

Curriculum Vitae

Personal information

Björn Brembs

<http://brembs.net>

born 23.02.1971 in Würzburg



Short profile: Dipl. Biol., Dr. rer. nat., PD, Prof.
Neurobiology of adaptive behavioral choice

Focus: Spontaneous actions and operant learning

Scientific career:

Professor

- Oct 2012-present Department of Zoology, Universität Regensburg. Selected projects:
- The neurogenetics of operant and classical learning systems and their interactions in ethologically relevant learning situations
 - The neurobiology of spontaneous behavioral variability and its role in operant learning
 - Behavioral flexibility in simple orientation tasks
 - Behavioral genomics

Adjunct Professor

- Apr 2012-Sep 2012 Department of Genetics, Universität Leipzig. Research in Berlin and teaching in Leipzig.

Heisenberg Fellow

- Jun 2009-Mar 2012 Institute of Biology – Neurobiology, Freie Universität Berlin. Selected projects:
- The neurogenetics of operant and classical learning systems and their interactions in ethologically relevant learning situations
 - The neurobiology of spontaneous behavioral variability and its role in operant learning
 - Biogenic amines and the control of behavior
 - Behavioral flexibility in simple orientation tasks
 - Heritability of mate choice

Independent Researcher

- Dec 2003-May 2009 Institute of Biology – Neurobiology, Freie Universität Berlin. Selected projects:
- Spontaneous actions and the neurogenetics of operant learning
 - Context generalization and occasion setting in *Drosophila*
 - Biogenic amines and the control of behavior

Postdoctoral training

- Mar 2000-Nov 2003 Department of Neurobiology and Anatomy, University of Texas – Houston Medical School (Prof. Dr. Byrne). Selected projects:
- Neural correlates and mechanisms of operant learning in *Aplysia*
 - Extending *Aplysia* in vitro conditioning to include operant and classical components
 - Simulating *Aplysia* buccal neuronal networks using SNNAP.

Graduate training

- Sep 1996-Mar 2000 Graduate student, Department of Genetics, Universität Würzburg (Prof. Dr. Heisenberg). Projects:
- Operant and classical conditioning in *Drosophila* at the flight simulator
 - Conditioning *Drosophila* with compound stimuli
 - The neurobiology of aggression in *Drosophila*
- Aug 1999 "Mouse Transgenics and Behavior" EMBO and FENS advanced course, Edinburgh, UK. Organizer: Prof. Dr. Richard Morris
- Aug-Sep 1997 "Behavioral Organization in Animals" Social Science Research Council Workshop, University of California, Davis, USA.

International undergraduate research projects

- Aug-Sep 1994 "Prior residence, territory quality and life-history strategies in juvenile Atlantic salmon (*Salmo salar* L.)" Advisor: Prof. Dr. Neil Metcalfe; Glasgow, UK
- Aug-Sep 1993 "Effects of flow regulation, habitat area and isolation on the macroinvertebrate fauna of rapids in north Swedish rivers." Advisors: Prof. Dr. Björn Malmqvist, Dr. Göran Englund; Umeå, Sweden.

Education:

- 2009 **Habilitation**, PD, Freie Universität Berlin, Title: "The neurobiology of operant learning: biophysical and molecular mechanisms in a hierarchical organization of multiple memory systems"
- 1996-2000 **Dissertation**, Dr. rer. nat. Universität Würzburg, Title: "An analysis of associative learning in *Drosophila* at the flight simulator" Grade: "Magna cum laude"
- 1995/1996 **Diploma thesis**, Dipl. Biol. Universität Würzburg, Title: "Operant and classical conditioning in *Drosophila* at the flight simulator". Grade: "sehr gut"
- 1993/1994 **Study abroad**, University of Umeå, Sweden
- 1991-1996 **Undergraduate studies**, Universität Würzburg
- 1990/1991 **Military service**, Hammelburg
- 1990 **Abitur**, Wirsberg-Gymnasium Würzburg. Compulsory one-year project (Facharbeit): „The ultimate and proximate causations of homing behavior in salmon“

Academic Employment:

Oct 2012-present	Professor of Neurogenetics , Department of Zoology, Universität Regensburg
Apr 2012-Sep 2012	Adjunct Professor , Department of Genetics, Universität Leipzig
Jul 2009-Mar 2012	Heisenberg Fellow (DFG), Institute of Biology - Neurobiology, Freie Universität Berlin
Jan 2004-Jun 2009	Independent researcher , Institute of Biology - Neurobiology, Freie Universität Berlin
Jan 2002-Dec 2003	Emmy-Noether fellow (DFG), Department of Neurobiology and Anatomy, University of Texas – Houston Medical School
Mar 2000-Dec 2001	PostDoctoral fellow , Department of Neurobiology and Anatomy, University of Texas – Houston Medical School
Sep 1996-Mar 2000	Graduate student , Department of Genetics, Universität Würzburg
1994-1996	Web-Master , Universität Würzburg. Development, installation and maintenance of the website for the Biozentrum.
1993-1996	Teaching assistant , practical course "Entwicklungsbiologische Übungen", Department of Zoology I, Universität Würzburg.

