



Hochschule für Technik und Wirtschaft Dresden

Fakultät Informatik/Mathematik

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Publikationen

Published/Accepted for Publication:

- F. M. Schwarz, I. Schniewind, M. J. Besso, S. Lange, A. Linge, S. G. Patil, S. Loeck, D. Klusa, A. Dietrich, A. Voss-Boehme, A. Nowrouzi, M. Krause, A. Dubrovskaya, I. Kurth, C. Peitzsch. Plasticity within aldehyde dehydrogenase-positive cells determines prostate cancer radiosensitivity. *Mol Cancer Res* Feb 8 (2022) [doi: 10.1158/1541-7786.MCR-21-0806](https://doi.org/10.1158/1541-7786.MCR-21-0806)
- P. Rossbach, H.-J. Böhme, S. Lange, A. Voss-Böhme. Model-Based Prediction of an Effective Adhesion Parameter Guiding Multi-Type Cell Segregation. *Entropy* 23 (11), 1378 (2021) [doi:10.3390/e23111378](https://doi.org/10.3390/e23111378)
- J. M. Nava-Sedeno, A. Voß-Böhme, H. Hatzikirou, A. Deutsch and F. Peruani. Modeling collective cell motion: are on- and off-lattice models equivalent? *Phil. Trans. R. Soc. B*, 375: 20190378 (2020) [doi:10.1098/rstb.2019.0378](https://doi.org/10.1098/rstb.2019.0378)
- A. Dirkse, A. Golebiewska, T. Buder, P. V. Nazarov, A. Muller, S. Poovathingal, N. H. C. Brons, S. Leite, N. Sauvageot, D. Sarkisjan, M. Seyfrid, S. Fritah, D. Stieber, A. Michelucci, F. Hertel, C. Herold-Mende, F. o Azuaje, A. Skupin, R. Bjerkvig, A. Deutsch, A. Voss-Böhme and S. P. Niclou. Stem cell-associated heterogeneity in Glioblastoma results from intrinsic tumor plasticity shaped by the microenvironment. *Nature Communications* 10, Article number: 1787 (2019) [doi:10.1038/s41467-019-09853-z](https://doi.org/10.1038/s41467-019-09853-z)
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- K. Hoffmann, A. Voss-Böhme, J. C. Rink, L. Bruschi. A Dynamically Diluted Alignment Model Reveals the Impact of Cell Turnover on the Plasticity of Tissue Polarity Patterns. *Journal of the Royal Society Interface* 14 20170466 (2017) [doi:10.1098/rsif.2017.0466](https://doi.org/10.1098/rsif.2017.0466) (preprint)
- K. Talkenberger, E. Ada Cavalcanti-Adam, A. Voss-Böhme, A. Deutsch. Amoeboid-mesenchymal migration plasticity promotes invasion only in complex heterogeneous microenvironments. *Scientific Reports* 7: Article number: 9237 (2017) [doi:10.1038/s41598-017-09300-3](https://doi.org/10.1038/s41598-017-09300-3)
- D. Reher, B. Klink, A. Deutsch, A. Voss-Böhme. Cell adhesion heterogeneity reinforces tumour cell dissemination: novel insights from a mathematical model. *Biology Direct* 12:18 (2017) [doi: 10.1186/s13062-017-0188-z](https://doi.org/10.1186/s13062-017-0188-z)
- T. Buder, A. Deutsch, M. Seifert, A. Voss-Böhme. CellTrans: An R package to quantify stochastic cell state transitions. *Bioinformatics and Biology Insights* 11, 1-14 (2017) [doi: 10.1177/1177932217712241](https://doi.org/10.1177/1177932217712241)
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- A. Voss-Böhme, A. Deutsch. The cellular basis of cell sorting kinetics. *Journal of Theoretical Biology*, 263 (4), 419-436 (2010) [doi:10.1016/j.jtbi.2009.12.011](https://doi.org/10.1016/j.jtbi.2009.12.011)
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Buchkapitel:

- A. Voss-Böhme. [Cellular Potts Models for Interacting Cell Populations: Mathematical Foundation, Challenges, and Future Prospects](#). In: Louis PY., Nardi F. (eds) [Probabilistic Cellular Automata](#). Theory, Applications and Future Perspectives, Springer, (2018), ISBN 978-3-319-65556-7
- A. Voss-Böhme, W. de Back, J. Starruß. Cellular Potts Model. In: Dubitzky et al. (eds.), [Encyclopedia of Systems Biology](#), Springer (2013) ([preprint](#))
- A. Voss-Böhme, A. Deutsch. Interacting Cell Systems. In: Dubitzky et al. (eds.), [Encyclopedia of Systems Biology](#), Springer (2013) ([preprint](#))
- A. Voss-Böhme, Differential Adhesion Hypothesis. In: Dubitzky et al. (eds.), [Encyclopedia of Systems Biology](#), Springer (2013) ([preprint](#))
- A. Voss-Böhme, Metropolis Algorithm. In: Dubitzky et al. (eds.), [Encyclopedia of Systems Biology](#), Springer (2013) ([preprint](#))