Dr. Beatrice Ramm
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Professional Appointments

Since 1/2025	**Max Planck Research Group Leader**, Friedrich Miescher Laboratory of the Max Planck Society, Tübingen, Germany
2024	**Lecturer**, Omenn-Darling Bioengineering Institute, **Princeton University**, USA
11/2020 – 12/2024	**Associate Research Scholar and Fellow**, Center for the Physics of Biological Function, **Princeton University**, USA
2/2020 – 10/2020	**Postdoc**, Department of Cellular and Molecular Biophysics (Petra Schwille), **Max-Planck-Institute of Biochemistry**, Martinsried, Germany

Education

2015 – 2020	**PhD in Biochemistry**, **Ludwig-Maximilians-Universität München / Max-Planck-Institute of Biochemistry**, Graduate School of Quantitative Biology Munich; **summa cum laude**. Advisor: Petra Schwille
2012 – 2015	**MSc in Biochemistry**, **Technical University of Munich**; passed with High Distinction. Master's research in the laboratory of Drew Endy, **Stanford University**, USA
2009 – 2012	**BSc in Biochemistry**, **Technical University of Munich**

Selected Awards

2023	**Distinguished Postdoc Service Award**, Department of Molecular Biology, Princeton University
2021	**Otto Hahn Medal**, Max Planck Society
2021	**GBM Promotionspreis** (PhD award), German Society for Biochemistry and Molecular Biology
2021	**CeNS LMU publication award**, "Best interdisciplinary publication" (Ramm & Goychuk et al., 2021)
2020	**ORIGINS PhD Award**, ORIGINS excellence cluster Munich

Selected Teaching & Mentoring

Since 2025	**Group leadership**: independent advisor of a postdoc, two PhD students, master's and undergraduate researchers, and technical and bioinformatics staff
2024	**Co-instructor**, Introduction to Synthetic Biology (BNG 280), Princeton University
2023 & 2024	**Secondary PI & wetlab mentor**, iGEM Team, Princeton University
2015 – 2024	**Mentored six Master's/sensior thesis and rotation students**; two co-authored publications

Patents

Provisional patent application (2026): genetically encoded biosensor for extracellular and cell-surface proteases

Selected Invited & Keynote Talks

2026	**Mechanobiology Symposium**, University of Stuttgart, Germany — Invited keynote
2025	**ISTA**, Klosterneuburg, Austria — Invited seminar
2025	**CeNS Colloquium**, Center for Nanoscience, LMU Munich, Germany — Invited talk
2025	**Institute Colloquium,** IFIB, University of Tübingen, Germany — Invited talk
2024	**EPFL Bioengineering Seminar**, Lausanne, Switzerland — Invited talk
2024	**UC Irvine**, Dept. of Molecular Biology & Biochemistry, USA — Invited talk
2024	**University of Notre Dame**, Dept. of Chemistry and Biochemistry, USA — Invited talk
2023	**GRC Synthetic Biology**, Newry, ME, USA — Selected talk

Selected Publications

(equal contribution, † co-corresponding author)*

Ramm B†, Weatherly M, Toettcher J† (2026) A modular live-cell biosensor for extracellular protease activity. *bioRxiv* 2026.06.19.733436 (preprint)

Ramm B*†, Schumacher D*†, Harms A, Heermann T, Klos P, Müller F, Schwille P†, Søgaard-Andersen L† (2023) Biomolecular condensate drives polymerization and bundling of the bacterial tubulin FtsZ to regulate cell division. *Nat Commun* 14: 3825

Heermann T*, Steiert F*, **Ramm B**, Hundt N*, Schwille P (2021) Mass-sensitive particle tracking to elucidate the membrane-associated MinDE reaction cycle. *Nat Methods* 18: 1239–1246

Ramm B*, Goychuk A*, Khmelinskaia A, Blumhardt P, Eto H, Ganzinger KA, Frey E†, Schwille P† (2021) A diffusiophoretic mechanism for ATP-driven transport without motor proteins. *Nat Phys* 17: 850–858 (cover)

Ramm B, Glock P, Mücksch J, Blumhardt P, García DA, Heymann M, Schwille P (2018) The MinDE system is a generic spatial cue for membrane protein distribution in vitro. *Nat Commun* 9: 3942

Ramm B, Heermann T, Schwille P (2019) The E. coli MinCDE system in the regulation of protein patterns and gradients. *Cell Mol Life Sci* 76: 4245–4273

Miyagi A*, **Ramm B***, Schwille P, Scheuring S (2018) High-speed AFM reveals the inner workings of the MinDE protein oscillator. *Nano Lett* 18: 288–296

Full publication list: Google Scholar · www.rammlab.com