The 11th Conference on Stochastic Models of Manufacturing and Service Operations

SMMSO 2017

June 4-9, 2017
Acaya, Italy

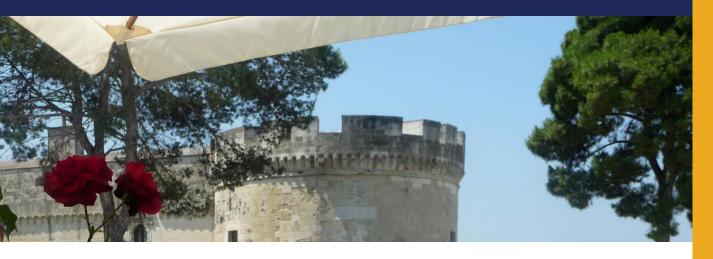Organized by Politecnico di Milano, ITIA-CNR and University of Salento

[PRELIMINARY]
CONFERENCE PROGRAM

POLITECNICO
MILANO 1863

Istituto di Tecnologie Industriali e Automazione
Consiglio Nazionale delle Ricerche

UNIVERSITÀ
DEL SALENTO

SMMSO 2017 is the eleventh in a row of successful conferences held every other year since 1997 in Europe. The conferences started in Greece (1997, 1999, 2001, 2003, 2005) and moved to other countries (The Netherlands, 2007, Italy, 2009, Turkey, 2011, and Germany, 2013) after returning to Greece in 2015. The conference names slightly varied year on year before the name SMMSO was established in 2009, during the first Italian edition of the conference. In 2017, SMMSO returns to Italy with a rich program bridging research and practice in manufacturing and service operations. For more information on past SMMSO conferences and publications, visit smmso.org.

PROGRAM OF THE FIRST DAY

16.30 – 17.30   **REGISTRATION OF PARTICIPANTS**

17.30 – 18.30   **VISION-ORIENTED KEYNOTE**
Stanley B. Gershwin (Massachusetts Institute of Technology)

18.30 – 19.30   **INDUSTRIAL ROUND TABLE**

19.30   **COCKTAIL AND DINNER AT ACAYA HOTEL**

09.00 – 09.30	**CONFERENCE OPENING** **Chairman: Tullio Tolio (Politecnico di Milano and ITIA-CNR)**
09.30 – 10.30	**KEYNOTE** *"Design, Analysis and Control of Output Dynamics of Production Systems"*, **Barış Tan (Koç University)**
10.30 – 11.00	**COFFEE BREAK**
11.00 – 12.30	**TECHNICAL SESSION S1.1 (Production Planning and Control)** **Chairman: George Liberopoulos**

"Dynamic Capacitated Lot Sizing with Random Demand and Random Yield" – Tempelmeier H., and Kirste M.

"Considering Sequence-dependent Stochasticity in Production Schedules" – Manitz M., Herrmann F., and Munninger M.

"Dynamic Lead Time Based Control Point Policy for Multi Stage Manufacturing Systems" – Colledani M., and Gershwin S.B.

12.30 – 13.30	**LUNCH**
13.30 – 14.30	**FREE TIME**
14.30 – 16.00	**TECHNICAL SESSION S1.2 (Performance Evaluation)** **Chairman: Kai Furmans**

"A Simulation Tool to Assess the Performance of Production Systems in Degraded Mode" – Di Mascolo M., Flaus J.–M., and Negrichi K.

"Multi-level Monte Carlo Analysis of Manufacturing Systems" - Pedrielli G., and Ju F.

"Performance Evaluation of Milkrun-supplied Flow Lines" Mindlina J., and Tempelmeier H.

16.00 – 16.30	**COFFEE BREAK**
16.30 – 18.00	**TECHNICAL SESSION S1.3 (Queueing systems)** **Chairman: Michael Manitz**

"Analysis of Performance Approximations for Queueing Networks with Non-homogeneous Arrival Processes" – Askin R.J., and Jampani Hanumantha G.

"Stability Conditions for Multiclass Queueing Networks" – Wu K., and Shen Y.

