

VITA PROF. DR. MED. RAINER BURGKART



- Senior physician
- Head of orthopedic research and teaching
- Staatsexamens (M3)-Examination officer of the government of Upper Bavaria for the Faculty of Medicine
- Specialist in orthopedics, additional qualification in sports medicine

Contact:

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Professional Experience

1989 - 1991

Resident in Orthopaedic Surgery and Traumatology, Klinikum rechts der Isar, TU München

1991 - 1992

Research Fellowship in the Orthopaedic Clinic, Duke University / Durham, N.C., USA
(Director: Prof. Dr. J. Urbaniak)

1992 - 1997

Resident in Orthopaedic Surgery and Traumatology, Klinikum rechts der Isar, TU München

07/1997

Board exams for Orthopaedic Surgery

Since 08/1997

Oberarzt (senior attending), Clinic for Orthopaedic, Klinikum rechts der Isar, TU München

1998 - 1999

Second Research Fellowship in the Orthopaedic Clinic, Duke University / Durham, N.C., USA
(Director: Prof. Dr. J. Urbaniak)

Since 2000

Head of Research and Education of the Clinic of Orthopaedics and Sportorthopaedics,
Klinikum rechts der Isar, TU München

KLINIK UND POLIKLINIK
FÜR ORTHOPÄDIE UND SPORTORTHOPÄDIE

2006 - 2007

Habilitation at TU München: „Entwicklung und experimentelle Evaluation neuer 3D Simulations- und OP-Techniken am proximalen Femur mittels fluoroskopiebasierter Navigation“, Germany

Since 02/2007

Associate Professor

Scientific Focus Areas

- Biofunctional Implant Surfaces in respect to Eukaryotic Interfaces and Antibacterial Properties (in vitro (cell lab) and in vivo testing (animal), Implant Testing and Implant Optimization
- Biomechanics of Macro- and Micro-Level (e.g. subcellular Biomechanics in Tissue Culture), Hard-Soft Interfaces,
- Computer Assisted Surgery and Robotics, Virtual Operation Planning, Modelling and AI
- MRT and Ultrasound Imaging including AI-based analytic methods
- Simulators for Medical Education (especially haptic interfaces), New Training Systems for Musculoskeletal Exercise

Memberships (only selection)

2005

Founding Member of “Netzwerk für Regenerative Medizin”

2006

Founding Member of “Netzwerk für Muskuloskelettale Biomechanik”

Since 2006

Board member of DFG-Exzellenz-Initiative “TUM International Graduate School of Science and Engineering (IGSSE)”

Since 2007

Board member of „Deutscher DIN Normenausschuss DIN NA 027-02-15 AA
"Endoprothetik und Osteosynthese"

Awards (only selection)

1999

Göran Selvik Award of European Orthopaedic Research Society for advanced computer 3D volumetry methods in „MRI-based assessment of cartilage loss in severe osteoarthritis-accuracy, precision and diagnostic value“

KLINIK UND POLIKLINIK
FÜR ORTHOPÄDIE UND SPORTORTHOPÄDIE

2000

Winner of the Ideenwettbewerb of the German Ministry of Education and Research (BMBF) for „Virtuelle und erweiterte Realität“ with the topic „VR Trainingsimulator for Orthopaedics“

2003

ISPO Academic Challenge Award 2003 for the innovative product idea: „Activated phantom limbs for the representation of body movements“

2004

„The Best of the Best“- Award of the Bayerische Gesellschaft für Geburtshilfe und Frauenheilkunde e.V. (BGGF), Schweinfurt

2008

Winner of the Bionikwettbewerb of TUM 2008 for the project „Hard-Soft Interfaces in Biology and Technical Applications – e.g. the tendon-bone interface“

2010

Karl-Heinz-Höhne 1. Prize MedVis-Award 2010 for C. Dick, R. Burgkart, R. Westermann: „Innovative Visualizing of Implant Planning in Orthopedics“,

2010

Best Teaching Award 2010 of the Technical University Munich for the conception and realisation of a new interactive training program

2011

EU Robotics Technology Transfer Award 2011 – Second place: Västerås / Schweden for R. Riener, M. Kurland, R. Burgkart: „SIMone: Robotic Birth Training Simulator“

2012

Award of “Arbeitsgemeinschaft Endoprothetik” for Gollwitzer H., et al, R. Burgkart, R., I. Banke, for the publication: „Antimicrobial Peptides and Pro-Inflammatory Cytokines in Periprosthetic Joint Infection“

2015

Investigator Award des V. Münchener Symposium für experimentelle Orthopädie, Unfallchirurgie und muskuloskelettale Forschung for Iris Pflieger, et al., Burgkart R. “Kartographie des Erholungsverhaltens und der Steifigkeit des artikulären Knorpels im adulten, ovinen Kniegelenk”

2015

TUM-Award "Exzellenz in Teaching"

2016

Excellence Award "Best Teacher of 2015 in TUM Medicine"