



High Tech Materials from Nature – Biomechanics, Modeling, Simulation and Applied Technologies

Workshop Series TUM Bioengineering.

In Cooperation with:



Munich | June 5th, 2014

PROGRAM

15:00 Introduction and Welcome

Prof. Dr. rer. nat. Axel Haase

TUM Zentralinstitut für Medizintechnik (IMETUM)

15:10 From Biomechanics to Medical “Flight Simulators”

PD Dr. med. Rainer Burgkart

Clinic of Orthopaedics and Sportorthopaedics, Klinikum re. der Isar,
TUM

15:30 Cytoskeletal Pattern Formation: Self Organization of Topology

Prof. Dr. rer. nat. Andreas Bausch

Cell Biophysics, Physics Department, TUM

15:50 Cell-Matrix Interaction

Prof. Dr. med. Arndt Schilling

Clinic of Plastic Surgery, Klinikum re. der Isar, TUM

16:10 Non-destructive Testing in Bio, Medical and Engineering

Prof. Dr.-Ing. Christian Große

Centrum Baustoffe und Materialprüfung, Ingenieur fakultät
Bau Geo Umwelt, TUM

16:30 Coffee Break

16:50 Bone Engineering using Biomaterials and Mechanical Stimulation

Prof. Dr. Dr. Martijn v. Griensven

Clinic of Traumatology, Klinikum re. der Isar, TUM

17:10 Computational Bone Mechanics

Prof. rer. nat. Ernst Rank

Computation in Engineering, Ingenieur fakultät Bau Geo Umwelt, TUM

17:30 Osteoporosis - Imaging-based Fracture Risk Prediction

Dr. med. Thomas Baum / PD Dr. med. Jan Bauer

Institute of Radiology, Klinikum re. der Isar, TUM

17:50 Concluding Remarks

In 2014 the IMETUM (TUM Institute of Medical Engineering) organizes a workshop series that promotes the **public visibility** of the interdisciplinary and cross-faculty field of **Bioengineering**.

January 25th, 2014

Kick-Off Workshop of the Series TUM Bioengineering I

TUM Institute of Medical Engineering, Garching

April 11th, 2014

Minimal Invasive Interventions I Klinikum re. der Isar, München

co-organized by Prof. Dr. H. Feußner

(Director of the Center for Minimally invasive Interdisciplinary Therapeutical Intervention: MITI)

June 5th, 2014

High Tech Materials from Nature – Biomechanics, Modeling, Simulation and Applied Technologies I

TUM Stammgelände, München

co-organized by PD Dr. med. Rainer Burgkart

(Clinic for Orthopaedics and Sportorthopaedics, Klinikum re. der Isar, TUM)

Save the Date I July 2014

X-Rays in Medicine for Diagnostics and Therapy