

Wolfram Liebermeister

Work

Wolfram Liebermeister
INRAE, Unité MaIAGE
Domaine de Vilvert
78350 Jouy en Josas – France

email wolfram.liebermeister@inrae.fr
web wolfram-liebermeister.pages-forge.inrae.fr/web/

Private

Wolfram Liebermeister
22 Rue Gabriel Péri
94200 Ivry sur Seine – France

email wolfram.liebermeister@gmail.com

Personal data

Name Dr. Wolfram Liebermeister
Date of birth July 25, 1972
Place of birth Tübingen, Germany
ORCID 0000-0002-2568-2381

Education

2013 **Habilitation** Habilitation in Theoretical Biophysics at Humboldt University Berlin
"Construction and control analysis of biochemical network models"
2004 **Doctorate** Doctorate in Theoretical Biophysics at Humboldt University Berlin
"Analysis of optimal gene expression"
1998 **Diplom** *Diplom* degree (M.Sc.) in Physics at the University of Hamburg
"Geometrie und Elektronenstruktur der Quasikristalle i-AlCuFe und i-AlPdMn"
1994 **Vordiplom** *Vordiplom* degree (B.Sc.) in Physics at the University of Tübingen

Employment

2017-today **Research director (DR2)** Research unit MaIAGE, INRAE Jouy-en-Josas
2019 **Visiting scientist** Mount Sinai Hospital, New York
2017 **Visiting scientist** Technion Haifa, Israel
2016 **Visiting scientist** Institute for Advanced Bioscience, Keio University, Japan
2011 - 2016 **Researcher** Institute of Biochemistry, Charité - Universitätsmedizin Berlin
2011 **Postdoctoral fellow** Dpt. of Plant Sciences, Weizmann Institute of Science, Israel
2009 - 2010 **Postdoctoral fellow** Theoretical Biophysics, Humboldt University Berlin
2007 - 2008 **Postdoctoral fellow** Max Planck Institute for Molecular Genetics, Berlin
2005 **Visiting fellow** Dpt. of Molecular Cell Biology, Weizmann Institute of Science, Israel
2004 - 2006 **Postdoctoral fellow** Max Planck Institute for Molecular Genetics, Berlin
2003 - 2004 **Research assistant** Dpt. of Mathematics and Computer Science, Free University Berlin
1997 - 1998 **Lecturer** Leibnizkolleg Tübingen

Academic and institutional service

Institutional governance

Scientific advisory board member	2020 - 2025	INRAE Scientific Advisory board
Managing board member	2021 - now	<i>Peer Community in Mathematical and Computational Biology</i>
Graduate students liaison	2020 - now	Graduate School ABIES, Paris-Saclay
Liaison for international relations	2020 - 2023	MathNum department (INRAE)

Committee work

I have served on various admission, recruitment, and thesis committees both in Germany and in France (10 doctorate, 2 habilitation, and 2 academic researcher recruitment committees).

Reviewing for academic journals

I reviewed manuscripts for various academic journals including *Nature*, *Nature Communications*, *Bioinformatics*, *PLoS Computational Biology*, *FEBS Journal*, *BMC Systems Biology*, *BMC Bioinformatics*, and *Physical Review Letters* (26 verified peer reviews in Web of Science as of November 2025).

Editorial roles

Since 2021, I have served as a recommender (editor) for *Peer Community in Mathematical and Computational Biology*, a community-driven, non-commercial initiative for peer review, with the option of diamond open access publication.

Publications and outreach

Scholarly publications

I have published a large number of peer-reviewed articles in academic journals (56 publications listed by Web of Science and 65 peer-reviewed scientific articles listed by ORCID as of November 2025), as well as various conference articles and book chapters.

Publications listed on: [Google Scholar](#) / [Web of Science](#) / [ResearchGate](#) / [ORCID](#)

Public communication and collaborations with artists

- Workshop session “Metabolic models” with speakers from academia and industry, at *Journées Annuelles du GT BioSS* workshop in Paris, 2025
- Speaker at a “Digibattle” about metabolic modelling, an educational online format within the INRAE Metaprogramme DIGIT-BIO, 2023
- Contributions to Wikipedia, among other things the German version of the page [“Peer Community In”](#)
- Contribution “Traces and Frames” to *tracelation* (2017), a book accompanying an interactive “Kunst am Bau” project by the media artist Tyne Claudia Pollman at Charité Berlin
- Work with the sculptor Eva Wohlleben on flexible geometric structures (3 articles presented at *International Conference on Geometry and Graphics*). The work has been featured in *Spektrum der Wissenschaft* (June 2009, “Große Wackelpolyeder”; and July 2009, “Mathematica fürs Volk”)
- Contribution to “Long Night of Science” at Humboldt University Berlin, 2009
- Book review “Albert Einstein – Ingenieur des Universums” for *Spektrum der Wissenschaft*, November 2005

Educational materials

- [*Systems Biology – A Textbook*](#) (Wiley-Blackwell, ISBN 978-3-527-33636-4)
1st edition 2009; 2nd, completely revised edition 2016 (co-author)
- Collaborative open access online textbook [*Economic Principles in Cell Biology*](#)
(initiator of the project, coordinator, co-author)
- Collection of 15 educational [*Jupyter Notebooks*](#) accompanying the book (co-organiser)
- Collection of lecture slides and lecture videos on [*Economic Principles of Cell Biology*](#) (co-organiser)
- Series of 12 educational videos on the “economy of the cell” (recorded in 2025; in post-production)
(co-organiser, co-author)
- [*Collection of educational materials*](#) for systems biology (initiator and co-organiser).

