

Simon Syga

Education

Since 2024	Postdoctoral Researcher, TU Dresden
2023	Guest Scientist, Universitat Autònoma de Barcelona
2018-2024	PhD candidate, TU Dresden
2015-2018	Master Physics, TU Dresden
2015	Semester abroad, Lund University, Sweden
2011-2014	Bachelor Physics, TU Dresden

Research experience

Since 2018	Research associate, TU Dresden, ZIH
2016-2018	Research assistant, TU Dresden, ZIH
2016	Research assistant, Max-Planck-Institute for the Physics of Complex Systems
2014	Undergraduate assistant, Max-Planck-Institute for the Physics of Complex Systems

Teaching experience

Since 2018	Tutor "Mathematical Biology"
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Publications

- Evolution of phenotypic plasticity leads to tumor heterogeneity with implications for therapy**
Syga, S., Jain, H. P., Krellner, M., Hatzikirou, H. & Deutsch, A., 19 Mar 2024.
- Artificial patterns in spatially discrete models of cell migration and how to mitigate them**
Nava-Sedeño, J. M., Syga, S. & Deutsch, A., 1 Dec 2023, In: BIOMATH. 12, 2, 15 p., 2311177.
- Cell jamming in a collagen-based interface assay is tuned by collagen density and proteolysis**
Beunk, L., Wen, N., Helvert, S. V., Bekker, B., Ran, L., Kang, R., Paulat, T., & 4 others Syga, S., Deutsch, A., Friedl, P. & Wolf, K., 21 Nov 2023, In: Journal of cell science. 136, 23, 35 p., jcs.260207.
- Mathematik der Pandemie**
Syga, S., Wolf-gladrow, D. & Deutsch, A., Aug 2022, 1 ed. Heidelberg: Springer, Berlin [u. a.]. 127 p.
- 35 Cent weniger für Benzin und 17 Cent weniger für Diesel: Der Tankrabatt ist angekommen**
Freitas, D. & Syga, S., 2022, In: ifo Dresden berichtet. 29, 05, p. 13-18
- Extracellular matrix guidance determines proteolytic and non-proteolytic cancer cell patterning**
Beunk, L., van Helvert, S., Bekker, B., Ran, L., Kang, R., Paulat, T., Syga, S., & 3 others Deutsch, A., Friedl, P. & Wolf, K., 2022
- BIO-LGCA: A cellular automaton modelling class for analysing collective cell migration**
Deutsch, A., Nava-Sedeño, J. M., Syga, S. & Hatzikirou, H., 15 Jun 2021, In: PLoS Computational Biology. No. 6
- Inferring the effect of interventions on COVID-19 transmission networks**
Syga, S., David-Rus, D., Schälte, Y., Hatzikirou, H. & Deutsch, A., 2021, In: Scientific Reports. No. 1, p. 21913-
- Quantification of nematic cell polarity in three-dimensional tissues**
Scholich, A., Syga, S., Morales-Navarrete, H., Segovia-Miranda, F., Nonaka, H., Meyer, K., Back, W. D., & 5 others Bruschi, L., Kalaidzidis, Y., Zerial, M., Jülicher, F. & Friedrich, B. M., 10 Dec 2020, In: PLoS Computational Biology. 16, 12, e1008412.
- Cell-cell adhesion and 3D matrix confinement determine jamming transitions in breast cancer invasion**
Iliina, O., Gritsenko, P. G., Syga, S., Lippoldt, J., La Porta, C. A. M., Chepizhko, O., Grosser, S., & 8 others Vullings, M., Bakker, G. J., Starruss, J., Bult, P., Zapperi, S., Käs, J. A., Deutsch, A. & Friedl, P., 2020, In: Nature Cell Biology. p. 1103-1115 13 p.
- Entropy-driven cell decision-making predicts "fluid-to-solid" transition in multicellular systems**
Barua, A., Syga, S., Mascheroni, P., Kavallaris, N., Meyer-Hermann, M., Deutsch, A. & Hatzikirou, H., 2020, In: New Journal of Physics.
- A Lattice-Gas Cellular Automaton Model for Discrete Excitable Media**
Syga, S., Nava-Sedeno, J. M., Bruschi, L. & Deutsch, A., 2019, *Spirals and Vortices: In Culture, Nature, and Science*. Tsuji, K. & Müller, S. C. (eds.). Springer Nature Switzerland, Dordrecht [u. a.], p. 253-264 12 p.