



Technische
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Process Modeling for Fibrous Materials and Textiles

Lecture of

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13. Dezember 2018, 16.45 Uhr

Okerhochhaus, Pockelsstraße 3,
Seminarraum EG

The demand for lightweight materials is rising due to environmental awareness, resource scarcity and legal requirements especially. Fiber reinforced composites (FRC) are among the most desirable lightweight materials, which combine high mechanical properties with low density. Despite the high specific material properties, the usage of FRC is limited because of high processing costs of fibers and textiles. Through simulation, a prediction of processing effects and a more detailed knowledge about the influence of manufacturing processes on the fiber and textile structure can be obtained. Further, operation points of processes or damaging machine components can be found. With this, the time putting a process into operation as well as the machine down time can be reduced significantly. Thus, reduced manufacturing costs and therefore a higher accessibility of FRC can be achieved through modeling and simulation of the manufacturing processes of FRC.