At the Chair of Logistics & Supply Chain Management of TUM School of Management we are looking for an interested and qualified student to conduct his/her

Master thesis

on the topic:

Capacity planning and optimization of constraints for pick-up stations

Problem definition:
The e-commerce market has grown very fast in the last decade. Therefore, the parcel logistics have expanded their capacities for deliveries. The last mile of a delivery process is the most expensive mile in the whole delivery process. If the recipient of a shipment is not available, the delivery tour needs to be done again. To reduce the costs of the last mile, some parcel services have installed automated pick-up stations to store shipments until recipients pick them up. The problem for designing and constructing such automated pick-up stations is to determine the optimal capacity regarding size and number of cases. This master thesis deals with the problem to find optimal constraints for pick-up stations.

Tasks:
- Review of related work
- Develop a model to calculate the shipping capacity of orders
- Find and use empirical data to evaluate the model
- Find optimal constraints for pick-up stations

Requirements:
The thesis is for Master students of the study-program TUM-BWL. Qualified candidates have a major in Supply Chain Management. The ability to work independently as well as analytical skills are required. A background in mathematics and optimization is helpful. The thesis should be written in English.

Begin: November 2012
Advisor: Anna-Lena Beutel (anna.beutel@tum.de)

For further information and selected literature on the topic, contact Anna-Lena Beutel in room 1516. Please send your application together with your curriculum vitae and transcripts of records by email.