

Dr Melissa Rinaldin

Current position Postdoctoral fellow at TU Dresden and MPI-CBG
Areas of expertise Soft Matter Physics, Biophysics, Quantitative biology, *in vitro* reconstitution
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Birth date 20/11/1990

Education

07/11/2019 PhD Soft and Biological Matter, **Leiden University** The Netherlands
24/09/2015 MSc Physics, **University of Padua** Italy
23/04/2013 BSc Physics, **University of Padua** Italy

Research experience

10/2020-current **Physics of Life Excellence Cluster, TU Dresden**
Max Planck Institute of Molecular Cell Biology and Genetics Germany
Postdoctoral fellow *Advisor: Prof. J. Brugués*

01/2020-09/2020 **Brandeis University** USA
Postdoctoral fellow *Advisors: Prof. B. Rogers and Prof. G. Duclos*

10/2015-10/2019 **Leiden University** The Netherlands
PhD thesis research *Advisors: Prof. D. J. Kraft and Prof. L. Giomi*

02/2019-08/2019 **Leiden University** The Netherlands
MSc thesis research *Advisor: Prof. T. Schmidt*

10/2012-03/2013 **University of Padua** Italy
BSc thesis research *Advisor: Prof. F. Mammano*

Grants and awards

2024 Physics of Life Fellowship Incentive program, TU Dresden (€ 30,000)
2024 Nakatani award for best abstract submitted at International Biophysics Conference in Kyoto (€ 650)
2024 Training grant as part of the Charlotte Buhler Program, TU Dresden (€ 500)
2024 Grant from the Physics of Life Excellence Cluster Dresden to support the travel for invited speakers of workshop "IntCha" (€ 3,000)
2023 Grant from the Max Planck Institute for the Physics of Complex Systems to organize workshop "IntCha" (€ 12,000 + costs to host conference for 121 participants)
2022 Participated in the Lindau Nobel Laureate Meeting (€ 5,000 from HFSP)
2022-2024 EMBO postdoctoral fellowship (project leader, €168,000)
2021 Prize in the science writing contest of the Dutch Physical Society (€ 750)
2020-2025 HFSP Cross-Disciplinary Fellowship (project leader, € 180,000)
2015 European Erasmus Fellowship

Complete list of publications

1. Y. Xu, A. Chao, M. Rinaldin, A. Kickuth, J. Brugués, and S. Di Talia[†], "The cell cycle oscillator and spindle length set the speed of chromosome separation in *Drosophila* embryos", *bioRxiv*: 2024.06.17.598879 (2024), accepted in *Curr. Biol.*
2. M. Rinaldin, A. Kickuth, B. Dalton, Y. Xu, S. Di Talia, and J. Brugués[†], "Robust cytoplasmic partitioning by resolving an intrinsic cytoskeletal instability", *bioRxiv*: 2024.03.12.584684 (2024) under review in *Nature*
3. M. Rinaldin[†], B. ten Haaf, J. Salaris, E. J. Vegter, C. van der Wel, L. Giomi, and D. J. Kraft[†], "Supported lipid bilayers of designed shape obtained with microprinting and PDMS replica-molding", *Soft Matter* 20, 7379 (2024), highlighted in the cover

4. Ketzetzi, M. Rinaldin, P. Dröge, J. de Graaf, and D. J. Kraft[†], “Activity-induced microswimmer interactions and cooperation in one-dimensional environments”, *Nat. Comm.* 13, 1772 (2022)
5. M. Rinaldin^{*}, P. Fonda^{*}, L. Giomi[†], and D. J. Kraft[†], “Geometric pinning and antimixing in scaffolded lipid vesicles”, *Nat. Comm.* 11, 4314 (2020), highlighted in *Nature Chemistry Community Blog*
6. M. Rinaldin, P. Fonda, L. Giomi and D. J. Kraft[†], “Lipid exchange enhances geometric pinning in multi-component membranes on patterned substrates”, *Soft Matter* 16, 4932 (2020), highlighted in the back cover
7. P. Fonda, M. Rinaldin, D. J. Kraft and L. Giomi[†], “Thermodynamic equilibrium of binary mixtures on curved surfaces”, *Phys. Rev. E* 100, 032604 (2019), editor’s suggestion
8. M. Rinaldin^{*}, R. W. Verweij^{*}, I. Chakraborty, and D. J. Kraft[†], “Colloid supported lipid bilayers for self-assembly”, *Soft Matter* 5, 1345 (2019)
9. P. Fonda, M. Rinaldin, D. J. Kraft and L. Giomi[†], “Interface geometry of binary mixtures on curved substrates”, *Phys. Rev. E* 98, 032801 (2018)