Conference/Symposium Organization:

Jul 2017	Mini-symposium organizer: Behavioral Biology – Insights from <i>Drosophila</i> , Regensburg
Sep 2012	Member LISC2012 program committee: 2nd International Workshop on Linked Science 2012—Tackling Big Data, Boston, Ma.
Apr 2009	Session Organizer: "Spontaneous behaviors and evoked responses: two sides of the same coin?" (with Jonathan Wolpaw), 19th Annual Meeting of the Society for the Neural Control of Movement, Waikoloa, Hawaii, USA
Jan 2009	Session Chair: "Open Access publishing: present and future" (with William Hooker), ScienceOnline '09, Research Triangle Park, NC, USA Session Chair: "Reputation, authority and incentives. Or: How to get rid of the Impact Factor" (with Peter Binfield), ScienceOnline '09, Research Triangle Park, NC, USA
Jul 2008	Symposium S28 Chair: "The neurobiology of choice and decision-making" (with Bernard Balleine), FENS Forum 2008, Geneva, Switzerland
Sep 1998	Organizer "9 th Neurobiological Graduate Student Workshop" (with Roman Ernst, Stefan Just and Christoph Kleinedam), Würzburg

Honors and awards:

Aug. 2017-present	Member Advisory Board ScholarlyHub
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Sept. 2016-present	Member AG Scientific Software for Allianz der Wissenschaftsorganisationen
March 2016-present	Academic editor for PeerJ
August 2015	Best Presentation Award , Symposium "Governance, Performance & Leadership of Research and Public Organizations", Bavarian Academy of Sciences, Munich, July 15/16, 2015.
July 2015-present	Subject Editor , Research Ideas and Outcomes (RIO)
October 2013-present	Editorial Board Member of <i>ScienceOpen</i>
June 2013-June 2017	Editorial Board Member of <i>Advances in Biology</i>
June 2012-present	Editorial Board Member of <i>F1000 Research</i>
May 2012-present	Editorial Board Member of <i>Animal Biology</i>
2012-2014	Member Article Level Metrics External Technical Advisory Group , Public Library of Science
May 2010-present	Faculty Member , Faculty of 1000
May 2010-Sep 2014	Operations Committee Member , International Society for Comparative Psychology
2010-2014	Associate Editor , <i>Frontiers in Neuroscience</i>
Sep 2009	Member DFG delegation for opening of the Japan DFG Liaison Office
Jun 2009-Apr 2012	Heisenberg Fellow of the DFG
Jun 2009-May 2010	Associate Faculty Member , Faculty of 1000
Jul 2008-Jun 2010	Associate Editor for J. Vis. Exp.
2006-2018	Academic Editor for <i>PLoS ONE</i>
May 2002-2015	Editorial Board Member of <i>Evolutionary Psychology</i>

Research support:

Personal

2017-2020	DFG Research grant Title: <i>What is the function of FoxP in operant self-learning?</i> Grant number: BR 1892/17-1 Period of support: Sep. 2017-Aug. 2020 Total direct costs: 294,000€
2017-2018	DFG Research grant Title: <i>The neurobiology of operant behavior.</i> Grant number: BR 1892/16-1 Period of support: May 2017-Nov. 2018 Total direct costs: 63,400€
2011	DFG Collaborative research grant Title: Fostering German - Japanese collaborative research in the field of neuroscience Grant number: BR 1892/11-1 Period of support: March, 2011 Total direct costs: 6,300€
2010-2013	DFG Research unit FOR1363 "Biogenic Amines in Insects"

