

# EUROMAT 2019 / Area F: Materials for Healthcare

## SYMPOSIUM: F8

Title: Surface modification of biomaterials and coatings		
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<b>Abstract</b>		
<p>Biomedical devices need to fulfil several requirements in terms of cells interactions. In the case of bone integration of orthopaedic or dental implants and regeneration of damaged bone at the surgical site, the longevity of implants is strictly related to their fast and direct bonding to the surrounding tissues, as well as their ability to control inflammatory processes and bacterial contamination at the interface between bone and device. For devices like vessel substitutes or stents, they share the requirement to control inflammation and avoid infection but there is the need of cell selectivity to avoid thrombosis. For this reason, surface modifications at the macro-, micro- and nanoscale, biomimetic surfaces (i.e. bioactive surfaces both from the inorganic and biological point of view) and new coating technologies devoted to the optimization of the host response to the implant represent a challenge for innovative biomaterials implants.</p> <p>This symposium is focused on the most recent topics concerning new coatings, surface treatments and functionalization of materials for implantable devices, with enhanced tissue healing ability, in the field of tissue surgery and regeneration. Particular emphasis will be given to innovative processing technologies and to the investigation of the interface phenomena involved in the biological response.</p> <p>In the frame of the above mentioned scenario, suggested topics are:</p> <ol style="list-style-type: none"><li>1. Innovative coating technologies;</li><li>2. Surface chemical treatments;</li><li>3. Surface functionalization;</li><li>4. Nanostructured surfaces;</li><li>5. Clinical applications.</li></ol>		