IFAC Conference on Manufacturing Modelling, Management and Control
IFAC MIM 2022

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June 22-24, 2022, Nantes, France (online and face-to-face presentations)

Special session dedicated to the memory of Dr. Jean-Marie Proth

Session code (for submissions): **w9ufx**

Organised by:

- Prof. Chengbin Chu, ESIEE Paris, France
- Prof. Feng Chu, University of Saclay, France
- Prof. Alexandre Dolgui, IMT Atlantique, France
- Prof. Rakesh Nagi, University of Illinois, USA
- Prof. Xiaolan Xie, Mines St Etienne, France

Aim & scope: Dr. Jean-Marie Proth (http://proth.jean-marie.monsite-orange.fr/) passed away on June 17, 2021. Jean-Marie was a pioneer and leading scholar in many directions of industrial engineering and operations research. He contributed a lot to the production planning and control domain: flow control, scheduling, planning, and hierarchical production management. Dr. Jean-Marie Proth advised/supervised tens of professors and scientists who are now leaders in these areas. Jean-Marie worked on solving systems of partial differential equations, especially for the design of buffer stocks, the development of specific algorithms for some scheduling problems in real time, supply chains engineering, assembly line balancing, and bin-packing problems. His results in the modeling, analysis, and evaluation of discrete event systems, especially Petri Nets for modeling and analyzing the behavior of discrete event systems, data analysis for design of production systems, innovative tool to perform cross-decomposition for group technology (called GPM). The algorithm GPM was used not only in the group technology and layout design, but also to decompose linear systems of very large size in order to approximate the solution. Many other research problems were solved by Jean-Marie Proth. Among others, for city logistics, an algorithm was proposed which proceeds by division of the territory and can guide a vehicle in a city, taking into account fluctuations in traffic, etc.

Keywords: hierarchical production management, production planning and control, scheduling, buffer allocation, assembly line balancing, bin-packing, inventory control, replenishment planning, discrete event systems, Petri nets, group technology, facility layout, stochastic systems, data analysis, clustering, combinatorial optimization.

Selected books:

"Mathematical Theory of Production Planning", by A. BENSOUSSAN, M. CROUHY and J.M. PROTH, North Holland Publishing, 1983.
"Mathematical Tools in Production Management", by J.M. PROTH and H. HILLION, Plenum, 1990.
"L'ordonnancement et ses applications", by C. CHU and J-M. PROTH, Masson, 1996.
"Petri Nets: A Tool for Design and Management of Manufacturing Systems", by J-M. PROTH and X. XIE, Wiley and Sons, 1996.
“Supply Chain Engineering: Useful Methods and Techniques”, by A. DOLGUI, J.-M.PROTH, Springer, 2010

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Deadline for submissions (please use the code, see above): **March 15th, 2022**

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