



**Dr. Hermann Cuntz**

Born 7 October 1974 in Bielefeld

**Work address:**

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[www.treestoolbox.org/hermann/](http://www.treestoolbox.org/hermann/)     [www.twitter.com/HCuntz](http://www.twitter.com/HCuntz)

Married to **Dr. Marieke Schölvínck**, kids **Sophie** and **Clara** (\*2013), **Lotte** (\*2016), **Tim** (\*2020)

**Research interest**

**Computational neuroscience**, with the general goal to understand the biophysics of neural computation and information processing as a function of single cells and circuits.

**Positions**

**Justus Liebig University**, Gießen (Germany)

*ICAR3R – Interdisciplinary Centre for 3Rs in Animal Research*

Since 2022: Scientist.

**Frankfurt Institute for Advanced Studies (FIAS)**, Frankfurt (Germany)

Since 2014: Research Fellow.

**Ernst Strüngmann Institute (ESI) for Neuroscience**, Frankfurt (Germany)

2014 – 2025: Max Planck Group Leader, evaluated as “**Excellent**” by Scientific Advisory Board.

2011 – 2014: Scientist.

**Goethe University**, Frankfurt (Germany)

*Institute of Clinical Neuroanatomy*

2011 – 2014: Affiliated Group Leader as guest scientist.

2011: Group Leader.

**University College London**, London (UK)

*Wolfson Institute for Biomedical Research*

2006 – 2011: Post-doc with Prof. Michael Häusser.

**Hebrew University**, Jerusalem (Israel)

*Interdisciplinary Center for Neural Computation*

2004 – 2005: Post-doc with Prof. Idan Segev.

## Education

Goethe University, Frankfurt (Germany, teaching since 2014)

Habilitation in **Biology** in progress with Prof. Bernd Grünewald.

University of California at Berkeley, Berkeley (USA) and  
Max Planck Institute of Neurobiology, Martinsried (Germany)

2000 – 2004: Doctorate in **Computational Neuroscience** (*magna cum laude*) with Prof. Alexander Borst, "Input organisation of motion-sensitive interneurons in the fly".

Eberhard Karls Universität, Tübingen (Germany) & Friedrich Miescher Laboratory (Max Planck)

1994 – 2000: Diploma in **Biology** (incl. **Computer Science** minor) with Prof. Alexander Borst, "Räumliche Verteilung von Membranparametern in Fliegenneuronen: eine Simulationsstudie".

## Publications

Google Scholar profile: <https://tinyurl.com/y9vzlxpj> H-index 25, ~ 2,100 citations.

Web of Science H-index 19, ~ 1,180 citations, Journal impact factor (IF) are indicated per year; for reference, average IF in mathematical & computational biology is ~ 1.8.

\*equal first    +equal last    •corresponding    <sup>H</sup>habilitation    ●● most significant

## Preprints

1. ●● Baltruschat L, Tavosanis G, Cuntz H<sup>•</sup>. *A developmental stretch-and-fill process that optimises dendritic space filling* ([bioRxiv](#))
2. Weigand M<sup>•</sup>, Cuntz H<sup>•</sup>. *A simple model for detailed visual cortex maps* ([bioRxiv](#))

## Published

3. Groden M<sup>•</sup>, Moessinger HM, Schaffran B, DeFelipe J, Benavides-Piccione R<sup>+</sup>, Cuntz H<sup>+</sup>, Jedlicka P<sup>+</sup> (2024) *A biologically inspired dendritic repair mechanism for human and nonhuman neurons*. **PLoS Computational Biology**, 20(2):e1011267. (IF 4.8)
4. Bird AD<sup>•</sup>, Cuntz H, Jedlicka P (2024) *Robust and consistent measures of pattern separation based on information theory and demonstrated in the dentate gyrus*. **PLoS Computational Biology**, 20(2):e1010706. (IF 4.8)
5. Liao M, Bird AD, Cuntz H, Howard J<sup>•</sup> (2023) *Branched neuronal dendrites have universal topological properties that optimize connectivity*. **Cell Reports**, 42(11):113268. (IF 8.8)
6. Rößler N<sup>•</sup>, Jungenitz T, Sigler A, Mittag M, Bird AD, Brose N, Deller T, Cuntz H, Schwarzacher SW, Jedlicka P (2023) *Lognormal-like skewed distribution of spine sizes is independent of presynaptic release and synaptic plasticity*. **Open Biology**, 13(8):230063. (IF 5.8)
7. Schneider M<sup>•</sup>, Bird AD, Gidon A, Triesch J, Jedlicka P<sup>+</sup>, Cuntz H<sup>+</sup>• (2023) *Biological complexity facilitates tuning of the neuronal parameter space..* **PLoS Computational Biology**, 19(7):e1011212. (IF 4.8)

