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Institute of Neuroscience and Medicine (INM-6)
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Curriculum Vitae

Academic background:

- 1996–2002 studies in Physics at
- Technical University Berlin, Germany (1996–1997)
 - Ernst-Moritz-Arndt University Greifswald, Germany (1997–1998)
 - Georg-August-University Göttingen, Germany (1998–2002)
- 2002 diploma in Physics, Dept. of Nonlinear Dynamics, Georg-August University, Göttingen, Germany
- 2002–2007 PhD studies in Computational Neuroscience (supervisors: Markus Diesmann, Ad Aertsen, Theo Geisel) at
- Dept. of Nonlinear Dynamics, MPI for Fluid Dynamics, Göttingen, Germany (2002–2004)
 - Computational Neurophysics, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany (2004–2005)
 - Bernstein Center for Computational Neuroscience, Albert-Ludwigs University, Freiburg, Germany (2006–2007)
- 2007 PhD in Computational Neuroscience/Biology (“summa cum laude”; thesis title: “Correlation dynamics in cortical networks”; reviewers: Ad Aertsen, Stefan Rotter), Bernstein Center for Computational Neuroscience, Albert-Ludwigs University, Freiburg, Germany

Research positions:

- since 2011 Researcher at Inst. of Neuroscience and Medicine (INM-6), Computational and Systems Neuroscience, and Inst. for Advanced Simulation (IAS-6), Theoretical Neuroscience, Jülich Research Centre and JARA, Jülich, Germany
- 2007–2011 Postdoctoral Fellow at Inst. of Mathematical Sciences and Technology (IMT), Norwegian University of Life Sciences (UMB), Ås, Norway
- 2005–2007 Research Assistant at Bernstein Center for Computational Neuroscience Freiburg, Albert-Ludwigs University, Freiburg, Germany
- 2004 Research Assistant at Computational Neurophysics group, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany
- 2002–2004 Research Assistant at Dept. of Nonlinear Dynamics, MPI for Fluid Dynamics, Göttingen, Germany

Research topics:

- relation between structure, dynamics and function of neuronal networks
 - computational performance of neural networks
 - effect of network topology and heterogeneity on population dynamics
 - dynamics and structure of correlations in recurrent neural networks
 - unraveling network structure by analysis of neuronal data
- relation between microscopic and macroscopic neural-network dynamics
 - response properties of single neurons in experiments and theory
 - mean-field dynamics of neuronal networks
 - interpretation of neuronal mass data (modelling extracellular potentials)
- mathematical modeling of neurodegenerative diseases (Parkinson, Alzheimer)

Techniques/Tools:

- mathematics: dynamical systems, probability theory, point processes, graph theory
- theoretical physics: statistical physics
- numerics: Python, Matlab, C, C++, NEST

Languages:

- German (mother tongue)
- English (fluent in speech and writing)
- Norwegian (basics)

Workshops and courses:

January 2017 – January 2018	Development program for employees in leading and project-management positions, Jülich Research Centre, Jülich, and GHS Partner, Munich
June/July 2008	“Okinawa Computational Neuroscience Course”, Okinawa, Japan (as tutor)
June 9–13 2008	“Using Python for Computational Neuroscience”, FACETS Student Workshop, BCCN Freiburg, Freiburg, Germany
August 2005	“EU Advanced course in Computational Neuroscience” in Arcachon, France (as tutor)
September 2004	“Course on Computational Neuroscience”, MPI of Dynamics and Self-Organization Göttingen, Germany
August 2000	“Electrophysiology in living brain slices”, Dept. of Neurobiology and Biophysics, University Freiburg, Germany

Teaching:

Courses¹

winter term, 2016/17	co-lecturer of course “Introduction to Computational Neuroscience” (theory lectures + Python exercises), RWTH Aachen University, Germany
summer term, 2016	co-lecturer of course “Theoretical neuroscience - Correlation structure of neuronal networks” (theory lectures + math exercises), RWTH Aachen University, Germany
winter term, 2015/16	co-lecturer of course “Introduction to Computational Neuroscience” (theory lectures + Python exercises), RWTH Aachen University, Germany

