



## **SEMINAR**

### **Facility Location: From Deterministic to Stochastic to Endogenous Uncertainty**

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Facility location problems occur in several real-life problems, such as warehouse location, store location, server location and so on. In this talk we start from a simple facility location problem, and gradually we include layers of complexity. Initially, we assume the problem is deterministic, and all data of the problem is assumed to be known in advance. We then relax this assumption, and rather assume that demand is uncertain and follows a given probability distribution. Finally, in the last layer of complexity, we assume that the distribution of demand depends on the location decisions made. This allows us to make a journey through solution methods, starting from Benders decomposition, moving to the L-Shaped method, and terminating to an extension of this for stochastic programs with endogenous uncertainty.