8. Mittag M<sup>••</sup>, Mediavilla L<sup>••</sup>, Remy S, Cuntz H<sup>+</sup>, Jedlicka P<sup>+</sup> (2023) *Dendritic structural degeneration in Alzheimer's disease preserves neuronal input-output function*. *Journal of Physiology*, 601(15):3403-3437, special issue on Computational Neuroscience. (IF 5.5)
9. Jedlicka P<sup>•</sup>, Bird AD<sup>+</sup>, Cuntz H<sup>+</sup> (2022) *Pareto optimality, economy-effectiveness trade-offs and ion channel degeneracy: Improving population models of neurons*. *Open Biology*, 12(7):14-23. (IF 5.8)
10. Stürner T, Ferreira Castro A, Philipps M, Cuntz H<sup>+</sup><sup>•</sup>, Tavosanis G<sup>+</sup><sup>•</sup> (2022) *The branching code: a model of actin-driven dendrite arborisation*. *Cell Reports*, 39(4):110746. (IF 8.8).
11. **••** Cuntz H<sup>•</sup>, Bird AD, Mittag M, Beining M, Schneider M, Mediavilla L, Hoffmann FZ, Deller T<sup>+</sup>, Jedlicka P<sup>+</sup> (2021) *A general principle of dendritic constancy – a theory of neuronal size- and shape-invariant excitability*. *Neuron*, 109(22):3647-3662. (Press release, featured in FAZ and RTL Hessen, Paper of the Month at German Anatomical Society, IF 17.2)
12. Bird AD<sup>•</sup>, Jedlicka P, Cuntz H (2021) *Dendritic normalisation improves learning in sparsely connected artificial neural networks*. *PLoS Computational Biology*, 17(8):e1009202. (IF 4.8)
13. Bird AD<sup>•</sup>, Deters LH, Cuntz H (2021) *Excess neuronal branching allows for innervation of specific dendritic compartments in cortex*. *Cerebral Cortex*, bhaa271. (IF 4.9)
14. **••** Ferreira Castro A<sup>•</sup>, Baltruschat L, Stürner T, Bahramid A, Jedlicka P, Tavosanis G<sup>+</sup><sup>•</sup>, Cuntz H<sup>+</sup><sup>•</sup> (2020) *Achieving functional neuronal dendrite structure through sequential stochastic growth and retraction*. *eLife*, 9:e60920. (Press release, IF 8.1).
15. Groden M<sup>••</sup>, Weigand M<sup>••</sup>, Triesch J, Jedlicka P, Cuntz H<sup>•</sup> (2020) *A model of brain folding based on strong local and weak long-range connectivity requirements*. *Cerebral Cortex*, 30(4):2434-2451. (IF 5.4)<sup>H</sup>
16. Ebner C<sup>•</sup>, Clopath C, Jedlicka P<sup>+</sup>, Cuntz H<sup>+</sup> (2019) *Unifying long-term plasticity rules for excitatory synapses by modeling dendrites of cortical pyramidal neurons*. *Cell Reports*, 29(13):4295-4307. (Cover image, December 24 issue, IF 8.1)
17. Bird AD<sup>•</sup>, Cuntz H (2019) *Dissecting Sholl analysis into its functional components*. *Cell Reports*, 27(10):3081-3096. (IF 8.1)<sup>H</sup>
18. Stürner T<sup>\*</sup>, Tatarnikova A<sup>\*</sup>, Mueller J, Schaffran B, Cuntz H, Zhang Y, Nemethova M, Bogdan S, Small V, Tavosanis G<sup>•</sup> (2019) *Transient localization of the Arp2/3 complex initiates neuronal dendrite branching in vivo*. *Development*, dev.171397. (IF 5.8)<sup>H</sup>
19. Anton-Sanchez L<sup>••</sup>, Effenberger F<sup>\*</sup>, Bielza C, Larrañaga P, Cuntz H<sup>•</sup> (2018) *A regularity index for dendrites – local statistics of a neuron's input space*. *PLoS Computational Biology*, 14(11):e1006593. (IF 4.4)<sup>H</sup>
20. Jungenitz T<sup>••</sup>, Beining M<sup>\*</sup>, Radic T, Deller T, Cuntz H, Jedlicka P<sup>+</sup>, Schwarzacher SW<sup>+</sup> (2018) *Structural homo- and heterosynaptic plasticity in mature and adult newborn rat hippocampal granule cells*. *PNAS*, 115(20):E4670-E4679. (Press release, IF 9.6)<sup>H</sup>
21. Nanda S, Chen H, Das R, Bhattacharjee S, Cuntz H, Torben-Nielsen B, Peng H<sup>•</sup>, Cox DN, De Schutter E, Ascoli GA<sup>•</sup> (2018) *Design and implementation of multi-signal and time-varying neural reconstructions*. *Scientific Data*, 5:170207. (IF 5.9)<sup>H</sup>
22. Cuntz H<sup>•</sup> (2018) *Perspective: Mixing audio and video in dendrites*. *Journal of Physiology*, 596(4):553-554. (IF 5.0)

23. ●● Beining M<sup>•</sup>, Mongiat LA, Schwarzacher SW, Cuntz H<sup>+•</sup>, Jedlicka P<sup>+</sup> (2017) *T2N as a new tool for robust electrophysiological modeling demonstrated for mature and adult-born dentate granule cells*. *eLife*, e26517. (Paper of the Month at German Anatomical Society, IF 7.6)<sup>H</sup>
24. Vormberg A<sup>•</sup>, Effenberger F, Muellerleile J, Cuntz H<sup>•</sup> (2017) *Universal features of dendrites through centripetal branch ordering*. *PLoS Computational Biology*, 13(7):e1005615. (IF 4.0)<sup>H</sup>
25. ●● Weigand M<sup>•</sup>, Sartori F, Cuntz H<sup>•</sup> (2017) *Universal transition from unstructured to structured neural maps*. *PNAS*, 114(20):E4057-E4064. (Press release, in the top 5% of all research outputs scored by Altmetric, IF 9.5)<sup>H</sup>
26. Radic T<sup>•</sup>, Jungenitz T, Singer M, Beining M, Cuntz H, Vlachos A, Deller T, Schwarzacher SW (2017) *Time-lapse imaging reveals highly dynamic structural maturation of postnatally born dentate granule cells in organotypic entorhino-hippocampal slice cultures*. *Scientific Reports*, 7:43724. (IF 4.1)<sup>H</sup>
27. Beining M<sup>••</sup>, Jungenitz T<sup>\*</sup>, Radic T, Deller T, Cuntz H<sup>+</sup>, Jedlicka P<sup>+</sup>, Schwarzacher SW<sup>+</sup> (2017) *Adult-born dentate granule cells show a critical period of dendritic reorganization and are distinct from developmentally born cells*. *Brain Structure and Function*, 222(3):1427-1446. (IF 4.2)<sup>H</sup>
28. Bird AD<sup>•</sup>, Cuntz H (2016) *Optimal current transfer in dendrites*. *PLoS Computational Biology*, 12(5):e1004897. (IF 4.5)<sup>H</sup>
29. Platschek S<sup>\*</sup>, Cuntz H<sup>••</sup>, Vuksic M, Deller T, Jedlicka P<sup>•</sup> (2016) *A general homeostatic principle following lesion induced dendritic remodeling*. *Acta Neuropathologica Communications*, 4(1):19. (IF 5.4)<sup>H</sup>
30. Mazzoni A<sup>•</sup>, Lindén H, Cuntz H, Lansner A, Panzeri S, Einevoll GT<sup>•</sup> (2015) *Computing the local field potential (LFP) from integrate-and-fire network models*. *PLoS Computational Biology*, 11(12):e1004584. (IF 4.6)<sup>H</sup>
31. Budd J<sup>•</sup>, Cuntz H, Eglen S, Krieger P (2015) Editorial: *Quantitative analysis of neuroanatomy*. *Frontiers in Neuroanatomy*, 9:143. (IF 3.3)
32. Schneider CJ<sup>•</sup>, Cuntz H, Soltesz I (2014) *A three-dimensional model of the rat dentate gyrus*. *PLoS Computational Biology*, 10(10):e1003921. (Featured image in October 2014 issue, IF 4.6)<sup>H</sup>
33. Cuntz H<sup>•</sup>, Forstner F, Schnell B, Raghu SV, Borst A (2013) *Preserving dendrite function under extreme scaling*. *PLoS One*, 8 (8): e71540. (IF 3.5)<sup>H</sup>
34. ●● Cuntz H<sup>•</sup>, Mathy A, Häusser M (2012) *A scaling law derived from optimal dendritic wiring*. *PNAS*, 109 (27): 11014–11018. (Press release and covered by medicalxpress and others, IF 9.7)<sup>H</sup>
35. Cuntz H<sup>•</sup> (2012) *The dendritic density field of a cortical pyramidal cell*. Perspective article, invited submission for special issue in *Frontiers in Neuroanatomy*, 6:2. (IF 4.1)<sup>H</sup>
36. Cuntz H<sup>•</sup>, Forstner F, Borst A, Häusser M (2011) *The TREES toolbox – probing the basis of neuronal branching*. *Neuroinformatics*, 9(1): 91-96. (News Item, invited submission, most popular download, IF 3.0)<sup>H</sup>