"Vehicle Configuration in an Integrated Material Handling System with State-dependent Batch Transfer" – Zhang H.-Y., Xi S.-H., Chen Q.-X., Li X., and Yu A.-L.

18.00 – 18.30	**DAY CLOSURE**
18.30 – 20.30	**FREE TIME**
20.30	**DINNER AT ACAYA HOTEL**

09.00 – 10.30   **TECHNICAL SESSION S2.1 (Performance Evaluation)**
Chairman: Stefan Helber

"Stochastic Systems Modeling for Wireless Charging Electric Vehicle" – Jang Y.J., and Yeo J.

"Deterministic Asynchronous Two-machine Lines" – Tolio T.

"Performance Evaluation of a Two-machine Line with a Finite Buffer and Condition-based Maintenance" – Fitouhi M.-C., Nourelfath M., and Gershwin S.B.

10.30 – 11.00   **COFFEE BREAK**

11.00 – 12.30   **TECHNICAL SESSION S2.2 (Production Planning and Control)**
Chairman: Semyon Meerkov

"The Optimal Time to Adapt the Processing Rate in a Make-to-order Production System" – Vogel J,. and Stolletz R.

"Dynamic Programming for Energy State Control of Machine Tools in Manufacturing with Part Admission Control" – Frigerio N., Shanthikumar J.G., and Matta A.

"Production/Inventory Control with Correlated Demand" – Manafzadeh Dizbin N., and Tan B.

12.30 – 13.30   **LUNCH**

13.30 – 14.30   **FREE TIME**

14.30 – 16.00   **TECHNICAL SESSION S2.3 (Resource Allocation)**
Chairman: Raik Stolletz

"Optimization of Buffers, Service Rates, & Population in Closed Finite Queueing Networks" – MacGregor Smith J.

"Simulation Cutting Approach: Joint Workstation, Workload and Buffer Allocation Problem" – Zhang M., Matta A., Alfieri A., and Pedrielli G.S.

"Approaches for Machine Selection and Buffer Allocation in Stochastic Flow Lines" – Helber S.

16.00 – 16.30   **DAY CLOSURE**

16.30 – 20.30   **SOCIAL TOUR: VISIT TO LECCE CITY**

20.30   **DINNER AT ACAYA HOTEL**

09.00 – 10.30 **TECHNICAL SESSION S3.1 (Operations and Supply Chain)**
Chairman: Ronald Askin

"A Stochastic Dynamic Programming Approach for Assigning Inventories in Multi-channel Retailing" – Holzapfel A., Kuhn H., and Huebner A.

"Minimum Variance Hedging for Managing Price Risks" – Canyakmaz C., Karaesmen F., and Özekici S.

"Intelligent Evaluation of Suppliers' Sustainability Performance Using Multi-agent Systems in Distributed Supply Chains" – Ghadimi P., and Heavey C.

10.30 – 11.00 **COFFEE BREAK**

11.00 – 12.30 **TECHNICAL SESSION S3.2 (Operations and Supply Chain)**
Chairman: Heinrich Kuhn

"Modeling and Analysis of a Collaborative Production Network" – Hosseini B., and Tan B.

"Capacity Considerations in the Bullwhip Effect in Supply Chains: the Effect on Lead Times" – Framinan J.M.

"Imbrication of Services Between High Priority and Back-office Tasks" – Legros B., Jouini O., Akşin O.Z., and Koole G.

12.30 – 13.30 **LUNCH**

13.30 – 14.30 **FREE TIME**

14.30 – 16.00 **TECHNICAL SESSION S3.3 (Production Planning and Control)**
Chairman: Elisa Gebennini

"Optimal Buffer Allocation in Serial Production Lines Operating Under IB, EB, and CONWIP Policies" – Liberopoulos G.

"The Impact of Orbit Dependent Return Rate on the Control Policies of a Hybrid Production System" – Korugan A., Ata S., and Fadiloğlu M.M.

"Numerical Comparison of Kanban Mechanisms for Production Systems with Time-dependent Processing Times" – Schwarz J.A., and Stolletz R.

