

IWLS 2015 Program

Day 1: Wednesday, August 23, 2017

09:00-09:30 **Registration**

09:30-09:45 **Opening & Welcome**

09:45-10:45 **Session - Heuristics (chair: Ashwin Arulsevan)**

An easy construction heuristic for capacitated lot-sizing problems

Christian Almeder 1

A Unified Decomposition Metaheuristic for Assembly, Production and Inventory Routing

Raf Jans, Masoud Chitsaz, Jean-François Cordeau 5

10:45-11:15 **Coffee Break**

11:15-12:45 **Session - Stochastic I (chair: Steven Prestwich)**

A stochastic multi-item lot-sizing problem with bounded number of setups

Etienne de Saint Germain, Vincent Leclère, Frédéric Meunier 9

A responsive planning approach for robust stochastic capacitated lot sizing

Friese, Fabian 13

MILP-based model for approximating non-stationary (R, S) policies with correlated demands

Mengyuan Xiang, Roberto Rossi, Belen Martin-Barragan, S. Armagan Tarim 17

12:45-13:30 **Lunch**

13:30-14:30 **Session - Reformulations and relaxations (chair: Kerem Akartunali)**

Dantzig-Wolfe reformulations for multi-item lot-sizing problems with inventory bounds

Andrés Acevedo-Ojeda, Ivan Contreras 23

Two-Period Relaxations for Lot-Sizing Problems with Big Bucket Capacities: Consecutive versus Non-Consecutive Two-Period Relaxations

Mahdi Doostmohammadi, Kerem Akartunali 27

14:30-18:00 **Distillery tour**

Day 2: Thursday, August 24, 2017

09:30-11:00	Session - Extensions and Applications (chair: Kerem Akartunalı)	
	An Approach for Operational Production and Capacity Planning in Semiconductor Manufacturing	
	<i>Quentin Christ, Stephane Dauzere-Peres, Guillaume Lepelletier</i>	31
	Machine Flexibility in Lot Sizing Problems	
	<i>Silvio Alexandre de Araujo, Diego Jacinto Fiorotto, Raf Jans</i>	36
	Capacitated Lot Sizing with a Fixed Product Sequence	
	<i>Xueying Shen, Stéphane Dauzère-Pérès, Filippo Focacci, Fabio Furini</i>	41

11:00-11:30 Coffee Break

11:30-13:00	Session - Complexity and Algorithms (chair: Ashwin Arulsevan)	
	Lot-sizing models for energy management	
	<i>Nabil Absi, Christian Artigues, Safia Kedad-Sidhoum, Sandra Ulrich Ngueveu, Omar Saad</i>	45
	Sandwich approximations for lot-sizing problems	
	<i>Guillaume Goisque, Christophe Rapine, Wilco van den Heuvel, Albert P. M. Wagelmans</i>	49
	Polynomial time algorithms for energy-aware lot sizing problem under stationary energy parameters	
	<i>Christophe Rapine, Guillaume Goisque, Ayse Akbalik</i>	53

13:00-14:00 Lunch

14:00-15:00	Session - Robust (chair: Mahdi Doostmohammadi)	
	Robust inventory problem revisited	
	<i>Agostinho Agra, Cristina Requejo, Filipe Rodrigues</i>	57
	A decomposition algorithm for the robust lot sizing problem with remanufacturing option	
	<i>Öykü Naz Attila, Kerem Akartunalı, Ashwin Arulsevan, Agostinho Agra</i>	61

15:00-15:30 Coffee Break

15:40-16:30	Session - Stochastic II (chair: Roberto Rossi)	
	Optimal policies for production-clearing systems with stochastic demands	
	<i>Remco Germs, Nicky D. van Foreest, Onur A. Kilic</i>	65
	Single item stochastic lot sizing problem considering capital flow and business overdraft	
	<i>Zhen Chen, Roberto Rossi, Ren-qian Zhang</i>	69

16:30-17:30 Meeting of the EURO Working Group on Lot-Sizing

19:00 Conference Dinner at Babity Bowster

Day 3: Friday, August 25, 2017

09:30-11:00 Session - Lot sizing with levels (chair: Mahdi Doostmohammadi)

- Solving the multi-level capacitated lot-sizing problem with lead time consideration
Tom Vogel, Christian Almeder 73
- A computational comparison of formulations for an integrated three-level lot sizing and transportation problem with a distribution structure
Mathieu Gruson, Jean-François Cordeau, Raf Jans 77
- Coordinating a two-level supply chain with capacity reservation and subcontracting
Siao-Leu Phouratsamay, Safia Kedad-Sidhoum, Fanny Pascual 81
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11:00-11:30 Coffee Break

11:30-13:00 Session - Inventory and routing (chair: Roberto Rossi)

- A construction heuristic for the Supply Vehicle Routing and Lot Sizing Problem
Fanny Hein, Christian Almeder 85
- The Inventory Routing Problem in Rectangular Warehouses
Haldun Süral, Claudia Archetti, Melih Çelik 89
- A review of methods for modelling multiple modes in inventory models
Erna Engebretsen 93
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13:00-14:00 Lunch

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