

IFAC TC 5.2 Manufacturing Modelling for Management and Control

Working group 2: Advanced multi-criteria applications in manufacturing and logistics

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Contexte and motivations

- Multi-criteria approaches have been put to use in multiple segments of manufacturing and logistics.
- Prominent role to integrate people, information and products across integrated supply chain boundaries (manufacturing, warehousing, distribution of goods and services, etc.).
- Decisions involving customer profiling, new product development, retail marketing, and sales patterns are immensely refined using innovative multi-criteria approaches.
- Such decisions have an impact on the overall integrated logistic network processes.

WG topics

1. Manufacturing and logistics systems scheduling and planning;
2. Adaptive manufacturing and logistics systems trading, coordination and negotiation;
3. Green and eco-manufacturing and logistics systems management;
4. Risk management in manufacturing and logistics systems;
5. Secure manufacturing and logistics systems collaboration;
6. Impacts of cultural difference for manufacturing and logistics systems management,...

Results (1)

Publication of books

1. Applications of multi-criteria and game theory approaches: manufacturing and logistics. **Springer Series in Advanced Manufacturing** 445 pages, (Springer), L. Benyoucef, J.C. Hennet and M.K. Tiwari (Eds) – ISBN: 978-1-4471-5294-1, 2013.
2. Optimization of logistics. **HP-ISTE Ltd/John Wiley**, 304 pages, A. Yalaoui, H. Chehade, F. Yalaoui and L. Amodeo – ISBN: 9781848214248, 2012.

Editors of special issues of international journals

1. Advanced metaheuristics for integrated supply chain management in **Journal of Intelligent Manufacturing** (Springer publisher), L. Benyoucef and M.K. Tiwari (Eds.) –Vol. 23, Issue 4 (2012).
2. Recent advances in industrial engineering and systems management in **International Journal of Services Operations and Informatics** (Inderscience publisher), L. Benyoucef and M. Dahane (Eds.)– Vol. 7, Issue 4 (2012).

Results (2)

Organization of tracks and special sessions in international conferences

1. **MIM 2013, Special Session: Advanced multi-criteria applications in manufacturing and logistics.** IFAC 2013 Conference on Manufacturing Modelling, Management and Control (IFAC-MIM), June 19–21, Saint Petersburg, (Russia). Proposed by L. Benyoucef and F. Yalaoui.
2. **MIM 2013, Special Session: Recent fuzzy logic applications in manufacturing.** IFAC 2013 Conference on Manufacturing Modelling, Management and Control (IFAC-MIM), June 19–21, Saint Petersburg, (Russia). Proposed by L. Benyoucef and M.K. Tiwari.
3. **MIM 2013, Special Session: Optimal design of production and assembly lines.** IFAC 2013 Conference on Manufacturing Modelling, Management and Control (IFAC-MIM), June 19–21, Saint Petersburg, (Russia). Proposed by H. Chehad, F. Yalaoui and L. Amodeo.
4. **INCOM2012, Special Session: Game theory and multi-criteria approaches for supply chains.** 14th IFAC Symposium on Information Control Problems in Manufacturing May 23 – 25, 2012, Bucharest, (Romania). Proposed by L. Benyoucef and J.C. Hennes.
5. **INCOM2012, Track M: Metaheuristics and soft computing in production management (3 sessions).** 14th IFAC Symposium on Information Control Problems in Manufacturing May 23 – 25, 2012, Bucharest, (Romania). Proposed by: F. Yalaoui and L. Amodeo.
6. **INCOM2012, Track B: Discrete event systems and hybrid systems: modelling and supervisory control (3 sessions).** 14th IFAC Symposium on Information Control Problems in Manufacturing May 23 – 25, 2012, Bucharest, (Romania). Proposed by: F. Yalaoui, L. Amodeo, H. Alla and S. Caramihai.