

BIOGRAPHICAL SKETCH

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NAME DANIEL ROHRBACH		POSITION TITLE MEMBER OF THE RESEARCH STAFF	
eRA COMMONS USER NAME			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Martin-Luther Universität Halle-Wittenberg, Halle (Saale), Germany	Ms.Sc.	2010	Bioinformatics
Berlin-Brandenburg School for Regenerative Therapies (BSRT), Humboldt University, Berlin, Germany	Dr. rer.nat.	2013	Experimental Biophysics

A. Positions and Honors

- 2013 - Present : Member of the Research staff, F.L. Lizzi Center for Biomedical Engineering, Riverside Research Institute, New York, NY
- 2010 – 2013: Doctoral Student, at the Imaging, Simulation and Stimulation group of the Julius Wolff Institute, Charité Berlin
- 2004 - 2007: Teaching and reviser of student tutorials and courses in informatics, Prof. Dr. Wolf Zimmermann, Martin-Luther Universität Halle-Wittenberg Halle (Saale), Germany

Member, Acoustical Society of America (ASA)

Awarded BSRT travel Grant to participate at the Acoustics 2012 conference in Hong Kong (163rd meeting of the Acoustical Society of America) for the oral presentation entitled “Assessment of soft and mineralized tissue formation in a rat bone healing model using quantitative ultrasound (QUS).”

Awarded poster prize for student competition 2010 of DGBMT, ÖGBMT and SGBT with the title “Evidence-based numerical ultrasound simulations at the human femoral neck.”

Selected as one of the ten best presentations **of Young Investigators Award – at the World Congress 2009** - Medical Physics and Biological Engineering - for oral presentation with the title “Spatial distribution of tissue mineralization and anisotropic tissue elastic constants in human femoral cortical bone.”

B. Publications

Raum K, **Rohrbach D**, Laugier P, Glüer CC, Barkmann R. Bone quality beyond bone mineral density – new diagnostic perspectives by quantitative ultrasound. Osteologie 2010; 19:217-24.

Rohrbach D, Lakshmanan S, Peyrin F, Langer M, Gerisch A, Grimal Q, Laugier P, Raum K. Spatial distribution of tissue level properties in a human femoral cortical bone. *Journal of biomechanics* 2012;45:2264-70.

Malo MKH, **Rohrbach D**, Isaksson H, Töyräs J, Jurvelin JS, Tamminen IS, Kröger H, Raum K. Longitudinal elastic properties and porosity of cortical bone tissue vary with age in human proximal femur. *Bone* 2013; 53:451-8.

Rohrbach D, Grondin J, Grimal Q, Laugier P, Barkmann R, Raum K. Evidence based numerical ultrasound simulations at the human femoral neck. *Biomedizinische Technik, Rostock, conference proceeding 2010*

Grimal Q, **Rohrbach D**¹, Grondin J, Barkmann R, Glüer C, Raum K, Laugier P. Modeling of femoral neck cortical bone for the numerical simulation of ultrasound propagation. *Ultrasound in Medicine and Biology*, 2012; submitted, under revision

Rohde K, **Rohrbach D**, Glüer C, Laugier P, Grimal Q, Raum K, Barkmann R. Influence of porosity, pore size and cortical thickness on the propagation of ultrasonic waves guided through the femoral neck cortex: a simulation study. *Transactions on Ultrasonics, Ferroelectrics, and Frequency Control* 2012; submitted paper.

Preininger B, Hesse B, **Rohrbach D**, Varga P, Gerigk H, Langer M, Peyrin F, Perka C, Raum K. Histogram feature-based classification improves differentiability of early bone healing stages from micro-computed tomographic data. *Journal of computer assisted tomography* 2012; 36:469-76.

Rohrbach D, Preininger B, Hesse B, Gerigk H, Perka C, Raum K. The early phases of bone healing can be differentiated in a rat osteotomy model by focused transverse-transmission ultrasound. *Ultrasound in medicine & biology*; 2013; 39(9):1642-53