¹for details, see <http://tomtetzlaff.de/teaching.html>

August 3-9, 2015	lecturer at 2 nd HBP school on Future Computing (lectures on “Single-neuron models” and “Simulation of single-neuron models”), Obergurgl, Austria
summer term, 2015	co-lecturer of course “Theoretical neuroscience - Correlation structure of neuronal networks” (theory lectures + math exercises), RWTH Aachen University, Germany
winter term, 2014/15	co-lecturer of course “Introduction to Computational Neuroscience” (theory lectures + Python exercises), RWTH Aachen University, Germany
summer term, 2014	co-lecturer of course “Theoretical neuroscience - Correlation structure of neuronal networks” (theory lectures + math exercises), RWTH Aachen University, Germany
winter term, 2013/14	co-lecturer of course “Introduction to Computational Neuroscience” (theory lectures + Python exercises), RWTH Aachen University, Germany
summer term, 2013	co-lecturer of course “Theoretical neuroscience - Correlation structure of neuronal networks” (theory lectures + math exercises), RWTH Aachen University, Germany
winter term, 2012/13	co-lecturer of course “Introduction to Computational Neuroscience” (theory lectures + Python exercises), RWTH Aachen University, Germany
February 14-17, 2012	co-lecturer of course “Introduction to Computational Neuroscience”, RWTH Aachen University, Germany
February 14-17, 2012	tutor at course “Introduction to Scientific Programming” (Python), RWTH Aachen University, Germany
September 20, 2011	lecture “Cortical networks: Background and simple models” + exercises at course “Simulation of Biological Neural Networks”, Bernstein Center Freiburg, Germany
winter term 2011	lecturer and organiser of course “Mathematical Neuroscience” (FYS386), Inst. of Mathematical Sciences and Technology, Norwegian University of Life Sciences, Ås, Norway
June 7th, 2010	lecture on “Associative memory” within the course “Faszination Gehirn” for Bachelor students in Biology, BCCN Freiburg, Germany
winter term 2010	lecturer and organiser of course “Mathematical Neuroscience” (FYS386), Inst. of Mathematical Sciences and Technology, Norwegian University of Life Sciences, Ås, Norway
winter term 2008	lecturer and organiser of course “Mathematical Neuroscience” (FYS386), Inst. of Mathematical Sciences and Technology, Norwegian University of Life Sciences, Ås, Norway
October 2006	tutor for exercises in “Neurophysiology I: Measurement and Analysis of Neuronal Activity”, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs-University, Freiburg, Germany
August 2006	co-lecturer of course “Simulation of biological neural networks” (2 weeks), Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany
summer term 2006	co-lecturer “Introduction to Neurobiology and Biophysics II: Computational Neuroscience”, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg
summer term 2004	tutor for exercises in “Introduction to Neurobiology and Biophysics IV: Signals and Systems”, lecture by Prof. Ad Aertsen, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany
July 2005	contribution to course “Simulation of biological neural networks” (2 weeks), Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany
summer term 2005	co-lecturer “Introduction to Neurobiology and Biophysics II: Computational Neuroscience”, Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany

March 2004 contribution to course "Simulation of biological neural networks" (2 weeks), Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany

winter term 2003/04 tutor for exercises in "Thermodynamics and statistical mechanics", lecture in Theoretical Physics by Prof. Annette Zippelius, University Göttingen, Germany

April 2003 contribution to course "Simulation of biological neural networks" (2 weeks), Dept. of Neurobiology & Biophysics, Biology III, Albert-Ludwigs University, Freiburg, Germany

October 2002 "Göttinger Woche", yearly lecture (2h) on theoretical neurobiology for high schools, Dept. of Nonlinear Dynamics, MPI for Fluid Dynamics, Göttingen, Germany

winter term 2001/02 contribution to "Biophysics Laboratory", Göttingen, Germany

Summer schools

January 20-28, 2012 lecturer and tutor at the 4th Latin American School on Computational Neuroscience (LASCON IV), University of Sao Paulo, Ribeirao Preto, Brazil

June/July 2008 tutor at the "Okinawa Computational Neuroscience Course 2008", Okinawa, Japan

August 2005 tutor at the "EU Advanced course in Computational Neuroscience" in Arcachon, France

