Universität Karlsruhe (TH)
Fakultät für Wirtschaftswissenschaften

Karlsruhe Institute of Technology

VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit:	Donnerstag, 30. November 2017, 17:30 Uhr
Ort:	Raum 4A-09, Gebäude 05.20
Es spricht:	Lisa Maillart, University of Pittsburgh
Zum Thema:	**Optimal Pooling, Batching and Pasteurizing of Donor Human Milk**

Abstract: Donated human milk – collected, processed and dispensed via milk banks – is the standard of care for premature neonatal intensive care unit (NICU) inpatient infants and unhealthy outpatient infants whose mothers cannot provide adequate supply. We take a multi-criteria integer programming approach to optimize the daily decisions involved in the (1) pooling of milk from different donors to meet macronutrient requirements across different product types, and (2) batching of pooled milk for efficient pasteurization. Our numerical results demonstrate significant improvements compared to historical and staff-generated decisions at Mothers' Milk Bank of North Texas (MMBNT). Model implementation at MMBNT has quickly resolved chronic production imbalances, reduced labor requirements and improved NICU order fulfillment.

BIO: Lisa Maillart is Professor and Co-Director of the Stochastic Modeling, Analysis and Control (SMAC) Laboratory in the Department of Industrial Engineering at the University of Pittsburgh. Prior to joining the faculty at Pitt, she served on the faculty of the Department of Operations in the Weatherhead School of Management at Case Western Reserve University. She received her MS and BS in industrial and systems engineering from Virginia Tech, and her PhD in industrial and operations engineering from the University of Michigan. Her primary research interest is in sequential decision making under uncertainty, with applications in medical decision-making, healthcare operations, healthcare policy and maintenance optimization. She is a member of INFORMS, SMDM and IIE, and was recently named a Fulbright U.S. Scholar.

Die Vorträge zum Operations Research wenden sich an alle Interessierten!

Bei Rückfragen wenden Sie sich bitte an:
Prof. Dr. Stefan Nickel, Institut für Operations Research.