- TP 02 title: *Genetic dissection of octopamine action in Drosophila motivation, reward and motor control*
 Grant number: BR 1892/9-1
 Period of support: Sep. 2010-Aug. 2013
 Total direct costs: 157,000€
- 2010 **Research Commission Freie Universität Berlin starting grant**
 Title: *What is the default mode of insects?*
 Period of support: Jul-Dec 2010
 Total direct costs: 10,000€
- 2009-2012 **DFG Research grant**
 Title: *The neurobiology of spontaneous behavior and its modulation by refferent stimuli in Drosophila.*
 Grant number: BR 1892/7-1
 Period of support: May 2009-Apr. 2012
 Total direct costs: 520,000€
- 2009-2012 **DFG Heisenberg fellowship**
 Title: *The neurobiology of spontaneous behavior and its modulation by refferent stimuli in Drosophila.*
 Grant number: BR 1892/6-1
 Period of support: May 2009-Apr. 2012
 Total direct costs: 170,000€
- 2005-2009 **DFG Research grant**
 Title: *The neural basis of operant conditioning in Aplysia*
 Grant number: BR 1892/4-1
 Period of support: Dec 2005-Mar 2009
 Total direct costs: 20,000€
- 2004-2007 **DFG Independent Research Fellow**
 Title: *Von der Verhaltens- zur Neurophysiologie: Operantes Konditionieren und dessen Wechselwirkungen mit klassischem Konditionieren.*
 Grant numbers: BR 1892/2-1, BR 1892/3-1
 Period of support: Mar 2004-Apr 2006, Jun 2006-May 2007
 Total direct costs: 182,150€
- 2002-2003 **DFG Emmy-Noether fellowship**
 Title: *Verhaltens- und neurophysiologische Untersuchung grundlegender Lernmechanismen: Operantes Konditionieren und dessen Wechselwirkungen mit klassischem Konditionieren*
 Grant number: BR 1892/2-1
 Period of support: Jan. 2002 – Dec. 2003
 Total direct costs: 70,000€
- 2002-2003 **NIH Research Grant** (as co-author with Prof. Dr. Byrne)
 Title: *Analysis of the Neural Control of Behavior*
 Grant number: R01 NS19895
 Period of support: Dec. 2002 – Dec. 2003
 Total direct costs: \$1,187,500

External

2017

DAAD WISE FellowshipRecipient: Saloni Rose (India)

Title: *The neurobiology of spontaneous behavioral choice*
 Grant number: 91651654
 Period of support: 15.05.-31.07.2017
 Total direct costs: 2,150€

2015/2016

Erasmus+ Fellowship

Recipient: Pablo Martinez Chinchilla (Spain)
 Title: *The neurobiology of spontaneous flight in Drosophila*
 Fellowship number: n.a.
 Period of support: Oct. 2015-Feb. 2016
 Total direct costs: 2,100€

2013-2015

DAAD Postdoctoral Fellowship

Recipient: Ezequiel Axel Gorostiza (Argentina)
 Title: *Hide if you can't fly? Behavioral flexibility in Drosophila*
 Fellowship number: A/12/76546
 Period of support: Sep. 2013-Aug. 2015
 Total direct costs: 35,210€

2012/2013

FARO Global Fellowship

Recipient: Lidia Castro González (Spain)
 Title: *Behavioral flexibility in simple taxis behaviors*
 Period of support: 01.11.2012-30.04.2013
 Total direct costs: 4,350€

2010

DAAD WISE fellowship

Recipient: Nitin Singh Chouhan (India)
 Title: *Recording spontaneous walking behavior in Drosophila using pySOLO*
 Grant number: A0982977
 Period of support: 10.05.2010-29.07.2010
 Total direct costs: 2,280€

2009-2011

SNF Fellowship for Advanced Researchers

Recipient: Dr. Julien Colomb (Switzerland)
 Title: *The what and where of operant learning in Drosophila*
 Grant number: PA00P3_124141
 Period of support: Feb. 2009-Jan. 2011.
 Total direct costs: 98,720 CHF

2000-2002

NIH Research Grant

Recipient: Prof. Dr. John H. Byrne
 Title: *Analysis of the Neural Control of Behavior*
 Grant number: R01 NS19895
 Period of support: Apr 1997 - Nov 2002
 Total direct costs: \$859,680

1996-2000

Graduate student position

Recipient: Prof. Dr. Martin Heisenberg

International collaborations:

