



CALL FOR PAPERS FOR SPECIAL SESSION PROPOSAL

SPECIAL SESSION 2

Smart Engineering for Medical Devices and Human-Centred Comfort

Session description :

This special session will explore how engineering innovations in advanced materials, digital design and intelligent systems can improve human well-being. Modern healthcare technologies increasingly rely on smart engineering, integrating sensing, adaptive materials, data-driven modelling and human-focused design. These advances allow to move away from functional engineering towards intelligent, customized systems that respond in real time to human needs. Progress in medical devices and wearable comfort applications is driven by core principles such as smart materials, additive manufacturing, and digital technologies.

This session will facilitate interdisciplinary dialogue among engineers, materials scientists, industry professionals and healthcare professionals, exploring personalized engineering that combines material intelligence, digital technologies and advanced manufacturing. Participants will discuss adaptive systems for human needs and accelerate the development of next-generation medical solutions that align with the vision of SIME 2026.

Session chairs :

- **Mahdi Chemkhi**, EPF School of Engineering / University of Technology of Troyes
- **Elisabeth LACAZEDIEU**, Université Polytechnique Hauts de-France, INSA Hauts-de-France

Topics of interest (not limited to) :

- Adaptive materials and human-centered design systems
- Additive manufacturing for medical implants, surgical training
- Smart materials, textiles for human comfort
- Smart engineering innovation for societal problems
- Personalized engineering linking digital intelligence and manufacturing
- AI & machine learning models for injury prevention or medical devices
- Multi-parameter multi-physics multi-scale smart modeling for medical applications.

Important Dates



Sponsors



Contact : sime.conf@gmail.com

Submission Link
<https://sime-conf.org/submission/>

Website : www.sime-conf.org