



## International Conference on Industrial Engineering and Systems Management

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**Special Session on:**

**Realistic Manufacturing Scheduling**

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Description:

The gap between scheduling theory and practice has been long known, recognized and studied. More often than not, elaborated scheduling models and procedures are proven to be extremely effective in controlled and synthetic laboratory problems but rarely applied in practical manufacturing scheduling. Real scheduling problems are varied, big and rich in the number of constraints and special characteristics. It is fairly common, even for modern and large manufacturing companies, to use simple spreadsheets to schedule production. In many cases the scheduling process is mostly human-based with little to no optimization. The application of modern and effective algorithms and techniques, like for example metaheuristics, has remained elusive. Such algorithms are capable of producing near optimal production schedules even for sophisticated problems in little CPU time.

This session aims at gathering the latest contributions to the study of complex and real production and manufacturing scheduling.

Topics acceptable for the session include, but are not limited to, the following:

- Production scheduling in reconfigurable systems.
- Hybrid flow- and job- shop settings with additional constraints.
- Scheduling with real earliness-tardiness objectives, due date windows and multi-objective approaches.
- Scheduling in complex and feature rich environments, including sequence dependent setup times, additional productive resources and tooling, maintenance, manpower scheduling, etc.
- Manufacturing scheduling in the presence of non-deterministic data.
- Case studies in practical manufacturing scheduling.
- Multi-objective optimization in complex scheduling problems.
- Distributed and/or assembly scheduling problems.
- Other important aspects related with real scheduling like internal and external logistics, supply chain management and optimization, real production planning, etc.

**Further information:** For additional details, interested authors might contact Rubén Ruiz ([rruiz@eio.upv.es](mailto:rruiz@eio.upv.es)) or Eva Vallada ([evallada@eio.upv.es](mailto:evallada@eio.upv.es)).

Submissions to the special sessions will be through the same submission site and under the same rules as for the main conference. Please, consult the general call for papers of the IESM 2015 conference at <http://www.iesm15.org/evenements/iesm2015/call-papers> or the conference web site at <http://www.iesm15.org/> for more and updated details.