

Lecture Series of the Research Institute for Supply Chain Management

Monday, May 10, 2021. Beginning 5:30 pm



MARGARETHA GANSTERER :

MULTI-LEVEL LOT SIZING WITH DISTRIBUTED AGENTS:

Collaborative operations planning is a key element of modern supply chains. We introduce the collaborative multi-level lot-sizing problem with cost synergies. This arises if producers can realize reductions of their costs by providing more than one product in a specific time horizon. If capacities are limited, agents might have to share resources and jointly cover required demands. In this case, finished components are transshipped between agents. As an agent can be in charge of producing more than one component, we include the concept of set up carry-over into our modeling. We address a centralized planning approach, where the objective is to find a globally optimized lot sizing plan for all participating agents. Thus, we cover both horizontal and vertical collaboration between agents. Since producers are typically not willing to reveal critical information, we also propose a decentralized mechanism, where producers do not have to reveal their individual costs. The proposed decentralized mechanism can be applied to other problem classes, where collaborative decision makers aim for good plans under incomplete information.

Margaretha Gansterer is full professor of Business Administration with a focus on Logistics and Operations Management. She obtained her PhD and her Habilitation at the University of Vienna. Currently, she is head of the department of Operations, Energy, and Environmental Management at the University of Klagenfurt. Previously, she held a professor position for Operations Management at the Otto-von-Guericke University Magdeburg. Margaretha Gansterer currently serves as the International Liaison (Europe, Middle East, Africa) at the INFORMS Transportation and Logistics Society."

For further information, please contact sekretariat.itl@wu.ac.at