37. ●● [Cuntz H\\*](#), Forstner F, Borst A, Häusser M (2010) *One rule to grow them all: A general theory of neuronal branching and its practical application*. [PLoS Computational Biology](#), 6(8): e1000877. (Featured image in August 2010 issue; selected by PLoS and kikim media for a prototype documentary film for the US Public Broadcasting Service; reviewed in Faculty 1000 by Prof. Olaf Sporns, 25,000 downloads, IF 5.5)<sup>H</sup>
38. Phoka E\*\* , [Cuntz H\\*](#), Roth A, Häusser M (2010) *A new approach for determining phase response curves reveals that Purkinje cells can act as perfect integrators*. [PLoS Computational Biology](#), 6(4): e1000768. (IF 5.5)<sup>H</sup>
39. Watt AJ\* , [Cuntz H](#), Mori M, Nusser Z, Sjöström PJ, Häusser M (2009) *Traveling waves in developing cerebellar cortex mediated by asymmetrical Purkinje cell connectivity*. [Nature Neuroscience](#), 12:463-473. (Cover in April 2009 issue; reviewed as “exceptional” in Faculty 1000 by Prof. Marla Feller, IF 14.3)<sup>H</sup>
40. [Cuntz H\\*\\*](#), Forstner F\*, Haag J, Borst A (2008) *The morphological identity of insect dendrites*. [PLoS Computational Biology](#), 4(12):e1000251. (Featured image in December 2008 issue; reviewed in Faculty 1000 by Prof. Eve Marder, IF 5.9)<sup>H</sup>
41. Weber F\* , Eichner H, [Cuntz H](#), Borst A (2008) *Eigenanalysis of a neural network for optic flow processing*. [New Journal of Physics](#), 10:015013. (IF 3.4)
42. [Cuntz H\\*](#), Borst A, Segev I (2007) *Optimization principles of dendritic structure*. [Theoretical Biology and Medical Modelling](#), 4(1):21. (IF 1.6)<sup>H</sup>
43. ●● [Cuntz H\\*](#), Haag J, Forstner F, Segev I, Borst A (2007) *Robust coding of flow-field parameters by axo-axonal gap junctions between fly visual interneurons*. [PNAS](#), 104(24):10229–10233. (Press release, IF 9.6)
44. ●● [Cuntz H\\*](#), Haag J, Borst A (2003) *Neural image processing by dendritic networks*. [PNAS](#), 100 (19): 11082–11085. (Press release and covered by National Geographic and others, IF 10.3)

## Books

1. Budd J, [Cuntz H](#), Eglen S, Krieger P (Eds). *Quantitative analysis of neuronal anatomy*. [Frontiers in Neuroscience](#), Research Topic and eBook (2016).
2. [Cuntz H\\*](#), Remme M\*, Torben-Nielsen B\*, (Eds). *The computing dendrite: from structure to function* (2014). Springer Series in Computational Neuroscience, Vol 11, [Springer](#), ~ 52,000 downloads.

## Book chapters

1. Bird AD\* , [Cuntz H](#) (submitted) *Modelling single neuron morphology* In: Encyclopedia Brain, (Eds) Akay M, Sajda P, [Wiley](#).
2. Leopold DA, Strick PL, Bassett DS, Bruno RM, [Cuntz H](#), Harris KM, Oberlaender M, Raichle ME (2019) *Functional architecture of the cerebral cortex*. In: Cerebral Cortex 3.0: Complexity and Computation, (Eds) Singer W, Sejnowski T, Rakic P, [MIT Press](#).

3. Platschek S, Cuntz H<sup>+</sup>, Deller T<sup>+</sup>, Jedlicka P<sup>+</sup> (2017). *Lesion-induced dendritic remodeling as a new mechanism of homeostatic structural plasticity in the adult brain*. In: *Rewiring the brain: a computational approach to structural plasticity in the adult brain*, (Eds) van Ooyen A, Butz M, Elsevier.
4. Cuntz H (2016) *Modelling dendrite shape*. In: *Dendrites*, 3rd edition, (Eds) Stuart G, Spruston N, Häusser M, Oxford University Press.
5. Torben-Nielsen B<sup>\*</sup>, Cuntz H (2014) *Introduction to dendritic morphology*. In: *The Computing Dendrite: From Structure to Function*, (Eds) Cuntz H, Remme M, Torben-Nielsen B, Springer.
6. Cuntz H<sup>\*</sup> (2014) *Modelling dendrite shape from wiring principles*. In: *The Computing Dendrite: From Structure to Function*, (Eds) Cuntz H, Remme M, Torben-Nielsen B, Springer.
7. Cuntz H<sup>\*</sup>, Haag J, Borst A (2014) *Modelling the cellular mechanisms of fly optic flow processing*. In: *The Computing Dendrite: From Structure to Function*, (Eds) Cuntz H, Remme M, Torben-Nielsen B, Springer.
8. Cuntz H<sup>\*</sup>, (2013) *Models of fly lobula plate tangential cells (LPTCs)*. In: *Encyclopedia of Computational Neuroscience*, (Ed) Jaeger D, Jung R; invited by Gabbiani F, Springer.
9. Cuntz H<sup>\*</sup>, (2013) *The TREES toolbox – Code for neuronal branching*. In: *Encyclopedia of Computational Neuroscience*, (Ed) Jaeger D, Jung R; invited by Gleeson P, Springer.