Student supervision

since January 2017 supervision of PhD student Daniel Biermann

2015–2016 supervision of Master student Daniel Biermann (thesis title: "Probabilistic Computations in Neural Networks with Stochastic Synapses")

since November 2014 supervision of PhD student Robin Pauli

2014–2016 supervision of PhD student Jyotika Bahuguna (thesis title: "Structure-dynamics relationship in basal ganglia: Implications for brain function")

since April 2014 supervision of PhD student Karolína Korvasová

since September 2013 supervision of PhD student Jakob Jordan

since December 2012 supervision of PhD student David Dahmen

2012–2013 supervision of Master student Jakob Jordan (thesis title: "Deterministic recurrent networks as a source of uncorrelated noise for functional neural systems")

2008–2009 co-supervision of PhD student Eilen Nordlie (thesis title: "Contributions to neuronal network modeling and the investigation of rate-based models of the visual system")

2005–2006 co-supervision of Diploma student David Reichert (thesis title: "Modeling the dynamics of higher-order correlations in feed-forward networks")

2003–2004 co-supervision of Diploma student Daniel Schöner (thesis title: "Analysis of the correlation structure in realistic cortical networks")

2002–2003 co-supervision of Diploma student Michael Buschermöhle (thesis title: "Latenzvariabilität synchroner Spikeaktivität in kortikalen Netzwerken")

Grant applications:

- 2012 co-author (PI) of DFG (German Research Foundation) grant proposal “Klinische Forschergruppe 219, Basalganglien-Kortex-Schleifen: Mechanismen pathologischer Interaktionen und ihrer therapeutischen Modulation” (Clinical Research Group 219, Basal-Ganglia-cortex loops: Mechanisms of pathological interactions and their therapeutic modulation), subproject 9: “Mathematische Modellierung der Entstehung und Suppression pathologischer Aktivitätszustände in den Basalganglien-Kortex-Schleifen” (Mathematical modelling of the generation and suppression of pathological states in the basal-ganglia-cortex loops) (granted)
- 2012 co-author (PI) of a collaborative research project “Structure, dynamics and function of the septo-hippocampal network in Alzheimer’s disease” between the German Center for Neurodegenerative Diseases (DZNE) and the Research Center Jülich (INM-6) (granted)
- 2005 co-author of BMBF (German ministry of education and research) grant proposal “Neurocognitive Mechanisms of Reward-Based Learning: Implications for Basal Ganglia and Prefrontal Dysfunction”, project “Spatio-Temporal Neural Activity in the Frontostriatal System during Reward-Based Association Learning” (granted)

Symposia/Tutorials:

- July 2013 co-organiser of tutorials at 22nd Annual Computational Neuroscience Meeting (CNS*2013), Paris, France
- July 2012 co-organiser of tutorials at 21st Annual Computational Neuroscience Meeting (CNS*2012), Atlanta/Decatur, USA
- March 2009 organiser of symposium “The fine-scale structure of the cortical network: implications for its dynamics and function” at the 8th Meeting of the German Neuroscience Society in Göttingen, Germany

Peer Reviews:

- Brain Research
- Frontiers in Computational Neuroscience
- Frontiers in Neuroscience
- Journal of Computational Neuroscience
- Journal of the Royal Society Interface
- Network: Computation in Neural Systems
- Neural Computation
- Neurocomputing
- PLoS Computational Biology

Invited talks:

- November 12th 2016 “Computational Neuroscience meets Neuromorphic Computing”, JARA FIT Science Days, Schleiden, Germany
- September 21st 2016 “Effect of Alzheimer’s disease on the dynamics and computational performance of recurrent neural networks”, Bernstein Conference 2016, workshop “Network mechanisms underlying brain dysfunction”, Berlin, Germany
- October 14th 2015 “Effect of Alzheimer’s disease on the dynamics and computational performance of recurrent neural networks”, workshop “Computational Neuroscience and the Hybrid Brain”, Freiburg, Germany

