

Jona Kayser

curriculum vitae

Max-Planck-Institute for the Science of Light
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Research Interests

I am a biophysicist studying the evolutionary dynamics of dense cellular populations, such as organoids or solid tumors. I am particularly intrigued by how evolution can be understood as an emergent phenomenon shaped by physical interactions at the single cell level. My research combines genetically-tailored model systems with concepts from statistical physics and machine learning to explore the impact of multicellular dynamics on critical evolutionary processes in biomedicine, such as tumor progression and the emergence of therapy resistance.

Academic Positions

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| Since 2019 | Group Leader (since 2021 Emmy Noether Programm)
Max Planck Institute for the Science of Light / Max-Planck-Zentrum für Physik und Medizin, Erlangen, Germany
Evolution & Multicellular Dynamics |
| 2014 - 2019 | DFG Postdoctoral Fellow, University of California, Berkeley, USA
Evolutionary Dynamics (Prof. Dr. O. Hallatschek) |
| 2013 - 2014 | Short-term Postdoc, Technical University of Munich
Cell Biophysics (Prof. Dr. A. R. Bausch) |

PhD

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| 2008 - 2013 | Physics, Technical University of Munich
Thesis topic: "Non-equilibrium Effects in Cytoskeletal Networks"
(Dissertation grade: <i>summa cum laude</i>)
(Advisor: Prof. Dr. A. R. Bausch) |
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Education

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| 2002 - 2008 | Diploma in Physics, University of Bayreuth
Thesis topic: "Parallel Measurement Procedures with DNA Microarrays"
(Grade: 1,0 ; Advisor: Prof. Dr. A. Ott) |
| 2006 - 2007 | University of California in San Diego, USA |
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