### Other publications

1. Cuntz H, (2015) *Computational Cajal – modelling the formation of neural circuits*. Yearbook of the Max Planck Society 2014.
2. Cuntz H, (2013) *Geburtshilfe für den Computer; Die neurowissenschaftlichen Wurzeln der Kybernetik*. *Gehirn und Geist (Spektrum der Wissenschaft)* 3/2013: 86-87. Invited book review in German.

### Job search, selected offers and interviews

#### Senior

- May 2022 Interview, **W2 Computational Neuroscience**, LMU Munich, **Faculty of Biology**
- Mar 2020 **Ranked**, **Professor in Biophysics of Development**, Wageningen University, **Experimental Zoology, Biology Faculty**, invited by Prof. Johan van Leeuwen
- Nov 2019 **Ranked**, **Associate professor in Theoretical Neuroscience**, Nijmegen University, **Physics Faculty**, invited by Prof. Paul Tiesinga
- Nov 2019 Interview, **W3 Theoretical Systems Neuroscience**, Freiburg University, **Biology Department**, invited by Prof. Dierk Reiff
- May 2019 Skype interview, **Group Leader in Neuroscience**, Bordeaux NeuroCampus, invited by Prof. Daniel Choquet
- May 2019 **2<sup>nd</sup> place**, **W2 Computational Neuroscience of Behavior**, Bonn University, **Medical Faculty**, invited by Prof. Heinz Beck
- Sept 2018 Offer: **Full professor in Computational Neuroscience** University of Hertfordshire, UK, **Computer Science**

## Junior

- Feb 2013* Interview, **W1 Theoretical Neuroscience**, Philipps Universität Marburg, invited by Prof. Anna Schubö
- Dec 2011* Interview, **Lecturer in Mathematical Modelling of Biological Phenomena**, Imperial College London, Department of Bioengineering, invited by Prof. Ross Ethier
- Jan 2010* Interview, **Associate fellow**, Neurosciences Institute, San Diego, invited by Prof. Gerald Edelman
- July 2009* Interview, **Junior professor Computational Neuroscience: Detailed Modeling of Signal Processing in Neurons**, Goethe Center for Scientific Computing, Mathematical Faculty, invited by Prof. Gabriel Wittum

## Funding and awards

- Dec 2023* **Mathworks**, grant to further develop the *TREES Toolbox* (\$ 10,000.00)
- Oct 2023* **Bf3R Research Funding** with Prof. Peter Jedlicka (€109,156.98)
- Sept 2013* **Bernstein Award 2013, BMBF No. 01GQ1406** (€1,351,662.00)
- June 2013* **DFG grant CU 217/2-1** (rededicated, €257,315.00)
- Feb 2011* Wellcome Image Award 2011 (£200)
- May 2010* Guarantors of Brain, travel grant award
- April 2010* 1st prize poster, UCL Neuroscience (£500)
- 2008–2011 Max Planck Fellowship
- 2006–2008 **Alexander von Humboldt, Feodor Lynen Fellowship**
- 2004–2005 **Minerva Fellowship**

## Public and media outreach

Twitter account: <https://twitter.com/HCuntz>

My visual designs have been used on the main UCL, ESI and FIAS websites as well as on Wikipedia (e.g. in articles for *Mind*, *Neural Networks*, *In silico*, two visuals were open access image of the day at Wikimedia) and journals such as Science, Nature and Scientific American.

## Selected

- Sept 2022 Feature for [Tierversuche verstehen](#) with the title "Computer & Zellkulturen – Mehr Tierschutz in der Hirnforschung".
- Mar 2022 "*Cajal's Dream*" submitted to the official [Oculus Store](#) (App Lab).
- Mar 2022 TV Interview for [RTL Hessen](#) about "*Dendritische Konstanz*".
- Feb–Apr 2020 Invited contribution to the exhibition "*Neurones, les intelligences simulées*" at the [Centre Pompidou](#) in Paris, Mutations/Creations program, in partnership with the Ircam.
- Mar 2020 Contribution to [Hessischer Rundfunk \(HR\)](#) TV show on animal experiments.
- Oct 2015 Invited contribution to the Biennale entitled "*Globale*" at the [Zentrum für Kunst und Medientechnologie \(ZKM\)](#) in Karlsruhe
- Jan 2015 Video installation at Open Day of the [Zentrum für Kunst und Medientechnologie \(ZKM\)](#) in Karlsruhe
- Nov 2012 Exhibition at [Zentrum für Kunst und Medientechnologie \(ZKM\)](#) Karlsruhe; video installation on panoramic screen 2.1m × 18.4m. Reviewed in [Frieze Magazine](#)
- Aug 2012 Video interview (15min) about my work by Arvid Leyh for [dasgehirn.info](#) (title "*Die Schönheit wachsender Dendriten*")
- June 2012 Interview by Stuart Mason Dambrot for [medicalxpress](#) (title "*Branching out: A mathematical law of dendritic connectivity*")
- May 2012 Coverage of my work in [Wired](#) magazine (June issue)
- Dec 2011 Full article (5–pages) "*the dendrite code*" about my work in [Gehirn und Geist \(Spektrum der Wissenschaft\)](#)
- May 2011 Full documentary about my work by [kikim media](#) funded by the [Alfred P. Sloan foundation](#) and available at [Public Broadcasting Service \(PBS\)](#) and [Sciencebytes.org](#)
- Feb 2011 [Wellcome Image Award 2011](#), exhibition at the [Wellcome Collection](#) (24. February – 10. July)
- Oct 2003 Short interview for [National Geographic](#)

## Teaching

### Regular teaching

- Since 2015 **BSc in Biology**, Frankfurt, [Faculty member](#)  
 Course Neurobiology I – Specialisation 2 "*fly motion vision*" 7 afternoons (4.5h each) and one seminar (1h) in summer semester 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023  
 Lecture for first semester 0.5h, 2016



- Since 2014* **MSc of Interdisciplinary Neuroscience (INS)**, Frankfurt, **Faculty member**  
 Lab rotation module 6 – *8weeks* C10 Computational Neuroanatomy (28 students since 2014, and 6 students with Peter Jedlicka before 2014) 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023  
 Basic introductory module cellular neurophysiology *3h* lecture and *3h* practical together with Peter Jedlicka 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023
- 2014–2022 **International Max-Planck Research School (IMPRS) for Neural Circuits** (PhD program), Frankfurt, **Faculty member**  
 No new students since 2020.  
 Student selection and follow-up meetings, lab rotation modules (4 students since 2014), 2h lecture on modern topics and 1h seminar open to everyone 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
- 2017–2021 **SMARTSTART**, Germany, **Faculty member**  
 Program for MSc and PhD students: Student selection 2018, 2019, lab rotation module

