Research Project/Study Project/Bachelor Thesis

Multibody Modelling of a Textile Machine's Yarn Tensioning System

Within the framework of the cooperation with the ITM/TU Dresden, the Chair of Dynamics and Mechanism Design conducts research in the field of textile machine simulation. Besides the modelling of the machine, the modelling of the textile structures is in focus. For a student project or a thesis the following task steps are planned:

- *Geometric measurement of the yarn tensioning system (warp tension compensation) of an ITM textile machine*
- *Determination of the quasi-static stiffness characteristics of the elastic tensioning elements involved*
- *Appropriate preparation of the measured data for the use in a multibody model*
- *Implementation of the previously determined topology in the multibody simulation environment Simpack*
- *Simulation of representative load cases*
- *Prerequisites: Good knowledge in mechanics, measurement technology, vibration theory, mathematics, MBS software – preferably Simpack; programming experience in MATLAB*

Start: *as of now*

Contact:

M. Sc. Maximilian Krentzien

Chair of Dynamics and Mechanism Design
Marschnerstraße 30, Zi 154, 01307 Dresden

Tel.: +49 (0) 351/ 463 - 37958
E-Mail: maximilian.krentzien@tu-dresden.de
Homepage: www.tu-dresden.de/mw/dmt