Curriculum vitae — Prof. Dr.-Ing. Tim Ricken

Name Tim Ricken

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Academic Education

1992	Studies of civil engineering, University of Duisburg-Essen
1998	Diploma civil engineering
2002	Doctorate, Capillarity in porous media

Professional Career

1998–2002	Research fellow, Institute of Mechanics, University of Duisburg-Essen
2002–2006	Postdoctoral research fellow, Institute of Mechanics, University of Duisburg-Essen
2006–2009	Assistant Professor in Computational Mechanics, University of Duisburg-Essen
2009–2011	Associate Professor in Computational Mechanics, University of Duisburg-Essen
2006–2011	Course Director for the international Master Program “Computational Mechanics”, University of Duisburg-Essen
2011	Visiting Professor in Mechanics and Structural Analysis, TU Dortmund University
2011–2017	Full Professor in Mechanics, Structural Analysis and Dynamics, TU Dortmund University
2017	Full Professor and Director of the Institute of Structural Analysis and Dynamics in Aero-Space Engineering, University of Stuttgart

Funding (last 5 years)

DFG-SPP	2020–2023	Polymorphe Unschärfemodellierung, Auswertung und Quantifizierung flüssigkeitsgesättigter Böden und Erdbauwerke
DFG-EXC 2075	2019–2026	Data and Model Driven Multiscale Simulation of Tumor Growth in Liver Cell, Tissue and Organ (DFG-EXC 2075-PN2-2A)
Intes (Industry)	2019–2023	Age-related structural change and loss of strength of polymer materials
DFG-EXC 310/2	2018–2019	Understand, predict and treat the damage response of hepactic steatosis via a data validated tri-phase, continuum multicomponent model for the description of blood perfusion and fat growth in the liver lobule (DFG-EXC 310/2-PN4-27)
DFG-SPP	2017–2020	Polymorphe Unschärfemodellierung zur Stabilitätsuntersuchung flüssigkeitsgesättigter Böden und Erdbauwerke (RI 1202/6-1)
EU Marie Skłodowska-Curie actions	2015–2018	REMEDIATE - Improved decision-making in contaminated land site investigation and risk assessment, 2015-2017, H2020 -MSCA-ITN-2014,643087 – Remediate
MERCUR	2015–2017	Entwicklung methodischer und theoretischer Grundlagen für den Transfer des lastadaptiven Leichtbauprinzips der Natur in technische Anwendungen, Stiftung Mercator – (Pr-2014-0044)
DFG	2013–2017	Beschreibung von Grenz- und Versagenszuständen der biologischen Methanoxidation in Deponien (RI 1202/3-2)
Thyssen-Krupp Steel AG	2011–2018	Beschreibung und numerische Simulation der Stahlherstellung in einer Stranggussanlage
Abfallentsorgungs-Gesellschaft Ruhrgebiet	2010–2017	Bewertung von Maßnahmen in der Deponienachsorge mittels numerischer Simulation

Publications (max. 10 most relevant)

1. T. **Ricken** and L. Lambers. “On computational approaches of liver lobule function and perfusion simulation”. In: *GAMM-Mitteilungen* 9.3 (2019), e201900016. DOI: 10.1002/gamm.201900016
2. D. M. Pierce, T. **Ricken**, and C. P. Neu. “Image-Driven Constitutive Modeling for FE-Based Simulation of Soft Tissue Biomechanics”. In: *Numerical methods and advanced simulation in biomechanics and biological processes*. Ed. by M. Cerrolaza, S. J. Shefelbine, and D. Garzón-Alvarado. London: Elsevier/AP Academic Press an imprint of Elsevier, 2018, pp. 55–76. DOI: 10.1016/B978-0-12-811718-7.00004-6
3. T. **Ricken**, N. Waschinsky, and D. Werner. “Simulation of Steatosis Zonation in Liver Lobule—A Continuummechanical Bi-Scale, Tri-Phasic, Multi-Component Approach”. In: *Biomedical Technology*. Ed. by Peter Wriggers, Prof. Thomas Lenarz. Springer International Publishing, 2018. DOI: 10.1007/978-3-319-59548-1
4. X. Wang, T. S. Eriksson, T. **Ricken**, and D. M. Pierce. “On incorporating osmotic prestretch/prestress in image-driven finite element simulations of cartilage”. In: *Journal of the Mechanical Behavior of Biomedical Materials* 86 (2018), pp. 409–422. DOI: 10.1016/j.jmbbm.2018.06.014
5. B. **Christ**, U. **Dahmen**, K.-H. **Herrmann**, M. **König**, J. R. **Reichenbach**, T. **Ricken**, J. Schleicher, L. O. **Schwen**, S. Vlaic, and N. Waschinsky. “Computational Modeling in Liver Surgery.” In: *Frontiers in Physiology* 8 (2017), p. 906. DOI: 10.3389/fphys.2017.00906
6. D. M. Pierce, M. J. Unterberger, W. Trobin, T. **Ricken**, and G. A. Holzapfel. “A microstructurally based continuum model of cartilage viscoelasticity and permeability incorporating measured statisti-

cal fiber orientations." In: *Biomechanics and Modeling in Mechanobiology* 15.1 (2016), pp. 229–244. DOI: 10.1007/s10237-015-0685-x

7. T. **Ricken**, D. Werner, H. G. Holzhütter, M. **König**, U. **Dahmen**, and O. Dirsch. "Modeling function-perfusion behavior in liver lobules including tissue, blood, glucose, lactate and glycogen by use of a coupled two-scale PDE-ODE approach." In: *Biomechanics and Modeling in Mechanobiology* 14 (3 2015), pp. 515–536. DOI: 10.1007/s10237-014-0619-z
8. D. M. Pierce, T. **Ricken**, and G. A. Holzapfel. "Modeling sample/patient-specific structural and diffusional responses of cartilage using DT-MRI.". In: *International Journal for Numerical Methods in Biomedical Engineering* 29.8 (2013), pp. 807–821. DOI: 10.1002/cnm.2524
9. G. A. Ateshian and T. **Ricken**. "Multigenerational interstitial growth of biological tissues." In: *Biomechanics and Modeling in Mechanobiology* 9.6 (2010), pp. 689–702. DOI: 10.1007/s10237-010-0205-y
10. T. **Ricken**, U. **Dahmen**, and O. Dirsch. "A biphasic model for sinusoidal liver perfusion remodeling after outflow obstruction." In: *Biomechanics and Modeling in Mechanobiology* 9 (2010), pp. 435–450