### EU advanced course in computational neuroscience (ACCN)

\*Supervision of individual projects of 5 students for 4 weeks each (total ~ 640hrs)

- Aug 2014* **Local organiser** with Jochen Triesch, Frankfurt (Germany)
- Aug 2013* **Course lecturer**, Bedlewo (Poland)
- Aug 2008* **Course tutor\***, Freiburg (Germany)
- Aug 2007* **Course tutor\***, Arcachon (France)
- Aug 2005* **Course tutor\***, Arcachon (France)
- Aug 2004* **Course tutor\***, Obidos (Portugal)

### EITN School in Computational Neuroscience

- Sept 2023* **Course lecturer and Organiser**, Paris (France)
- Sept 2022* **Course lecturer and Organiser**, Paris (France)
- Sept 2021* **Course lecturer**, Paris (France)
- Mar 2020* **Course lecturer**, Paris (France)

### Other

- Jul 2022* **Course lecturer**, Baltic-Nordic School on Neuroinformatics, Kraków (Poland)
- Aug 2019* **Course lecturer**, Baltic-Nordic School on Neuroinformatics "Modeling Healthy and Diseased Brain: From Dendrites to Neurons and Networks", Frankfurt (Germany)

- Jun 2018, **Course lecturer**, Cold Spring Harbor Asia summer course "*Building and Mining Brain Cell Atlases and Connectomes*", Suzhou (China), cancelled in 2020
- Jun 2019
- Oct 2013 **Guest lecturer**, Computational Neuroscience, Basel (Switzerland)
- 2011 **Lecturer**, Human Anatomy, for one semester, Frankfurt (Germany)
- Dec 2006 **Course tutor**, "*Dendritic patching workshop*", UCL, London (UK)
- May 2006 **Guest lecturer**, "*Theoretical Neuroscience II*", at the Gatsby Computational Neuroscience Unit, UCL, London (UK)

## Didactic courses

- Since 2018 **Interdisziplinäres Kolleg Hochschuldidaktik** – Working towards certificate of didactics for university lecturers, Frankfurt (Germany)

## Selected invited talks

- Jul 2024 8<sup>th</sup> International Congress on Mathematical Software (ICMS), Durham (UK)
- Nov 2023 Institute of Zoology at TiHo, invited by Prof. Felix Felmy, Hannover (Germany), postponed from 2020
- Sept 2023 ICNF Mini-symposium, Frankfurt (Germany)
- Aug 2023 *BonnBrain*<sup>3</sup>, Bonn (Germany)
- Jul 2023 Ringberg retreat, invited by Prof. Alexander Borst, Kreuth (Germany)
- Jul 2023 TREES Toolbox Tutorial, CNS\*2023, Leipzig (Germany)
- Oct 2022 Blue Brain Workshop "*Mouse Neuronal Morphologies in Health and Disease*", Geneva and Lausanne (Switzerland)
- Sept 2022 Bernstein conference satellite workshop "*Simulating plasticity in morphologically detailed neural networks with Arbor – Building a new research community*", Berlin (Germany)
- May 2022 DENDRITES 2020 (Keynote), EMBO meeting, Heraklion (Greece), postponed from June 2020
- Apr 2022 Institute of Science and Technology (IST) Austria, invited by Prof. Edouard Hannezo, Vienna (Austria)
- Feb 2022 Institute of Psychiatry and Neuroscience of Paris – INSERM, invited by Dr. Cyril Hanus, Paris (France), postponed from Nov 2020
- Mar 2021 MPI of Neurobiology, invited by Prof. Alexander Borst, Martinsried (Germany)
- Oct 2020 Gutenberg Universität Mainz, invited by Prof. Carsten Duch, Mainz (Germany)
- Sept 2020 **SMARTSTART** Alumni Workshop Keynote lecture, Berlin (Germany), cancelled

- June 2020 2<sup>nd</sup> SMARTSTART MidsummerBrains, webinar
- Apr 2020 BCCN München, invited by Prof. Andreas Herz, München (Germany), postponed
- Mar 2020 CoSyNe 2020 workshop "Neural networks that are neuronal networks: Considerations of neuron morphology in circuit computations", Breckenridge (US)
- May 2019 Freiburg University, invited by Prof. Ulrich Egert, Freiburg (Germany)
- Oct 2018 Workshop "New Prospects in Interdisciplinary 3R Research", Giessen (Germany)
- Apr 2018 Symposium "11. Sino-German Frontiers of Science Symposium", Humboldt Stiftung, Shanghai (China)
- Apr 2018 Ernst Strüngmann Forum "Cerebral Cortex 3.0: Complexity and Computation", Frankfurt (Germany)
- Mar 2018 Institute for Theoretical Biology, invited by Prof. Susanne Schreiber and Dr. Michiel Remme, Berlin (Germany)
- Feb 2018 EITN Workshop "Dendritic integration and computation with active dendrites", Paris (France)
- Dec 2017 Blue Brain Project, Ecole Polytechnique Fédérale de Lausanne, invited by Dr. Lida Kanari, Genève (Switzerland)
- Nov 2017 MPFI for Neuroscience "MPG Neuroscience Retreat 2017", Jupiter (US)
- Oct 2017 EITN Workshop "Dendritic Spines: Morphology, Function and Modeling", Paris (France), cancelled
- Sept 2017 Eberhard Karls Universität Tübingen, invited by Prof. Philipp Berens, Tübingen (Germany)
- Feb 2017 invited talk at "MPG-Cambridge Neuroscience Symposium", Berlin (Germany)
- Apr 2016 Workshop "Digital representation of neuronal morphologies / tissue", Okinawa (Japan)
- Apr 2016 Gutenberg Universität Mainz, invited by Prof. Carsten Duch, Mainz (Germany)
- Mar 2016 EITN Workshop "Dendritic Sophistication: From Structure to Function", Paris (France)
- Sept 2015 Workshop "Connectomic workbench", Cambridge (UK)
- Mar 2015 EITN Workshop "Power laws and multiple scales in neural systems", Paris (France)
- Feb 2015 Workshop "Connectomics Analysis Workshop and Hackathon", Janelia Farm (US)
- Nov 2014 Symposium "Principles of Brain Wiring", Bochum (Germany)
- Sept 2013 Bernstein Award Lecture at the Bernstein Conference 2013, Tübingen (Germany)
- Sept 2013 Centre de Regulació Genòmica, invited by Prof. Mara Dierssen, Barcelona (Spain)
- June 2013 Philipps Universität Marburg, invited by Prof. Uwe Homberg, Marburg (Germany)

