

Proposal for Special Session at IEEE CASE 2021

Goal:

Smart manufacturing and industry 4.0 will change the way automation is considered but flexible scheduling and robust scheduling will still be challenges in the future.

Traditional methods of scheduling are mostly based on nominal information as for instance processing times or delivery dates. However, schedules based on nominal values often lead to infeasibilities or poor solutions. This is why robust decisions are at the heart of the operational decision makers. This interest has received wide concerns in industries and academia researches since the 2000's.

On the other hand, modern manufacturing systems offer flexibility to scheduling problems. In other words, tasks can be mapped onto a machine among a set of eligible machines. It results in very challenging scheduling problems, which have been extensively investigated since the 1990's but are still resonating within the community.

This stream aims to showcase theoretical developments and applications in this area and welcomes contributions from academic participants and industrial practitioners.

Session Title: Robust and flexible scheduling

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