

Title: New trends and challenges in modeling and control for Industry 5.0

Organizers:

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The general concept of Industry 5.0 started to materialize in mid-2020. Industry must continuously adapt to ever-changing challenges through innovative and novel ideas. It must constantly improve efficiency, optimize the value chain and offer production systems that cater to a quickly changing global consumer. Workshops organized by the European Commission suggest that "*Industry 5.0 recognises the power of industry to achieve societal goals beyond jobs and growth to become a provider of prosperity, by making production respect the boundaries of our planet and placing the wellbeing of the industry worker at the centre of the production process.*" A logical continuation to existing Industry 4.0 technologies takes them a step further, focusing even more on context-awareness, digital twins, energy efficiency, while keeping a human-deterministic rationale at the center.

This special sessions aims at bringing together novel ideas in control engineering practice, targeted for ever-changing industrial systems. We welcome theoretical contributions and practical applications associated to this field, together with emerging trends, new control concepts or modeling approaches. The special session welcomes papers in the field of, but not limited to:

- Artificial Intelligence for Industry 5.0
- Industry focused control design
- Novel modeling approaches
- Autotuning strategies
- Robust control