- May 2013* Dutch INCF meeting on "*predictive modeling*", Nijmegen (Netherlands)
- April 2013* Donders Institute Nijmegen, invited by Prof. Paul Tiesinga, Nijmegen (Netherlands)
- Dec 2012* Frankfurt Institute for Advanced Studies (FIAS); invited by Prof. Jochen Triesch, Frankfurt (Germany)
- April 2012* Max Planck Institute (MPI) for Brain Research; invited by Prof. Gilles Laurent, Frankfurt (Germany)
- July 2011* Helmholtz Research Center; invited by Prof. Markus Diesmann, Jülich (Germany)
- July 2011* MRC Laboratory of Molecular Biology (LMB); invited by Dr. Gregory Jefferis, Cambridge (UK)
- July 2011* Microsoft Research; invited by Prof. Stephen Emmott, Cambridge (UK)
- July 2011* Friedrich Miescher Institute (FMI); invited by Dr. Karl Farrow and Dr. Botond Roska, Basel (Switzerland)
- May 2011* Hertie-Institut für klinische Hirnforschung; invited by Dr. Fahad Sultan, Tübingen (Germany)
- Mar 2011* Invited talk at 2nd NeuroML workshop by Padraig Gleeson, London (UK)
- Nov 2010* Brain Corporation, Qualcomm; invited by Dr. Eugene Izhikevich, San Diego (US)
- July 2010* Invited talk at FENS 2010 satellite meeting "*Morphology and computations of single neurons*", Amsterdam (Netherlands)
- Mar 2010* Massachusetts Institute of Technology (MIT); invited by Prof. Sebastian Seung, Boston (US)
- Jan 2010* Ernst Strüngmann Institute (ESI) for Neuroscience; invited by Prof. Pascal Fries & Prof. Wolf Singer, Frankfurt (Germany)
- June 2009* Goethe University, Clinical Neuroanatomy; invited by Prof. Thomas Deller, Frankfurt (Germany)
- Mar 2009* Okinawa Institute of Science and Technology; invited stay for three weeks with Prof. Erik de Schutter, incl. invited talk, Okinawa (Japan)
- May 2008* 47th Tutzinger Symposium "*Modelling and engineering of complex systems - from molecular assemblies to biological networks*", Tutzinger (Germany)
- Feb 2008* Joint meeting of Gatsby Computational Neuroscience Unit and Columbia University Center for Theoretical Neuroscience, New York (US)
- Jan 2004* Max Planck Institute for Mathematics in the Sciences "*neural networks and cognitive systems*" seminar series; invited by Prof. Jürgen Jost, Leipzig (Germany)
- June 2003* FU Berlin Neurobiology department; invited by Prof. Bernd Grünewald and Prof. Randolph Menzel, Berlin (Germany)

## Organised scientific events

- Feb 2023 Workshop "Big news from a tiny region: The role of hippocampal region CA2 in information processing and epilepsy" with Dr. Tristan M. Stöber and Prof. Peter Jedlicka at ESI, Frankfurt (Germany)
- June 2022 7<sup>th</sup> biennial meeting of the Rhine-Main Neuroscience Network with Prof. Jakob von Engelhardt, Dr. Niklas Pascal and Prof. Frank Jäkel, Oberwesel (Germany)
- Since 2021 Local Max Planck Neuroscience Group Leader Meetings at ESI, Frankfurt (Germany)
- July 2019 28<sup>th</sup> Annual Computational Neuroscience Meeting CNS\*2019 as one of the directors, Barcelona (Spain)
- July 2018 Official workshop of CNS\*2018, "Neuronal morphology and structure" with Dr. Alexander Bird and André Castro from my group, Seattle (USA)
- July 2018 27<sup>th</sup> Annual Computational Neuroscience Meeting CNS\*2018 as one of the directors, Seattle (USA)
- July 2017 26<sup>th</sup> Annual Computational Neuroscience Meeting CNS\*2017 as one of the directors, Antwerp (Belgium)
- July 2015 Official workshop of CNS\*2015, "Dendrite function and wiring" with Dr. Michiel Remme and Dr. Ben Torben-Nielsen, Prague (Czech Rep)
- July 2013 Official workshop of CNS\*2013, "Dendrite function and wiring" with Dr. Michiel Remme and Dr. Ben Torben-Nielsen, Paris (France)
- Oct 2012 Computational Neuroscience Social at SfN\*2012. Invited chairman and organizer, approximate attendance 350, New Orleans (US)
- July 2011 Official workshop of CNS\*2011, "Dendrite function and wiring: experiments and theory" with Dr. Michiel Remme, Dr. Ben Torben-Nielsen and Dr. Jaap van Pelt, Stockholm (Sweden)

## Selected conference attendance

\*poster or oral presentation

### International

<i>SfN</i>	Washington 2017*, Chicago 2015*, New Orleans 2012*, Washington 2011*, San Diego 2010*, Washington 2008*, New Orleans 2003*, Miami 1999
<i>CNS</i>	Leipzig 2023*, Online 2021*, 2020*, Barcelona 2019*, Seattle 2018*, Antwerp 2017*, Prague 2015*, Paris 2013*, Stockholm 2011*, Berlin 2009, Edinburgh 2006, Chicago 2002*, Bruges 2000*
<i>Cosyne</i>	Denver 2020*, Salt Lake City 2010*, 2008*
<i>FENS</i>	Amsterdam 2010, Lisbon 2004*
<i>ICMS</i>	Durham 2024*
<i>ICIV</i>	Lund 2001*

### Local

- Bernstein Conference: Berlin 2022\*, Online 2021\*, Göttingen 2017\*, Berlin 2016\*, Heidelberg 2015\*, Göttingen 2014, Tübingen 2013\*
- *RMN<sup>2</sup>* Meeting: Oberwesel 2022\*, Online 2021, Oberwesel 2014\*
- INCF: Nijmegen 2013\*
- German Anatomical Society: Frankfurt 2012\*
- UCL Computational Biology: 2011
- UCL Neuroscience: 2010\*
- EPSRC Workshop "Dendrites, Neurones and Networks": Warwick 2010\*
- UCL Gatsby Unit Quinquennial Symposium: 2010
- Hebrew University / Gatsby Unit / Columbia Workshop: New York 2008\*, 2009
- Mathematical Neuroscience: Warwick 2007
- Ein Gedi Meeting Israel: 2004, 2005\*
- ICMS Workshop on Mathematical Models of Development and Learning in the Nervous System: Edinburgh 2006
- Meeting of the Israel Society of Neuroscience in Eilat: 2004\*
- Meeting of the German Neuroscience Society in Göttingen: 2003\*, 1999

