

CURRICULUM VITAE

PERSONAL INFORMATION

Name	URGO MARCELLO
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ACADEMIC AND PROFESSIONAL ACTIVITIES

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| December 2008 –
Politecnico di Milano
Mechanical Engineering Dept. | Assistant Professor |
| April 2010 – September 2010
Politecnico di Milano
MTA-SZTAKI Budapest | Visiting Researcher
Hosting Reference: Prof. Jozsef Vancza
Risk-Based Stochastic Scheduling. |
| March 2005 – April 2008
Politecnico di Milano
Mechanical Engineering Dept. | Ph.D. in "Manufacturing Systems and Technologies" XX Cycle.
Supervisor: Prof. Tullio Tolio
Robust Production Planning in Manufacturing-to-Order Systems: A Stochastic Programming Approach. |
| December 2003 – February 2005
Politecnico di Milano
Mechanical Engineering Dept.
Production Systems and
Technologies Division | Research Fellow – Discrete Event Simulation Methods for Performance Evaluation and Design of Clinical Analyses Laboratories.
Supervisor: Prof. Tullio Tolio
Research Project in collaboration with Roche Diagnostics Italy to develop a software package for the analysis and automatic design of clinical analyses laboratories. |
| November 2002 – May 2003
Institut für Integrierte Produktion
Hannover - Germany | Stage in a Research Institute
Tutor: Dr. Ing. Steffen Reinsch
Consulting to a small mechanical enterprise for the Supply Chain analysis and reorganization. |

MAIN RESEARCH FIELDS

- Description Project Scheduling Approaches for Production Planning under Uncertainty, Stochastic Programming Approaches to Production Planning under Uncertainty, Production Process Modeling for Production Planning in Complex Manufacturing Systems.
- Activities Development of production planning approaches in MTO/ETO systems producing complex items. Development of solution algorithms grounding on stochastic programming. Application to industrial cases: production of machining centers, MCM S.p.A, Fontana S.p.A.
- Description Design and analysis of manufacturing systems.
- Activities Design approaches aiming at the configuration of manufacturing systems and able to cope with uncertainty to provide robust solution and proper reconfiguration paths. These Approaches are supported by a set of techniques for the evaluation of the performance of a manufacturing systems grounding on simulation, mathematical programming, analytical methods
- Description Development of scheduling algorithms, performance and sensitivity analysis for the algorithms and the solution.
- Activities Design and development of production planning and scheduling algorithms in small and medium enterprises. The developed algorithms have been integrated in software packages installed in small industries.

PUBLICATIONS

- T. Tolio, M. Urgo, A. Alfieri **A Two-Stage Stochastic Programming Project Scheduling Approach to Production Planning**, International Journal of Advanced Manufacturing Technology, accepted, 2011.
- T. Tolio, M. Urgo, J. Vancza **Robust production control against propagation of disruptions**, CIRP Annals - Manufacturing Technology, 60(1), pp.489 – 492, 2011.
- T. Tolio, M. Urgo, A. Alfieri **A project scheduling approach to production planning with feeding precedence relations**, International Journal of Production Research, 49 (4), pp.995-1020, 2011.
- T. Tolio, M. Urgo, A. Alfieri **A project scheduling approach to production and material requirement planning in Manufacturing-to-Order environments**, Journal of Intelligent Manufacturing, in print, 2010.
- T. Tolio, M. Urgo, A. Alfieri **Production and Material Requirements Planning in Manufacturing-to-Order Environments: an Application to Machining Centres Production**, ESDA 2008 - 9th Biennial ASME Conference on Engineering Systems Design and Analysis, Haifa, Israel, July 7-9th 2008.
- T. Tolio, M. Urgo, A. Alfieri **Project Scheduling with Variable Intensity Activities and Feeding Precedence Relations: an Application to Production Planning in Manufacturing-to-Order Environments**, ESDA 2008 - 9th Biennial ASME Conference on Engineering Systems Design and Analysis, Haifa, Israel, July 7-9th 2008.
- T. Tolio, M. Urgo, A. Alfieri **Project Scheduling for Production Planning: a Stochastic Programming Approach with Feeding Precedence Constraints**, PMS 2008, 11th International Workshop on Project Management and Scheduling, Istanbul, Turkey, April 28-30th 2008.
- T. Tolio, M. Urgo **Design of Flexible Transfer Line to Minimize Equipment Cost: A Configuration Approach and Solution Characterization**, CIRP Design Conference 2008: Design Synthesis.
- T. Tolio, M. Urgo **Planning of Machining Centres Production: the Role of Precedence Modelling**, VII Convegno AITeM, Montecatini (Fi), September 10-12th 2007.
- T. Tolio, M. Urgo **A Rolling Horizon Approach to Plan Outsourcing in Manufacturing-to-Order Environments Affected by Uncertainty**, Annals of the CIRP, Vol. 56/1/2007, pp. 487-490.
- T. Tolio, M. Urgo **Outsource Planning in Presence of Rework Activities**, PMS 2006, Project Management and Scheduling Workshop, Poznan (PL), 26-28 Aprile 2006

