5-2: Computational methods for manufacturing and forming processes

Organisers

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Mini symposium description

Recently observed rapid advancement have been done in the development of **modern metallic and non-metallic materials** :

- advanced high-strength steels for the automotive industry,
- Ti- and Ni-based alloys for aerospace and nuclear applications, or
- multilayered composite materials for lightweight solutions,
- …

Connsidered with constantly increasing customer expectations, they are stimulating factors for the **adaptation of existing and the development of new manufacturing and forming processes**.

At the same time, **sophisticated computational methods** supporting and extending experimental research on these forming techniques are being more frequently used and also developed to reduce the cost and speed up the technology design process.

Therefore, the main goal of the mini-symposium is to present the new achievements in the development and application of **computational methods for designing, optimising and testing manufacturing and forming processes.** Both physics-based and data-driven computational approaches will be discussed within the mini-symposium.