### Summer schools

- Otto Loewi International Course in Eilat 2005
- School of dendrites in Jerusalem 2005

## Supervision

### Thesis supervision

- since 2024 Andrea Stolz, **Bachelor thesis**, Bioinformatics Frankfurt. *"Modelling the morphology of microglia in the retina"*.
- 2022–2023 Bassem Hermila, **Master thesis**, INS Frankfurt. *"A mathematically consistent way to compare dendritic trees"*. 1 publication in preparation.
- 2021–2022 Sophie Schmidt-Hamkens, **Master thesis**, INS Frankfurt. *"The influence of dendritic diameters on firing rate and backpropagation"*. 2 publications in preparation.
- 2021 Verena Haas, **Master thesis**, INS Frankfurt. *"Modelling and electrophysiological analysis of dendritic diameter fluctuations in turtle cortex neurons"*. 2 publications in preparation.
- 2020–2021 Lukas Frank, **Master thesis**, INS Frankfurt. *"A model for simultaneous growth of neuronal morphologies in constrained space"*. 1 publication in preparation.
- 2020–2021 Benjamin Fani Sani, **Bachelor thesis**, Bioinformatics Frankfurt. *"Exploring relationships of scalar branching statistics over the NeuroMorpho.Org database"*. Contribution to 1 publication in preparation.
- 2015–2020 André Ferreira Castro, **PhD thesis**, Biology Frankfurt. *"Dissecting the structure and function relationship in Drosophila dendrite development with the help of computational modelling"*. **Magna cum laude**. 1 eLife publication, 1 Cell Reports, 1 in preparation.
- 2014–2020 Marvin Weigand, **PhD thesis**, Biology and Bioinformatics Frankfurt. *"Neural placement by optimization principles"*. **Magna cum laude**, 1 PNAS publication, 1 Cerebral Cortex, and 1 submitted.
- 2020 Johannes Wagner, **Bachelor thesis**, Bioinformatics Frankfurt. *"Modeling dendrite development based on self-avoidance"*.
- 2020 Aysin Yildirim, **Bachelor thesis**, Biology Frankfurt. *"Exploring the impact of ion channel diversity in simplified neuron models"*.
- 2020 Alexander Hohn, **Bachelor thesis**, Biology Frankfurt. *"Modelling a cellular connectome of the medulla in Drosophila melanogaster"*.
- 2019–2020 Santiago Escobar Martínez, **Bachelor thesis**, Frankfurt University of Applied Sciences. *"Linking cerebral parcellation to embedded graphs"*.
- 2019 David Bernhardt, **Bachelor thesis**, Bioinformatics Frankfurt. *"Morphological modelling of a maturing population of periglomerular cells in the olfactory bulb"*.
- 2018–2019 Nathalie Schmidt, **Master thesis**, Bioinformatics Frankfurt. *"A simple layered cortex model determined by optimal synapse placement"*.
- 2018–2019 Marius Schneider, **Master thesis**, Physics Frankfurt. *"High dimensional ion channel composition in dentate granule cell models"*. 1 publication in Neuron, 1 submitted. (Now: IMPRS PhD student)

- 2018 Maren Katrin Philipps, **Bachelor thesis**, Biology Bonn. *"Modelling dendritic arborisation neuron morphology"*. With Gaia Tavano. 1 publication in Cell Reports.
- 2018 Laura Mediavilla, **Master thesis**, INS Frankfurt. *"Dendritic structural degeneration in Alzheimer's disease preserves input-output function"*. 1 publication in preparation, 1 in Neuron. Best Msc INS 2018. (Now: Wellcome Trust PhD student, Bristol)
- 2017–2018 Moritz Groden, **Master thesis**, Physics Frankfurt. *"Gyrification of the brain based on optimal wiring"*. 1 publication in Cerebral Cortex. (Now: PhD student in Giessen)
- 2012–2017 Marcel Beining, **PhD thesis**, IMPRS Frankfurt. *"On the structural maturation, plasticity, function and computation of adult-born hippocampal granule cells"*. **Magna cum laude**, 6 publications of which 1 PNAS, 1 eLife, 1 Neuron. With Dr. Stephan Schwarzacher, Dr. Peter Jedlicka and Prof. Thomas Deller. (Then post-doc with Dr. Moritz Helmstädter)
- 2017 Adonay Gebrehiwot, **Master thesis**, INS Frankfurt. *"Developmental model of retinal ganglion cells"*. (Now: MEXT PhD student fellowship at U Tokyo).
- 2017 Lisa Hilde Deters, **Master thesis**, INS Frankfurt. *"Neuronal connectivity through axonal and dendritic arborizations"*. 1 publication Cerebral Cortex.
- 2016–2017 Alexandra Vormberg, **Master thesis**, INS Frankfurt. *"Branching statistics of neuronal dendrites"*. 1 publication in PLoS CB. (Then: IMPRS PhD student)
- 2015 Christian Ebner, **Master thesis**, INS Frankfurt. *"Simulating synaptic plasticity in detailed neuron models"*. 1 publication Cell Reports. With Dr. Peter Jedlicka. (Now: NeuroCure PhD student in Berlin)
- 2005–2011 Friedrich Förstner, **Diploma thesis** and **PhD thesis**, Bioinformatics, München. Diploma thesis: *"Modeling the neuroanatomy of interneurons in the visual system of the fly calliphora vicina"*. PhD thesis: *"The morphological identity of insect dendrites"*. **Magna cum laude**, 8 publications e.g. Current Biology, PNAS, Nature Medicine. With Prof. Alexander Borst. (Then: Head of Sensors & Data Science at BRAGI)
- 2006–2007 Elena Phoka, **Master thesis**, MRC London. *"The Phase response curves of cerebellar Purkinje cells"*. 1 publication in PLoS CB. With Prof. Michael Häusser.
- 2006 Franz Weber, **Master thesis**, GSN at LMU München. 1 publication. With Prof. Alexander Borst. (Now Professor at University of Pennsylvania)