COLLABORATION IN PROJECTS

- 2011**
Research Contract **RollShop Simulator – A Reconfigurable Simulation Model for Roll Shops.**
Participants: Politecnico di Milano – Mechanical Eng. Dept., ITIA-CNR, TENOVA Pomini
- 2011**
Research Project INFRA-FP7 **VISIONAIR – A World-class Infrastructure for Advanced 3D visualization-based Research.**
Participants: INPG Entreprise SA (FR), Grenoble INP (FR), Laboratory for Manufacturing Systems & Automation (GR), Cranfield University (UK), University of Twente (NL), High Performance Computing Center Stuttgart (GE), Poznan Supercomputing and Networking Center (PL), Universite de la Mediterranee (FR), Consiglio Nazionale delle Ricerche (IT): Istituto di Matematica Applicata e Tecnologie Informatiche Istituto di Tecnologie IndustrialiAutomazione, Institut National de Recherche en Informatique et Automatique (FR), Royal Institute of Technology (SW), Technion - Israel Institute of Technology (IS), RWTH Aachen University (GE), Poznan University of Technology (PL), Arts et Metiers ParisTech (FR), University of Kaiserslautern (GE), University of Salford (UK), Fraunhofer-Instituts fur Produktionsanlagen und Konstruktionstechnik (GE), i2CAT Foundation (ES), University of Essex (UK), Computer and Automation Research Institute, Hungarian Academy of Sciences (HU), Ecole Centrale de Nantes (FR), University College London (UK), Politecnico di Milano (IT), European Manufacturing and Innovation Research Association, a cluster leading excellence (BE).
of the European Research Area (ERA).
- Activities Scientific responsible for Politecnico di Milano.

2008 - 2010
Significant bilateral project, XVII
Executive Programme of Scientific
and Technological Cooperation
between Italy and Hungary
Activities

2004-2008
Research Project FP6

2006
Research Contract

2004-2007
Research Contract

Cooperation Mechanism and Robust Production Planning in Complex Distributed Manufacturing Environments.

Participants: Politecnico di Milano – Mechanical Eng. Dept., SZTAKI – Computer and Automation Research Institute – Hungarian Academy of Science.

Scientific leader and for Politecnico di Milano.

VRL-KCiP - Virtual Research Lab for a Knowledge Community in Production

Participants: Institut National Polytechnique de Grenoble, UT/CTIT, Fraunhofer – IPK Berlin, Istituto di Tecnologie Industriali e Automazione – Consiglio Nazionale delle Ricerche – Milano, University of Bath, TEKNIKER Eibar, University of Patras, Kungliga Tekniska Högskolan-Stockholm, Hungarian Academy of Sciences, Comp.and Autom.Res. Inst.-Budapest, University of Ljubljana, University of Stuttgart, Institute Israel of TechnologyTechnion – Haifa, Ecole Centrale Nantes, Université. Technologique de Troyes, Poliltehnica University of Timisoara, Ecole Polytechnique Fédérale de Lausanne, University of Durham, Delft University of Technology, Eindhoven University of Technology, Poznam University of Technology, Berliner Kreis, AIP-PRIMECA, The Netherlands Research School of Integrated Manufacturing, IPV, Pôle Productique Rhône-Alpes, University of Stellenbosch.

Goals: NoE, putting together the specialists of research in production processes in order to share their knowledge in a common structure.

Production Scheduling in Small and Medium Enterprises

Participants: Politecnico di Milano – Mechanical Eng. Dept., Duda s.r.l.

Goals: design, development and marketing of a production planning and scheduling software package targeted to small and medium enterprises.

“Leonardo”

Participants: Politecnico di Milano – Mechanical Eng. Dept, Roche Diagnostics Italia

Goals: development of a semi-automatic tool supporting the design of clinical laboratories. The software tool is capable of evaluating a clinical laboratory grounding on discrete event simulation techniques and to propose a proper configuration of a clinical laboratory accorsing to the specification of a set of criteria and constraints.

**TEACHING ACTIVITIES
COURSES**

2008 – 2011

Politecnico di Milano – Facoltà di Ingegneria dei Sistemi – Corso di Laurea in Ingegneria Gestionale – I Liv. –Milano
Chair holder for the “Integrated Production System” Course

2010 – 2011

Politecnico di Milano – – Facoltà di Ingegneria Industriale – Corso di Laurea in Ingegneria Meccanica – I Liv. –Milano
Teaching Assistant for the “Mechanical Technology” Course
Teacher: Prof. Andrea Matta

2009 – 2010

Politecnico di Milano – Facoltà di Ingegneria Industriale – Corso di Laurea in Ingegneria Meccanica – II Liv. –Milano
Teaching Assistant for the “Mechanical Technology II” Course
Teacher: Prof. Antonio Armillotta

2008 – 2009

Politecnico di Milano – Facoltà di Ingegneria dei Sistemi – Corso di Laurea in Ingegneria Gestionale – I Liv. – Sede di Milano
Teaching Assistant for the “Mechanical Tecnology and Quality” Course
Teacher: Prof. Arianna Alfieri

2005 – 2011

Politecnico di Milano – Ph.D. School
Teaching Assistant for the “Management of Research Activities” Course
Teacher: Prof. Tullio Tolio

2004 – 2008

Politecnico di Milano – Facoltà di Ingegneria dei Sistemi – Corso di Laurea in Ingegneria Gestionale – I Liv. – Milano
Teaching Assistant for the “Integrated Production System” Course
Teacher:: Prof. Tullio Tolio

2004 – 2005

Politecnico di Milano – Facoltà di Ingegneria dei Sistemi – Corso di Laurea in Ingegneria Gestionale – II Liv. – Sede di Milano
Teaching Assistant for the “Reconfigurable Manufacturing Systems” Course
Teacher: Prof. Tullio Tolio