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Curriculum vitae

- 2009 – 2014 Spokesperson, Research Training Group (GRK) 1123 ‘Cellular Mechanisms of Learning and Memory Consolidation in the Hippocampal Formation’, German Research Foundation (DFG)
- Since 2006 Coordinator, NeuroCure – Cluster of Excellence grant applications
- Since 2005 Director, NWFZ, Charité, Berlin
- Since 2005 Full professor (W3), Cellular and Molecular Neurosciences, Charité, Berlin
- 2002 – 2005 Assistant professor, Department of Neurophysiology, Universität zu Köln and Charité, Berlin
- 1999 – 2002 Postdoctoral fellow, University of California, San Francisco, US
- 1997 – 1998 Studies in Physics, Humboldt-Universität zu Berlin
- 1994 – 1997 Studies in Medicine, Charité, Berlin
- 1992 – 1997 PhD thesis, Department of Neurophysiology, Universität zu Köln and Charité, Berlin
- 1990 – 1994 Studies in Medicine, Universität zu Köln

Research fields

Our group is active in the field of cellular and molecular neurobiology with the following major areas:

- Cellular and molecular mechanisms of synaptic plasticity
- Modulation and development of synaptic transmission, plasticity, and neuronal networks
- Homeostatic plasticity, hyperexcitability, and epilepsy
- ‘Synaptopathy’ in neurological-psychiatric disorders such as epilepsy, Alzheimer’s disease, mental retardation, and autism

Activities in the scientific community, honors, awards

- Since 2018 Member, Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)
- Since 2017 Member, Leopoldina – German National Academy of Sciences
- Since 2012 Principal investigator and site speaker, German Center for Neurodegenerative Diseases (DZNE), Berlin
- Since 2011 1st Einstein Professor, Einstein Foundation Berlin
- Since 2010 Member, Faculty Board at the Charité, Berlin
- 2005 Bernard Katz Award, Bert Sakmann and Alexander von Humboldt Foundation
- 2005 Schilling Award, German Neuroscience Society (NWG)
- 2004 Appointed to the Otto Loewi Center for Cellular and Molecular Neurobiology, Jerusalem, IL
- 2004 – 2009 Member, Die Junge Akademie of the Berlin-Brandenburg Academy of Sciences and Humanities (BBAW) and Leopoldina – German National Academy of Sciences
- Since 2003 Teaching Awards (2003/04, 2005/06, 2008/09, 2012/13), Graduate Program Medical Neurosciences, Charité, Berlin
- 2002 Emmy Noether Independent Junior Research Grant, German Research Foundation (DFG)
- 1998 Humboldt Award for Best Thesis, Humboldt-Universität zu Berlin

Selected publications

- Rost BR, Schneider-Warme F, Schmitz D, Hegemann P. Optogenetic Tools for Subcellular Applications in Neuroscience. *Neuron* 2017; 96:572-603
- Stempel AV, Stumpf A, Zhang HY, Ozdogan T, Pannasch U, Theis AK, Otte DM, Wojtalla A, Racz I, Ponomarenko A, Xi ZX, Zimmer A, Schmitz D. Cannabinoid Type 2 Receptors Mediate a Cell Type-Specific Plasticity in the Hippocampus. *Neuron* 2016; 90:795-809
- Johanning FW, Theis AK, Pannasch U, Ruckl M, Rudiger S, Schmitz D. Ryanodine Receptor Activation Induces Long-Term Plasticity of Spine Calcium Dynamics. *PLoS Biol* 2015; 13:e1002181
- Beed P, Gundlfinger A, Schneiderbauer S, Song J, Bohm C, Burgalossi A, Brecht M, Vida I, Schmitz D. Inhibitory gradient along the dorsoventral axis in the medial entorhinal cortex. *Neuron* 2013; 79:1197-1207
- Dugladze T, Schmitz D, Whittington MA, Vida I, Gloveli T. Segregation of axonal and somatic activity during fast network oscillations. *Science* 2012; 336:1458-1461
- Maier N, Tejero-Cantero A, Dorn AL, Winterer J, Beed PS, Morris G, Kempter R, Poulet JF, Leibold C, Schmitz D. Coherent phasic excitation during hippocampal ripples. *Neuron* 2011; 72:137-152
- Liu KS, Siebert M, Mertel S, Knoche E, Wegener S, Wichmann C, Matkovic T, Muhammad K, Depner H, Mettke C, Buckers J, Hell SW, Muller M, Davis GW, Schmitz D*, Sigrist SJ*. RIM-binding protein, a central part of the active zone, is essential for neurotransmitter release. *Science* 2011; 334:1565-1569 | *corresponding authors
- Beed P, Bendels MH, Wiegand HF, Leibold C, Johanning FW, Schmitz D. Analysis of excitatory microcircuitry in the medial entorhinal cortex reveals cell-type-specific differences. *Neuron* 2010; 68:1059-1066
- Trimbuch T, Beed P, Vogt J, Schuchmann S, Maier N, Kintscher M, Breustedt J, Schuelke M, Streu N, Kieselmann O, Brunk I, Laube G, Strauss U, Battfeld A, Wende H, Birchmeier C, Wiese S, Sendtner M, Kawabe H, Kishimoto-Suga M, Brose N, Baumgart J, Geist B, Aoki J, Savaskan NE, Brauer AU, Chun J, Ninnemann O, Schmitz D*, Nitsch R*. Synaptic PRG-1 modulates excitatory transmission via lipid phosphate-mediated signaling. *Cell* 2009; 138:1222-1235 | *corresponding authors
- Mellor J, Nicoll RA, Schmitz D. Mediation of hippocampal mossy fiber long-term potentiation by presynaptic Ih channels. *Science* 2002; 295:143-147