Websites

I designed, developed, curated and ran websites in static HTML (principlescellphysiology.org, www.proteomaps.net, rba.inrae.fr) and co-designed interactive websites (www.sbtabs.net, www.parameterbalancing.net).

Event organization

Summer schools

I initiated and co-organised yearly summer schools [*Economic Principles in Cell Biology*](#), held at Learning Planet Institute Paris (2022-2024) and at the University of Vienna (2025) with funding from Learning Planet Institute Paris, INRAE, INRIA, and CECAM. The schools involved guest sessions by colleagues with innovative science communication formats such as [*Night Science*](#) on research as a creative process, and [*Ateliers SeNS*](#) on the interplay of personal values and scientific work.

Workshops

- Advanced School on [*Quantitative Principles in Microbial Physiology: from Single Cells to Cell Communities*](#) at Abdus Salam International Centre for Theoretical Physics, Trieste, 2023
- *Resource Balance Analysis*, breakout session (4 days) at HARMONY 2021
- *Recent progress in computational modelling: cells and cell communities*, 3 days workshop at INRA Jouy en Josas, 2017

Seminars

- I initiated and co-organise the monthly zoom seminar [*Economic Principles in Cell Physiology*](#) with about 40 participants from across Europe and the US, 2021 – now.
- I invited a large number of international speakers to present their work at external seminar of the MaIAGE unit at INRAE Jouy en Josas.

Teaching

University courses

Systems Biology	Lecture	2023/2024	Learning Planet Institute (Université Cité Paris)
Systems Biology	Lecture	2022/2023	Learning Planet Institute (Université Cité Paris)
Systems Biology	Lecture	2021/2022	Center for Interdisciplinary Research (Université Cité Paris)
Systems Biology	Lecture	2020/2021	Center for Interdisciplinary Research (Université Cité Paris)
Systems Biology	Lecture	2019/2020	Center for Interdisciplinary Research (Université Cité Paris)
Electrodynamics	Lecture	2015/2016	Humboldt University Berlin, Biophysics
Electrodynamics	Lecture	2014/2015	Humboldt University Berlin, Biophysics
Electrodynamics	Lecture	2013/2014	Humboldt University Berlin, Biophysics
Models of Cellular Processes	Lecture	2009/2010	Humboldt University Berlin, Biophysics
Statistical Physics	Lecture	2008/2009	Humboldt University Berlin, Biophysics
Biological Thermodynamics	Lecture	2007/2008	Humboldt University Berlin, Biophysics
Theoretical Biology	Seminar	2007	Free University Berlin, Bioinformatics
Systems Biology II	Lecture	2006/2007	Free University Berlin, Bioinformatics
Systems Biology I	Lecture	2006	Free University Berlin, Bioinformatics
Regulatory Networks	Seminar	2005/2006	Free University Berlin, Bioinformatics
Pharmacokinetic Modelling	Seminar	2003/2004	Free University Berlin, Bioinformatics

Doctoral training courses

Cellular Enzyme Economy (blackboard teaching)	CompSysBio: Advanced Lecture Course on Computational Systems Biology	Aussois	2021
Cellular Enzyme Economy (blackboard teaching)	CompSysBio: Advanced Lecture Course on Computational Systems Biology	Aussois	2019
Introduction to Modelling of Biological Systems	Advanced Lecture Course on Systems Biology	Innsbruck	2018
Modelling and Engineering of Biological Systems	Université Paris Science et Lettres - ITI	Paris	2027
Introduction to Modelling of Biological Systems	Advanced Lecture Course on Systems Biology	Innsbruck	2016
Stochastic Fluctuations in Biochemical Systems	European Network of Excellence ENFIN	Paris	2007
Structure in Biochemical Networks	European Network of Excellence ENFIN	Berlin	2006

Other courses

Systems biology	Sessions in M.Sc. training courses at Humboldt University Berlin	1999 - 2009
Cell modelling	Tutor at Volkswagen Summer School <i>Combining standards for today's models</i>	2015
Physics	<i>Studium generale</i> (2 semesters) at Leibniz-Kolleg Tübingen	1998
Physics	<i>Studium generale</i> (2 semesters) at Leibniz-Kolleg Tübingen	1997

Mentorship

Between 2006 and today, I supervised 4 doctoral students, 3 M.Sc. students, and 3 B.Sc. students as the main or second advisor.

Grants

Project	Funding	Years
Multi-Size Hybrid Cell models (MuSiHC)	Funded by PEPR B-BEST program	2024-2028
Artificial Metabolic Networks (AMN)	ANR-funded project ANR-21-CE45-0021-02	2021-2024
An Economic Network Theory of Cell Metabolism	DFG-funded project LI 1676/2-2	2016-2019
Dynamics and Function of Enzyme Regulation in Large Metabolic Networks	DFG-funded project LI 1676/2-1	2011-2015
Research visit at Weizmann Institute	Minerva fellowship	2005

Office/IT

Office programs	Linux, Microsoft, Google
Typesetting/websites	Latex, Overleaf, HTML
Programming	MATLAB, Python (basic), Git

Languages

Fluent in German, English, and French; basic knowledge of Italian and Hebrew.