April 2nd 2015	“Deterministic neural networks as sources of uncorrelated noise for probabilistic computation”, EITN SP4-SP9 meeting (theory/neuromorphic workshop), Paris, France
July 18th 2013	“Decorrelation of neural-network activity by inhibitory feedback: Mechanism and applications”, 22nd Annual Computational Neuroscience Meeting (CNS*2013), workshop “Functional role of correlations: theory and experiment”, Paris, France
March 23rd 2012	“How local is the local-field potential?”, 2nd BrainscaleS plenary meeting, Jülich, Germany
January 26th 2012	“Decorrelation of neural-network activity by inhibitory feedback”, IV Latin American School on Computational Neuroscience (LASCON IV), University of Sao Paulo, Ribeirao Preto, Brazil
December 16th 2011	“Decorrelation of neural-network activity by inhibitory feedback”, Seminar Cycle on Computational and Systems Neuroscience, Centre de Recerca Matemàtica (CRM) & Institut d’Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain
June 21st 2011	“A tribute to Fridtjof Nansen: Modelling glacier calving by neural networks”, Biannual meeting of the Norwegian Physical Society, University of Oslo, Norway
May 12th 2011	“Calving dynamics of tidewater glaciers”, Joint BCCN Freiburg-Berlin Workshop on Point Processes in Neuroscience, Freiburg, Germany
May 6th 2011	“Decorrelation of neural-network activity by inhibitory feedback”, MPI for Biological Cybernetics, Tübingen, Germany
July 30th 2010	“Extraction of population models from spiking neurons”, workshop “Methods in Neuroinformatics” at the Nineteenth Annual Computational Neuroscience Meeting (CNS*2010), San Antonio, USA
July 25th 2010	“Decorrelation of neural-network activity by inhibitory feedback”, Nineteenth Annual Computational Neuroscience Meeting (CNS*2010), San Antonio, USA
June 9th 2010	“Decorrelation of neural-network activity by inhibitory feedback”, Bernstein seminar, BCCN Freiburg, Germany
November 26th 2009	“Rate dynamics of leaky integrate-and-fire neurons with strong synapses”, Kongsberg vision meeting, Kongsberg, Norway
July 13th 2009	“How local is the local-field potential?”, Brainworks 2009, Annual group retreat of the BCCN Freiburg, Schloss Beugen, Rheinfelden/Baden, Germany
July 2008	“From spiking networks to population models”, RIKEN BSI Forum, RIKEN Brain Science Institute, Wakoshi, Japan
May 15th 2008	“From single neuron dynamics to population models”, Bernstein Seminar, Bernstein Center for Computational Neuroscience Freiburg, Germany
October 2006	“Time scale dependence of neuronal correlations”, 2nd Bernstein Symposium for Computational Neuroscience, Bernstein Center for Computational Neuroscience Berlin, Germany
May 2006	“Time scale dependence of neuronal correlations”, Bernstein Center for Computational Neuroscience Berlin, Germany
November 2005	“Interactions between cortical feed-forward and recurrent random networks”, Max-Planck Institute for Mathematics in the Sciences, Leipzig, Germany
October 2005	“Interactions between feed-forward and recurrent random networks”, 1st Bernstein Symposium for Computational Neuroscience and Inauguration of the BCCN Freiburg, Bernstein Center for Computational Neuroscience Freiburg, Germany
March 2005	“Auto-correlation independent cross-correlation measures”, 3d Project meeting BMBF-DIPF1.2 (Compositionality: Neuronal basis of complex behaviour), Weizmann Institute of Science, Rehovot, Israel

- October 2004 “Correlation measures for non-Poissonian spike trains” and “Oscillations in balanced networks: causes, consequences and cures”, 2nd Project meeting BMBF-DIPF1.2 (Compositionality: Neuronal basis of complex behaviour), Dept. of Non-linear Dynamics, MPI for Fluid Dynamics Göttingen, Germany
- July 2004 “Feed-forward synchronisation in cortical network models”, Neuroinformatics and Theoretical Neuroscience, Neurobiology Department of the Inst. for Biology, Freie Universität Berlin, Germany
- October 2003 “Measuring correlations in spike data”, BrainWorks2003, Emmendingen, Dept. of Neurobiology and Biophysics, University Freiburg, Germany
- October 2003 “Embedded precision”, First Northern Island Seminar, Baltrum, Institute for Theoretical Neurophysics, University Bremen, Germany
- June 2003 “Consequences of realistic network size on the stability of embedded synfire chains”, Computational Neuroscience Meeting, Alicante, Spain
- June 2003 “Consequences of realistic network size on the stability of embedded synfire chains” and “Latency variability of synchronous spiking emerging from subthreshold activation”, workshop “Self-Organization of Synfire Networks as a Substrate for Higher Brain Function”, Dept. of Neurobiology and Biophysics, University Freiburg, Germany
- October 2001 “Asynchronous excitation of synfire activity”, BrainWorks2001, Gütenbach, Dept. of Neurobiology and Biophysics, University Freiburg, Germany
- August 2000 “The ground state of synfire structures”, Dept. of Neurobiology and Biophysics, University Freiburg, Germany