16.00 – 16.30 **COFFEE BREAK**

16.30 – 18.00 **TECHNICAL SESSION S3.4 (Performance Evaluation)**
Chairman: Fikri Karaesmen

"Decomposition of Asynchronous Automated Long Lines with Finite Buffer Capacity" – Magnanini M.C., and Tolio T.

"The Decomposition Equations of Flow Lines with Multiple Exponential Unreliable Non-identical Parallel-machine Workstations" – Diamantidis A., Papadopoulos C., Lee J., and Li J.

"Investigating the Potential of State-truncation Approximations for Production Lines" – Durmuş D., Yeralan S., and Heavey C.

18.00 – 18.30 **DAY CLOSURE**

18.30 – 20.30 **FREE TIME**

20.30 **DINNER AT ACAYA HOTEL**

09.00 – 10.30 **TECHNICAL SESSION S4.1 (Production Systems Modeling)**
Chairman: James MacGregor Smith

"A Classification of (max,+) Algebra Models of Manufacturing Systems" – Papadopoulos C., and O'Kelly M.E.J.

"Review of Models for Large Scale Manufacturing Networks" – Furmans K., Liberopoulos G., Rimmele M., and Zimmermann O.

"Smart Production Systems: Architecture and Application to Multi-job Manufacturing" – Alavian P., Denno P., and Meerkov S.M.

10.30 – 11.00 **COFFEE BREAK**

11.00 – 12.30 **TECHNICAL SESSION S4.2 (Production, Planning and Control)**
Chairman: Horst Tempelmeier

"Optimal Planned Lead Times for Tandem Queues: a Queueing Approach" – Van Ooijen H.P.G., and De Kok A.G.

"A Bernoulli Model for the Single-vendor Single-buyer Supply Chain" – Gebennini E., Grassi A., and Rimini B.

"Decomposition via Column Generation for Control of Tandem Production Lines" – Büyükdağli O., Nadar E., and Fadiloğlu M.M.

12.30 – 13.30 **LUNCH**

13.30 – 14.30 **TECHNICAL SESSION S4.3 (Performance Evaluation)**
Chairman: Cathal Heavey

"Teaching Stochastic Systems Modeling using LEGO Robotics-based Manufacturing Systems" – Jang Y.J., and Yosephine V.

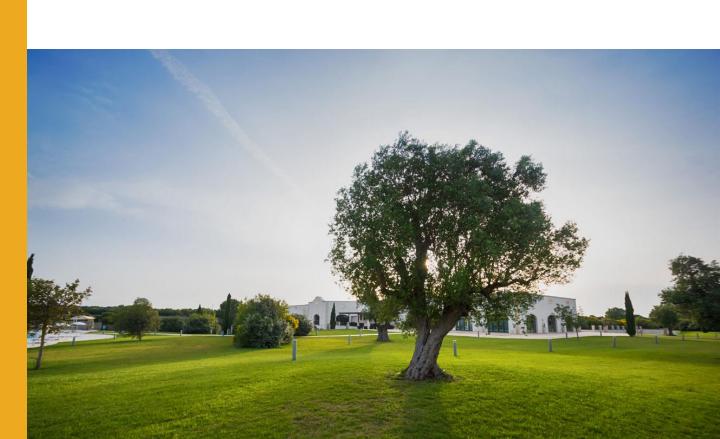"Theory of Constraints – The Myths and Clarification" – Wu K.

14.30 – 15.00 **DAY CLOSURE**

15.00 – 20.30 **SOCIAL TOUR: VISIT TO OTRANTO TOWN**

20.30 **SOCIAL DINNER AT ACAYA HOTEL**

FRIDAY, JUNE 9th

09.30 – 11.00	**SMMSO COMMUNITY: KEY FIGURES, PROJECTS, AND RESEARCH PRIORITIES.**
11.00 – 12.00	**SMMSO 2017 CONFERENCE CLOSURE**
12.00 – 13.30	**LUNCH**
13.30	**BUS TO THE AIRPORT**

ORGANIZING COMMITTEE

Tullio Tolio, Chairman	Politecnico di Milano and ITIA-CNR, Italy
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Antonio Grieco	University of Salento, Italy
Andrea Matta	Politecnico di Milano, Italy

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