2003-present

University of Texas, Houston, USA: Dr. John Byrne

2004-2012

University of California, San Diego, La Jolla, USA: Dr. William Kristan

2008-2014

University of Missouri, Columbia, USA: Dr. Troy Zars

2003-2012	Brain & Mind Research Institute , University of Sydney, Australia: Dr. Bernard Balleine
2007-2010	Queensland Brain Institute , University of Queensland, Australia: Dr. Bruno van Swinderen.
2006/2007	The Scripps Institute of Oceanography , La Jolla, USA: Dr. George Sugihara
2005/2006	University of Sussex , UK: Dr. Natalie Hempel de Ibarra
2002/2003	Mount Sinai School of Medicine , New York, USA: Dr. Elizabeth Cropper

Methods:

In the course of studying decision-making in a number of different model systems, I have always used the most suitable methods, irrespective of my prior experience. Among these methods were:

- Automated, video-based and traditional behavioral physiology in mice, fish, insects and mollusks
- Mouse and fly mutants/transgenes
- Optogenetics
- *In vivo* electrophysiological recordings/stimulations in awake, behaving animals
- *In vitro* conditioning of isolated nervous systems (mollusks and annelids)
- Computational analysis of behavioral data
- Intracellular electrophysiology
- Optophysiology/imaging
- Simultaneous electro- and optophysiology
- Standard molecular biology (Western blot, Immunocytochemistry, in situ hybridization, PCR, qRT-PCR, ELISA etc.)
- Genomics
- Pharmacology (insects and mollusks)
- Confocal microscopy/neuroanatomy (insects)
- Generation of polyclonal IgY antibodies
- Physiological computer modeling of simple neural networks
- Basic metabolic rate physiology
- Coding experience in Turbo Pascal, MatLab, R, Python, PHP, CSS, HTML

Languages:

Mother tongues German, Swedish

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2

Self-assessment				
French	A2	B1	A2	A1
Self-assessment.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Latin Latinum

Peer-Review:

External reviewer for

Funders

- BBSRC (UK)
- BIOMAT Consortium - Institute for Advanced Studies of Bio-systems (international)
- Biotechnology and Biological Sciences Research Council (UK)
- Center for Complexity Science (Israel)
- Deutscher Akademischer Austauschdienst (Germany)
- Deutsche Forschungsgemeinschaft (Germany)
- EC 7FP, Marie Curie actions (EU)
- Engineering and Physical Sciences Research Council (UK)
- Human Frontiers Science Program (international)
- Israel Science Foundation (Israel)
- National Research Agency (France)
- National Science Foundation (USA)
- National Science Centre Poland
- Netherlands Organization for Scientific Research (Netherlands)
- Schering Foundation (Germany)
- Studienstiftung des Deutschen Volkes (Germany)
- The Research Foundation - Flanders (Belgium)
- Vienna Fund of Science & Technology (Austria)
- Wellcome Trust (UK)

Journals

- Advances in Methods and Practices in Psychological Science
- Animal Behavior
- Behavior Genetics
- Behavioral Ecology and Sociobiology
- Behavioural Brain Research
- Beiträge zur Hochschulforschung
- Biological Bulletin
- Biology Open
- BMC Neuroscience
- Cell and Tissue Research
- Current Biology
- eNeuro
- European Journal of Neuroscience
- Evolution
- F1000 Research
- Frontiers in Neuroscience
- GigaScience
- Genes, Brain and Behavior
- IEEE Transactions on Neural Networks

- Insect Science
- International Journal of Comparative Psychology
- Journal of Comparative Neurology
- Journal of Comparative Physiology
- Journal of Comparative Psychology
- Journal of Experimental Biology
- Journal of Insect Behavior
- Journal of Insect Physiology
- Journal of Neurogenetics
- Journal of Neurophysiology
- Journal of Neuroscience
- Journal of Neuroscience Methods
- Journal of the Experimental Analysis of Behavior
- Journal of Visualized Experiments
- Learning and Memory
- Marine Ecology
- Nature Communications
- Neural Networks
- Neurobiology of Learning and Memory
- Neuroscience
- PeerJ
- PLoS Biology
- PLoS Computational Biology
- PLoS Genetics
- PLoS One
- Royal Society Open Science
- Science
- Scientific Reports
- The Neuroscientist
- WIREs Cognitive Science
- Zeitschrift für Psychologie

Scientific societies

- British Neuroscience Association (UK)

Scholarly Institutions

- Leibniz Gemeinschaft
- Centre de Recherche Neurobiologie-Neurophysiologie de Marseille (CRN2M, France)