Publications:

Peer-reviewed articles:

- 2017 Bahuguna J., **Tetzlaff T.**, Kumar A., Hellgren Kotaleski J., Morrison A. (2017), Homologous basal ganglia network models in physiological and Parkinsonian conditions, *Frontiers in Computational Neurosciences* 11:79. doi:10.3389/fncom.2017.00079
- 2016 Hagen E., Dahmen D., Stavrinou M.L., Lindén H., **Tetzlaff T.**, van Albada S.J., Grün S., Diesmann M., Einevoll G.T. (2016), Hybrid scheme for modeling local field potentials from point-neuron networks, *Cerebral Cortex* 26(12):4461–4496 doi:10.1093/cercor/bhw237
- Pfeil T., Jordan J., **Tetzlaff T.**, Grübl A., Schemmel J., Diesmann M., Meier K. (2016), Effect of heterogeneity on decorrelation mechanisms in spiking neural networks: A neuromorphic-hardware study, *Physical Review X* 6(2):021023, doi:10.1103/PhysRevX.6.021023
- 2014 Pettersen K.H., Lindén H., **Tetzlaff T.**, Einevoll G.T. (2014), Power laws from linear neuronal cable theory: power spectral densities of the soma potential, soma membrane current and single-neuron contribution to the EEG, *PLoS Computational Biology* 10(11):e1003928, doi:10.1371/journal.pcbi.1003928
- Kriener B., Enger H., **Tetzlaff T.**, Plesser H., Gewaltig M., Einevoll G.T. (2014), Dynamics of self-sustained asynchronous-irregular activity in random networks of spiking neurons with strong synapses, *Frontiers in Computational Neuroscience* 8:136, doi:10.3389/fncom.2014.00136
- Chapuis A. & **Tetzlaff T.** (2014), The variability of tidewater-glacier calving: origin of event-size and interval distributions, *Journal of Glaciology* 60(222):622–634, doi:10.3189/2014JoG13J215
- Helias M., **Tetzlaff T.**, Diesmann M. (2014), The correlation structure of local neuronal networks intrinsically results from recurrent dynamics, *PLoS Computational Biology* 10(1):e1003428, doi:10.1371/journal.pcbi.1003428