Publications for the general public

1. M. Rinaldin, “Vloeibare Patronen”, *Nederlands Tijdschrift voor Natuurkunde* (Apr. 2021)

Teaching experience

06/2024	Hiroshima University Japan Guest lecturer at the Graduate school of integrated sciences for life (30 PhD students)
2021-2023	TU Dresden Germany Instructor lab rotations Molecular Bioengineering (2 days a year, 5-10 MSc students)
10/2018-01/2019	Leiden University The Netherlands Teaching assistant in Condensed matter physics (6 months, 20 MSc students)
02/2018-06/2018	Teaching assistant in Diffusion (6 months, 80-120 BSc students)
02/2017-06/2017	Teaching assistant in Diffusion (6 months, 80-120 BSc students)

Supervision experience

11/2022-current	Co-supervisor of E. Sandaltzopoulou, PhD student, Physics of Life Excellence Cluster, TU Dresden
04/2022-09/2023	Co-supervisor of T. Benamar, research assistant and master student in Molecular Bioengineering, TU Dresden
02/2022-06/2023	Co-supervisor of K. Laxhauber, rotation for the Max Planck School matter to life, Max Planck Institute of Molecular Cell Biology and Genetics
06/2020-08/2020	Co-supervisor of D. Haryanto, summer student in Physics and Computer Science, Brandeis University
02/2019-09/2019	Co-supervisor of K. Lopez, master thesis in Physics, Leiden University
06/2018-09/2018	Co-supervisor of M. Ruckingel, summer student in Physics, Leiden University
02/2017-06/2017	Co-supervisor of B. Ten Haaf, bachelor thesis in Physics, Leiden University
02/2016-06/2016	Co-supervisor of J. Salaris, bachelor thesis in Physics, Leiden University

Training and certifications

07/2023	EMBO Laboratory leadership for postdocs
10/2023	Project leader for animal license n. 25-5131/564/25 (TVvG 24/2023)
10/2021	Certified for work involving animal experiments

Invited talks

01/2025	University of Geneva, Department of Biochemistry, Switzerland
08/2024	Living Systems Institute Seminar, University of Exeter, UK
05/2024	Max Planck Institute of Biochemistry Seminar, Germany
04/2024	Physico-Chimie Seminar, Institut Curie, France
04/2024	QBIO Seminar, École Normale Supérieure, France
02/2024	SLAM Seminar, Leiden Institute of Physics, The Netherlands
09/2023	Seminar at the National Institute of Genetics, Japan
04/2023	Interdisciplinary challenges: from non-equilibrium physics to life sciences, Italy

03/2019	Stanford seminar invited by Manu Prakash, USA
03/2019	UCSB seminar invited by Zvonimir Dogic, USA
03/2019	Caltech seminar invited by Chaira Darario, USA
02/2019	MRSEC seminar Brandeis University, USA
02/2019	Squishy seminar at Harvard University, USA
12/2018	The physics of complex systems V: from Padua to the rest of the world, Italy

Contributed talks

02/2025	The 3rd Crick Beddington Developmental Biology Symposium, UK
06/2024	International Union for Pure and Applied Biophysics Conference, Japan
06/2024	EMBO Microtubules conference, Germany
12/2023	22nd HFSP Meeting, South Africa
09/2023	International Soft Matter Conference, Japan, 2023
03/2023	German Physical Society Meeting, Germany
04/2019	Nanofront Winter Retreat, France
03/2019	APS March Meeting, USA
01/2019	Physics@Veldhoven, The Netherlands,
11/2018	25th Dutch Soft Matter Meeting, The Netherlands,
09/2018	European Conference of Colloids and Interface Science (ECIS), Slovenia,
03/2018	APS March Meeting, USA
12/2017	Chains (national chemistry conference), The Netherlands
04/2017	DRSTP School in Statistical Physics and Condensed Matter, The Netherlands
03/2016	APS March Meeting, USA

Other distinctions

Invited in recent months for on-site interviews for assistant professor positions:

- Physics of Life at the Cavendish Department, Cambridge University
- Biology and Chemistry at Chalmers University of Technology, Gothenburg
- Mechanobiology at the Warwick Medical School, University of Warwick
- Centre for Genomic Regulation, Barcelona
- University of Duisburg-Essen, Biology Department
- Hubrecht Institute, Utrecht
- Department of Medicine and Life Science, University Pompeu fabra, Barcelona

Selected academic citizenship

2024	Reviewer for Soft Matter
04/2024	Co-organizer of the 2024 edition of the conference Interdisciplinary challenges: from non-equilibrium physics to life sciences (IntCha), PKS visitor program
2024-2025	Selected for the program What's Next? Charlotte Bühler Programme, a leadership program for a target group of female postdocs at the TU Dresden
09/2023	Speaker of a science pitch at the Falling Walls Lab Berlin Adelshorf
2023	Selected and attended the program SignUp! for Leadership of the Max Planck Society career-building programme for excellent female postdocs
2022-2023	Speaker of the travel sustainability group, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden
05/2019	Speaker for the LION Science Day, Leiden University
2018-2019	Designer and curator of the Dutch Soft Matter website

References

Prof. Jan Brugués

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Prof. Daniela J. Kraft

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