Thesis defenses

- Bárður Eyjólfsson Ellendersen, University of Aarhus, 2019
- Radostina Lyutova, University of Würzburg, 2019
- Albrecht Vorster, University of Tübingen, 2019
- Sercan Sayin, MPI Neurobiologie Martinsried, 2019
- Ulrich Bornschein, University of Leipzig, 2015
- Christopher Harris, University of Sussex, 2012
- Britta Wittek, University of Hamburg, 2008

Professional Societies:

- Society for Neuroscience (2000-present)

- International Society for Neuroethology (1998-present)
- International Society for Comparative Psychology (2010-2014)
- Society for the Quantitative Analyses of Behavior (2010-2011)
- Society for the Neural Control of Movement (2009)

Service:

National service

2018-present	Member working group "Digital Tools", Allianz der Wissenschaftsorganisationen, representing the Hochschulrektorenkonferenz
2016-2018	Member <i>ad hoc</i> AG "Scientific software", Allianz der Wissenschaftsorganisationen

Departmental service

2017-present	Member examination committee teacher education (Regensburg)
2017-present	Member library committee of the University of Regensburg, representing the Faculty of Biology and Preclinical Medicine (Regensburg)
2015-present	Chair, Examination Committee, Faculty of Biology and Preclinical Medicine (Regensburg)
2014-2015	Vice chair of Examination Committee (Regensburg)
2014-present	Member of study program planning committee (Regensburg)
2013-present	Member performance assessment committee (Regensburg)
2007	Member search committee: Assistant Professor, systems neuroscience of invertebrates (Berlin)

PhD Thesis committee service

2019	Bárður Eyjólfsson Ellendersen (Aarhus) Christian Rohrsen (Regensburg)
2018	Zohar Z. Bronfman (Tel Aviv)
2017	Oliver Edenharter (Regensburg) Katharina Weiß (Regensburg)
2016	Ulla Obermayr (Regensburg) Katharina von Wyschetzki (Regensburg)
2015	Ingmar Weiss (Regensburg) Ulrich Bornstein (Leipzig)
2014	Christian Thiele (Regensburg) Stephan Kühbandner (Regensburg) Sebastian Peters (Regensburg)
2013	Cornelia Bleyl (Regensburg)

2012	Sven-Holger Puppel (Leipzig) Konstantin Stadler (Berlin) Christopher Harris (Sussex) Neloy Chakroborty (Berlin) Jaime Martínez Harms (Berlin)
2011	Ezequiel Mendoza (Berlin) Luise Richter (Berlin) Stephan Wierschke (Berlin) Simone Jörs (Berlin) Bettina Stocker (Berlin) Lars Vollborn (Berlin) Ravit Hadar (Berlin)
2010	Elisabeth Beyaert (Berlin) Daniel Hechler (Berlin)
2009	Tilman Franke (Berlin) Anja Froese (Berlin) Jana Börner (Berlin)
2008	Abid Syed Hussaini (Berlin) Jochen Decker (Berlin) Britta Wittek (Hamburg)
2006	Sabine Schwarz (Berlin)
2005	Bhumika Singh (Berlin)

External undergraduate thesis reviews

2018	Katja Czieselsky (Master) Ursula Hummel (Master)
2016	Andrea Ochsenkühn (Bachelor) Nicole Schäfer (Master)
2014	Laura Kuhn (Bachelor) Mutasem Bellah Saman (Master) Tobias Weichselgartner (Master) Petral Dirscherl (Master)
2013	Vanessa Pimentel (Master) Benedikt Nagel (Master)

Training in didactics/supervision/leadership:

18./19.2.2010	Workshop: Gute Lehre (Immanuel Ulrich, FU Berlin)
04.09.2003	Workshop: Leadership in times of stress and change (Employee Assistance and Work/Life Programs, UT Houston)

Outreach:

International

Radio

- SRF (Switzerland), July 18, 2014, Clips: „Warum schweigsame Fruchtfliegen ein Sprach-Gen haben“ (by Katharina Bochsler)
- BBC World Service (UK), March 24, 2014, Discovery: “The Biology of Freedom” (by Adam Hart)
- Voice of Russia (Russia), August 17, 2012, panel discussion with Rita Gardner, Timothy Gowers and Ross Mounce on “Open Access: A new horizon for science”.
- BBC World Service (UK) December 15, 2010, short interview
- KDVS (USA) July 2008: This Week in Science, short report
- KDVS (USA) May 2007: This Week in Science, 30 min Interview
- Canadian Broadcasting Corporation, May 2007: As it happens