- 2013 Grytskyy D., **Tetzlaff T.**, Diesmann M., Helias M. (2013), A unified view on weakly correlated recurrent networks, *Frontiers in Computational Neuroscience* 7:131, doi:10.3389/fncom.2013.00131
- Łęski S., Lindén H., **Tetzlaff T.**, Pettersen K.H., Einevoll G.T. (2013), Frequency dependence of signal power and spatial reach of the local field potential, *PLoS Computational Biology* 9(7):e1003137, doi:10.1371/journal.pcbi.1003137
- Heiberg T., Kriener B., **Tetzlaff T.**, Casti A., Einevoll G.T., Plesser H.E. (2013), Firing-rate models capture essential response dynamics of LGN relay cells, *Journal of Computational Neuroscience* 35(3):359–375, doi:10.1007/s10827-013-0456-6
- Helias M., **Tetzlaff T.**, Diesmann M. (2013), Echoes in correlated neural systems, *New Journal of Physics* 15(2):023002, doi:10.1088/1367-2630/15/2/023002
- 2012 Yousaf M., Wyller J., **Tetzlaff T.**, Einevoll G.T. (2012), Effect of localized input on bump solutions in a two-population neural-field model, *Nonlinear Analysis: Real World Applications* 14(2):997-1025, doi:10.1016/j.nonrwa.2012.08.013
- Tetzlaff T.**, Helias M., Einevoll G.T., Diesmann M. (2012), Decorrelation of neural-network activity by inhibitory feedback, *PLoS Computational Biology* 8(8):e1002596, doi:10.1371/journal.pcbi.1002596
- 2011 Lindén H., **Tetzlaff T.**, Potjans T.C., Pettersen K.H., Grün S., Diesmann M., Einevoll G.T. (2011), Modeling the spatial reach of the LFP, *Neuron* 72(5):859–872, doi:10.1016/j.neuron.2011.11.006
- Oleynik A., Wyller J., **Tetzlaff T.**, Einevoll G.T. (2011), Stability of bumps in a two-population neural-field model with quasi-power temporal kernels, *Nonlinear Analysis: Real World applications* 12:3073–3094, doi:10.1016/j.nonrwa.2011.05.008
- 2010 Nordlie E., **Tetzlaff T.**, Einevoll G.T. (2010), Rate dynamics of leaky integrate-and-fire neurons with strong synapses, *Frontiers in Computational Neuroscience* 4:149, doi:10.3389/fncom.2010.00149
- 2009 Boucsein C., **Tetzlaff T.**, Meier R., Aertsen A., Naundorf B. (2009), Dynamical response properties of neocortical neuron ensembles: multiplicative versus additive noise, *Journal of Neuroscience* 29(4):1006–1010, doi:10.1523/JNEUROSCI.3424-08.2009
- 2008 **Tetzlaff T.**, Rotter S., Stark E., Abeles M., Aertsen A., Diesmann M. (2008), Dependence of neuronal correlations on filter characteristics and marginal spike-train statistics, *Neural Computation* 20(9):2133–2184, doi:10.1162/neco.2008.05-07-525
- Kriener K., **Tetzlaff T.**, Aertsen A., Diesmann M., Rotter S. (2008), Correlations and population dynamics in cortical networks, *Neural Computation* 20(9):2185–2226, doi:10.1162/neco.2008.02-07-474
- 2004 **Tetzlaff T.**, Morrison A., Geisel T., Diesmann M. (2004), Consequences of Realistic Network Size on the Stability of Embedded Synfire Chains, *Neurocomputing* 58-60:117–121, doi:10.1016/j.neucom.2004.01.031
- 2003 **Tetzlaff T.**, Buschermöhle M., Geisel T., Diesmann M. (2003), The spread of rate and correlation in stationary cortical networks, *Neurocomputing* 52-54:949–954, doi:10.1016/S0925-2312(02)00854-8
- 2002 **Tetzlaff T.**, Geisel T., Diesmann M. (2002), The Ground State of Cortical Feed-Forward Networks, *Neurocomputing* 44-46:673–678, doi:10.1016/S0925-2312(02)00456-3

Book chapters:

- 2012 Einevoll G.T., Lindén H., **Tetzlaff T.**, Łęski S., Pettersen K. (2012), Local field potentials: biophysical origin and analysis, in Quiroga & Panzeri (ed.), *Principles of Neural Coding*, Taylor & Francis, ISBN: 9781439853306
- 2010 **Tetzlaff T.** & Diesmann M. (2010), Dependence of spike-count correlations on spike-train statistics and observation time-scale, in Grün S. & Rotter S. (ed.), *Analysis of parallel spike trains*, Springer, Berlin, ISBN: 9781441956743, doi:10.1007/978-1-4419-5675-0_6

Conference contributions:

