	LMW ch. 4
Sep. 28	Minimax Location	LMW ch. 6
Oct. 2	Location-Allocation Models	LMW ch. 7, 8
Oct. 5	Location Exercise in 305/221	
Oct. 9	Location Exercise in 305/221	
Oct. 12	Traveling Salesman Problem (TSP)	JRR 225-255,268-273,275-278
	Fall Break!	
Oct. 23	TSP	JRR 292-296, 314-323
Oct. 26	Vehicle Routing Problem (VRP)	MF 18-30, LS
Oct. 30	VRP + VRP with time windows (VRPTW)	GLP 1-15,20-21, KDM
Nov. 2	VRPTW + Arc Routing	KDM, GHJ
Nov. 6	Arc Routing + Dispatch Systems	GHJ
Nov. 9	Combined Routing and Location	JM
Nov. 13	Applied Integer Programming in VRP	Kallehauge
Nov. 16	Distribution Exercise in 116/9	HLP
Nov. 20	Distribution Exercise in 116/9	HLP
Nov. 23	Scheduling of Crews and Vehicles (SCV)	Larsen
Nov. 27	Real-life VRP + SCV	Birkedal + Larsen
Nov. 30	Group Presentations	
Dec. 4	Group Presentations	
Dec. 7	Group Presentations	

Activities on Mondays 13-17 and Thursdays 8-12 usually in 305/205 (building 305, room 205), but from Oct. 12-Nov. 27 in 116/13.

Course home page: <http://www.imm.dtu.dk/courses/02721>
which also contains the Location slides.

The plan may be changed by announcement in class.

The Location notes are available at the IMM note sale place (building 305, ground floor) for 100 kroner. The Distribution notes will be available on the Campusnet during September. A message will be sent out on Campusnet when the notes are ready.

Location reference

LMW. R.F. Love, J.G. Morris, and G.O. Wesolowsky: *Facilities Location*, North-Holland 1988.

Distribution references

JRR. M. Junger, G. Reinelt, and G. Rinaldi: *The Traveling Salesman Problem*, Handbooks in OR and MS, Vol. 7, Chapt. 4, Elsevier Science 1995.

GHL. G. Ghiani, A. Hertz, and G. Laporte: *Recent Algorithmic Advances for Arc Routing Problems*, Report September 2000.

MF. M. Fisher: *Vehicle Routing*, Handbooks in OR and MS, Vol. 8, Chapt. 1, Elsevier Science 1995.

LS. G. Laporte and F. Semet: *Classical Heuristics for the Vehicle Routing Problem*, GERAD Report G-98-54, 1999.

GLP. M. Gendreau, G. Laporte, and J.-Y. Potvin: *Metaheuristics for the Vehicle Routing Problem*, GERAD Report G-98-52, 1999.

KDM. N. Kohl, J. Desrosiers, O.B.G. Madsen, M. Solomon, and F.Soumis: *2-path Cuts for the Vehicle Routing Problem with Time Windows*, Transportation Science 33, 1999, pp 101-116.

RO. R.M. Jørgensen and O.B.G. Madsen: *Shortest Path and Real Road Networks*, IMM paper, October 2000.

JM. S.K. Jacobsen and O.B.G. Madsen: *A Comparative Study of Heuristics for a Two-Level Routing-Location Problem*, European Journal of Operational Research 5, 1980, pp 378-387.

Additional references will be handed out later

Instructors

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Guests

Brian Kallehauge, CTT, Centre for Traffic and Transport, DTU

Allan Larsen, CTT, Centre for Traffic and Transport, DTU

Jakob Birkedal Nielsen, Transvision

On Thursday, November 2, each group of students will be asked to choose a journal article from a list. The group presents the article for half an hour on an arranged day during the final weeks of the semester. The group also writes a paper on the article, to be handed in no later than Friday, December 22. The course grade is determined by the paper and the exercise reports. Passing the course also requires attending all group presentations.