

Curriculum vitae **Dr. rer. nat. Lars Ole Schwen**

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Academic Education	1997–2001	Associate Student, Hagen Distance Teaching University
	2001–2005	Student of Technomathematics, University of Duisburg–Essen
	2003–2004	Visiting Graduate Student, University of Washington, Seattle, USA
	2005	Diploma in Mathematics, thesis ‘Numerical Simulation of Transport and Diffusion in Drainage Media’
	2005–2010	Doctorate Student at Institute for Numerical Simulation, University of Bonn.
	2010	Dr. rer. nat., dissertation ‘Composite Finite Elements for Trabecular Bone Microstructures’
Professional Career	2006–2010	Scientific Staff Member, University of Bonn
	since 2010	Postdoctoral Research Scientist, Fraunhofer MEVIS
Funding (last 5 years)		
DFG	2019–2022	Modeling Pharmacokinetics in Steatotic Livers (SteaPKMod)

Publications (max. 10 most relevant)

1. T. Preusser, M. Rumpf, S. Sauter, and L. **Schwen**. “3D composite finite elements for elliptic boundary value problems with discontinuous coefficients”. In: *SIAM Journal on Scientific Computing* 33 (2011), pp. 2115–2143. DOI: doi:10.1137/100791750
2. L. O. **Schwen**, M. Krauss, C. Niederalt, F. Gremse, F. Kiessling, A. Schenk, T. Preusser, and L. Kuepfer. “Spatio-temporal simulation of first pass drug perfusion in the liver.” In: *PLoS Computational Biology* 10 (3 2014), e1003499. DOI: 10.1371/journal.pcbi.1003499
3. L. O. **Schwen**, W. Wei, F. Gremse, J. Ehling, L. Wang, U. **Dahmen**, and T. Preusser. “Algorithmically generated rodent hepatic vascular trees in arbitrary detail.” In: *Journal of Theoretical Biology* 365 (2015), pp. 289–300. DOI: 10.1016/j.jtbi.2014.10.026
4. L. O. **Schwen**, A. Schenk, C. Kreutz, J. Timmer, M. M. Bartolomé Rodríguez, L. Kuepfer, and T. Preusser. “Representative Sinusoids for Hepatic Four-Scale Pharmacokinetics Simulations.” In: *PloS One* 10 (7 2015), e0133653. DOI: 10.1371/journal.pone.0133653
5. L. O. **Schwen**, A. Homeyer, M. Schwier, U. **Dahmen**, O. Dirsch, A. Schenk, L. Kuepfer, T. Preusser, and A. Schenk. “Zonated quantification of steatosis in an entire mouse liver”. In: *Computers in Biology and Medicine* 73 (2016), pp. 108–118. DOI: 10.1016/j.combiomed.2016.04.004
6. A. Schenk, A. Ghallab, U. Hofmann, R. Hassan, M. Schwarz, A. Schuppert, L. O. **Schwen**, A. Braeuning, D. Teutonico, J. G. Hengstler, and L. Kuepfer. “Physiologically-based modelling in mice suggests an aggravated loss of clearance capacity after toxic liver damage.” In: *Scientific Reports* 7 (1 2017), p. 6224. DOI: 10.1038/s41598-017-04574-z
7. 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

8. L. O. **Schwen**, L. Kuepfer, and T. Preusser. "Modeling approaches for hepatic spatial heterogeneity in pharmacokinetic simulations". In: *Drug Discovery Today: Disease Models* 22 (2017), pp. 35–43
9. L. O. **Schwen** and S. Rueschenbaum. "Ten quick tips for getting the most scientific value out of numerical data". In: *PLoS Computational Biology* 14.10 (2018), e1006141. DOI: 10.1371/journal.pcbi.1006141
10. L. O. **Schwen**, E. Andersson, K. Korski, N. Weiss, S. Haase, F. Gaire, H. K. Hahn, A. Homeyer, and O. Grimm. "Data-Driven Discovery of Immune Contexture Biomarkers". In: *Frontiers in Oncology* 8 (2018), p. 627. DOI: 10.3389/fonc.2018.00627