- 2016 Bahuguna J., **Tetzlaff T.**, Kumar A., Kotaleski J.H., Morrison A. (2016), Functional classification of homologous networks in basal ganglia, BMC Neuroscience 2016 17(Suppl 1):P121, 25th Annual Computational Neuroscience Meeting (CNS*2016), Jeju, South Korea
- Jordan J., Pfeil T., **Tetzlaff T.**, Gruebl A., Schemmel J., Diesmann M., Meier K. (2016), The effect of heterogeneity on decorrelation mechanisms in spiking neural networks: a neuromorphic-hardware study, 9th Bernstein Sparks Workshop: Recent advances in recurrent network theory: fluctuating correlated dynamics across scales, Göttingen, Germany
- 2015 Hagen E., Dahmen D., Stavrinou M., Lindén H., **Tetzlaff T.**, Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2015), Hybrid scheme for modeling local field potentials from point-neuron networks, BMC Neurosci. 2015 16(Suppl 1):P67, 24th Annual Computational Neuroscience Meeting (CNS*2015), Prague, Czech Republic, doi:10.1186/1471-2202-16-S1-P67
- Jordan J., Petrovici M., Pfeil T., Breitwieser O., Bytschok I., Bill J., Gruebl A., Schemmel J., Meier K., Diesmann M., **Tetzlaff T.** (2015), Deterministic neural networks as sources of uncorrelated noise for probabilistic computations, BMC Neurosci. 2015 16(Suppl 1):P62, 24th Annual Computational Neuroscience Meeting (CNS*2015), Prague, Czech Republic, doi:10.1186/1471-2202-16-S1-P62
- Hagen E., Dahmen D., Stavrinou M., Lindén H., **Tetzlaff T.**, Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2015), Hybrid scheme for modeling local field potentials from point-neuron networks, 11th Göttingen meeting of the German Neuroscience Society, Göttingen, Germany
- Jordan J., Pfeil T., **Tetzlaff T.**, Gruebl A., Schemmel J., Diesmann M., Meier K. (2015), The effect of heterogeneity on decorrelation mechanisms in spiking neural networks: a neuromorphic-hardware study, 11th Göttingen meeting of the German Neuroscience Society, Göttingen, Germany
- Bachmann C., **Tetzlaff T.**, Kunkel S., Morrison A. (2015), Effect of Alzheimer disease on the dynamical and computational characteristics of recurrent neural networks, 11th Göttingen meeting of the German Neuroscience Society, Göttingen, Germany
- Jordan J., **Tetzlaff T.**, Petrovici M., Pfeil T., Breitwieser O., Bytschok I., Bill J., Schemmel J., Meier K., Diesmann M. (2015), Probabilistic computing based on noise generated by deterministic neural networks, Bernstein Conference 2015, Heidelberg, Germany, doi:10.12751/nncn.bc2015.0021
- Tetzlaff T.**, Hagen E., Dahmen D., Stavrinou M., Lindén H., Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2015), Hybrid scheme for modeling local field potentials from point-neuron networks, 2nd International Symposium of the Clinical Research Group 219, Cologne, Germany
- 2014 Dahmen D., Hagen E., Stavrinou M., Lindén H., **Tetzlaff T.**, Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2014), Computing local-field potentials based on a point-neuron network model of cat V1, SFN Neuroscience 2014, Washington D.C., USA

2013

Tetzlaff T., Jordan J., Petrovici M., Breitwieser O., Bytschok I., Bill J., Schemmel J., Meier K., Diesmann M. (2014), Neural networks as sources of uncorrelated noise for functional neural architectures, 10th Bernstein Conference 2014, Göttingen, Germany, doi:10.12751/nncn.bc2014.0133

Pfeil T., Jordan J., **Tetzlaff T.**, Grübl A., Schemmel J., Diesmann M., Meier K. (2014), Decorrelation of neural-network activity on heterogeneous neuromorphic hardware, 10th Bernstein Conference 2014, Göttingen, Germany, doi:10.12751/nncn.bc2014.0221

Lindén H., **Tetzlaff T.** (2014), Conditions for fluctuation-driven attractor states and the role of inhibition, 10th Bernstein Conference 2014, Göttingen, Germany, doi:10.12751/nncn.bc2014.0274

Bachmann C., **Tetzlaff T.**, Kunkel S., Bamberger P., Morrison A. (2013), Impact of Alzheimer's disease on the computational and dynamical properties of recurrent neural circuits, Bernstein Conference 2013, Tübingen, Germany, doi:10.12751/nncn.bc2013.0162

Dahmen D., Hagen E., Stavrinou M.L., Lindén H., **Tetzlaff T.**, Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2013), From spiking point-neuron networks to LFPs: a hybrid approach, Bernstein Conference 2013, Tübingen, Germany, doi:10.12751/nncn.bc2013.0059

Hagen E., Stavrinou M.L., Lindén H., Dahmen D., **Tetzlaff T.**, Albada S.v., Grün S., Diesmann M., Einevoll G.T. (2013), Hybrid scheme for modeling LFPs from spiking cortical network models, *Frontiers in Neuroinformatics*, Conference Abstract: Neuroinformatics 2013, doi:10.3389/conf.fninf.2013.09.00117

Bachmann C., **Tetzlaff T.**, Kunkel S., Bamberger P., Morrison A. (2013), Effect of Alzheimer's disease on the dynamical and computational characteristics of recurrent neural networks, *BMC Neuroscience* 2013, 14(Suppl 1):P282, 22nd Annual Computational Neuroscience Meeting (CNS*2013), Paris, France, doi:10.1186/1471-2202-14-S1-P282

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