

Session: Multiscale Mechanics in Durability of Materials

Roman Lackner, Technical University of Munich, Munich, Germany
Josef Eberhardsteiner, Vienna University of Technology, Vienna, Austria

The understanding and solution of engineering problems dealing with the durability of materials and structures requires consideration of scales below the so-called macroscale. Such multiscale approach allows the description of processes at the respective scale of observation and, via the use of appropriate upscaling methods, provides access to macroscopic changes of the material behavior, with the latter being used in the assessment of the performance of structures. For this session, contributions dealing with different aspects of multiscale modeling, focusing on durability mechanics are welcomed. Topics may range from experimental identification of material characteristics, upscaling techniques and validation, to application in the design and safety assessment of structures.