### INS MSc Rotations (Frankfurt)

<sup>M</sup>Subsequent MSc in the lab

Kiana Kafi Cheraghi (2024), Kimia Kafi Cheraghi (2024), J Schwarzpaul (2023), R Gualdi (2023), Z Rönna (2022), T Zhao (2022), I Nurlygaianov (2022), B Adiraju (2022), J Guldan (2021), C Bialek (2021), B Mert (2021), Y Behery (2021), S Schmidt-Hamkens (2020)<sup>M</sup>, N Nadeem Khan (2020), B Hermila (2020)<sup>M</sup>, I Glukhova (2020), V Haas (2020)<sup>M</sup>, N Hein (2020), L Eicke (2020), J Oh (2020), M Zaitsev (2020), S Waas (2020), J Motreedja (2019), M Wolter (2019), L Frank



(2019)<sup>M</sup>, S Nabiyeva (2018), N Almeida (2018), A Yotova (2018), R Hamatnurova (2018), A Kohli (2018), L Hansmeyer (2017), D Hain (2017), L Mediavilla (2016)<sup>M</sup>, N Omega Cipta Subrata (2016), J Krebs (2016), A Gebrehiwot (2016)<sup>M</sup>, N Seeliger (2016), J Pastyrik (2016), M Mohan (2016), J Hofmann (2016), A Vijikumar (2015), L Deters (2015)<sup>M</sup>, S Rodríguez Rozada (2015), S Jaganath (2015), J Muellerleile (2015), A Vormberg (2015)<sup>M</sup>, B Schaffran (2014), H Moessinger (2014), S Krischok (2014, with Peter Jedlicka and Marcel Beining), J Kasper (2013, with Peter Jedlicka), I Isik (2013, with Peter Jedlicka), C Ebner (2013, with Peter Jedlicka)<sup>M</sup>, C Barnes (2011, with Peter Jedlicka), D Kefalas (2011, with Peter Jedlicka)

### **BSc Rotations (Frankfurt)**

<sup>B</sup>Subsequent BSc in the lab

J Lanz (2024), A Mendzheritskaya (2024), A Stolz (2023)<sup>B</sup>, B Fani Sani (2019)<sup>B</sup>, M Jüngling (2019), A Yildirim (2018)<sup>B</sup>, A Hohn (2018)<sup>B</sup>, F Knop (2018), S E Martinez (2018)<sup>B</sup>

### **IMPRS PhD Rotations (Frankfurt)**

A Miguel (2020), T Katsanevaki (2017), F Hoffmann (2016, 1 publication in Neuron), F Sartori (2016, 1 publication in PNAS)

### **Wellcome Trust PhD Rotations (University College London)**

L Beeren (2007, with Michael Häusser), S Burnett (2005, with Michael Häusser)

### **Guest students**

Z Sun (2024, Krembil Research Institute, Toronto), D Hukic (2022, Frankfurt), D Savran (2021, Frankfurt), A Marishi (2019–2020, Frankfurt), J Wagner (2018–2019, Frankfurt), L Antón-Sánchez (2016, Cajal Institute, Madrid, 1 publication PLoS CB), O Gonzalez (2016, UT San Antonio), H Nedelescu (2011, Okinawa Institute for Science and Technology)

### **High school interns**

Z Tianyi Zhou (2024), J Gloede (2022), F Schwarzacher (2018), R Bouzrou (2013)

### **External Msc thesis examiner**

N Hein (2021–2022), A Röth (2021), L Schultheis (2020), S Becker (2020), S S Jhutti (2019)

### **Thesis advisory committee (TAC)**

M Vezir (PhD, 2022–2023), M Renard (PhD, since 2021), F Sartori (IMPRS PhD, 2017–2021)

### **External PhD exams**

*Nov 2020* **Examiner**, Eleftherios Zizis, Ecole Polytechnique Fédérale de Lausanne, PhD student of Prof. Henry Markram

*Jan 2018* **President**, Linus Manubens-Gil, Universitat Pompeu Fabra Barcelona, PhD student of Prof. Mara Dierssen

*Dec 2017* **Examiner**, Lida Kanari, Ecole Polytechnique Fédérale de Lausanne, PhD student of Prof. Henry Markram

## Community work

- Since 2023* **Representative** (elected), scientific council of the Max Planck Society
- Since 2019* **Associate editor**, now **Academic editor**, PLoS Computational Biology
- 2017–2018* **Guest editor**, PLoS Computational Biology
- 2017–2019* **Director**, Organization for Computational Neurosciences (OCNS)
- Since 2017* **Jury member**, Deutsche Neurowissenschaften-Olympiade
- Since 2017* **Member**, Interdisciplinary Center for Neuroscience Frankfurt (ICNF)
- Since 2017* **Coordination Assistant** for Bernstein Network, representing Frankfurt am Main
- 2016–2020* **Associate editor**, Frontiers in Neuroanatomy
- 2016–2023* **Member**, German Association of University Professors and Lecturers (Deutscher Hochschulverband, DHV)
- Since 2016* **Editorial board**, Matters
- Since 2014* **Member**, Bernstein Network
- Since 2014* **Member**, Rhine-Main Neuroscience Network (rmn<sup>2</sup>)
- 2014–2015* **Member of selection committee**, Brains for Brains Award

## Review editor for (selected)

~ 80 reviews are verified and can be checked on Publons

## Journals

Nature, Nature Neuroscience, Nature Methods, Neuron, PNAS, Science Advances, Current Biology, Cell Reports, eLife, PLoS Biology, PLoS Computational Biology, PLoS One, Current Research in Neurobiology, Cerebral Cortex, Journal of Neurophysiology, Journal of Physiology, Brain Structure and Function, Frontiers in Cellular Neuroscience, Frontiers in Neuroanatomy, Biological Cybernetics, Neuroinformatics, Communications Biology, Scientific Reports, MethodsX, Neuroscience, Neuroscience Letters, Journal of Computational Neuroscience, Neural Computation, Journal of Neuroscience Methods, Journal of Mathematical Neuroscience

## Grants

European Research Council (ERC), ERA-Net of the European Union, Air Force Office of Scientific Research, Dutch Research Council (NWO), German Research Foundation (DFG), French National Research Agency (ANR)

## Other

EU advanced course in computational neuroscience, CNS\*2021, CNS\*2020, CNS\*2019, CNS\*2018, CNS\*2013, CNS\*2012; Bernstein Network, SMARTSTART 2019, 2018

## Civil service

2002 McKinsey award “start social” for a project to build an international house, München (Germany)

1993–1994 Terre des Hommes – Civil service in an intercultural kindergarten, Wiesbaden (Germany)

## Personal

### Languages

English, French, German, basic Dutch

### Selected activities

Opera singing (2004–2005: student of Cilla Grossmeyer and Zvi Semel), Piano, Painting.