Print/Online

- Videnskab.dk (Denmark), December 5, 2017: Nature og Science: Prestige ikke lig med troværdigt indhold (Charlotte Price Persson)
- NatureJobs (UK), June 1, 2017, TechBlog: C. Titus Brown: Predicting the paper of the future (Jeffrey Perkel)
- Journal21.ch (Switzerland), September 11, 2016: Die Fliege und der freie Wille (Eduard Kaeser)
- Nature (UK), September 01, 2016: Germany: Equality or Excellence (Anja Krieger)
- Examiner (USA) October 24, 2015: Appreciating the intelligence of insects. (Daniel Calder)
- Nature News (UK) September 4, 2015: Germany claims success for elite universities drive. (Quirin Schiermeier, Richard van Noorden)
- National Geographic (USA) June 10, 2015: Does An Octopus Have A Soul? This Author Thinks So. (Simon Worrall)
- Nature News (UK) April 22, 2015: 'Living figures' make their debut (Dalmeet Singh Chawla)
- China Topix (China) August 11, 2014: German Scientists Introduce Continually Updating Graph on Study of Fruitflies (Ren Benavidez)

- Popular Science (USA) August 5, 2014: Harry Potter-esque Study To Come With A Continually Updating Graph (by Francie Diep)
- Forskerforum (Norway) vol. 46 (2), 12-17, 2014: Jakta på gjennomslag (by Kjerstin Gjengedal)
- Videnskab.dk (Denmark) October 18, 2013: Betalingstidsskrifter vægter 'sexy science' over nøjagtighed. (by Kristian Secher)
- Open and Shut (UK) September 29, 2013: Björn Brembs on the state of Open Access: Where are we, what still needs to be done? (by Richard Poynder)
- Frontline (India) October 4, 2013: Open Access vs academic power (by C. P. Chandrasekhar)
- ScienceDaily (USA) August 2012: Tracking Fruit Flies to Understand the Function of the Nervous System
- PBS "inside NOVA" (USA), February 22, 2012: In defense of free will (by Chelsea Ursin)
- BBC News (UK) December 16, 2010: Free will similar in animals, humans - but not so free (by Jason Palmer)
- LabmateOnline (UK) July 23, 2010: Research Points to Possibilities in ADHD Studies
- SEED Magazine (USA) April 21, 2010: Drosophila, we hardly knew ye (by Dave Munger)
- Eurasia Review (Spain) January 2010: Fly Study To Help People With Attention Disorders.
- Kronenzeitung (Austria) January 2010: Menschen und Fliegen vergessen auf ähnliche Weise
- ScienceDaily (USA) January 2010: How to Measure Attention Span of a Fly: Implications for ADHD, Autism in Humans
- SmartPlanet/CBS (USA) January 2010: In pursuit of ADHD treatment, scientists measure attention span of a fly
- PhysOrg (USA) January 2010: Attention drug drives memory research
- APA (Austria, wire service) July 2008: Forscher der Freien Universität Berlin entdecken neuartiges Lern-Gen

- Presstext (Austria, wire service) July 2008: Entdecktes Lern-Gen möglicher Schlüssel zur Suchtbekämpfung
- Wiener Zeitung (Austria) July 2008: Ein neuartiges Lern-Gen entdeckt
- Der Standard (Austria) July 2008: Bisher unbekanntes Lern-Gen entdeckt
- ScienceDaily (USA) July 2008: Novel kind of learning gene discovered
- BiotechSweden July 2008: Learning gene discovered
- Reuters (International wire service), May 2007: Defending free will: A fruit fly makes choices. Picked up by (among others) ABC News, Fox News, BBC Channel 4, CNBC, Sky News, Scientific American, etc.
- News.at (Austria) May 2007: Selbst Fruchtliegen haben "freien Willen": Gehirne sind mehr als Input-Output-Systeme
- Die Presse (Austria) May 2007: Willensfreiheit in Fruchtliegen? (with expert commentary)
- Tekegraph (UK) May 2007: Can flies think?
- Daily Telegraph (Australia) May 2007: Flies choose to irritate
- ScienceDaily (USA) May 2007: Do fruit flies have free will?
- Newsweek (USA) May 2007: Flies With Free Will?
- NewScientist (UK) May 2007: Fruit flies display rudimentary free will (Bob Holmes)
- National Post (Canada) May 2007: Be spontaneous (It may save your life)
- Nature (UK) May 2007: Do fruit flies have free will?
- NewKerala (India) May 2007: Fruit flies also have free wills
- LiveScience (USA) May 2007: Farfetched? Hint of Free Will Found in a Fly
- G1 (Brazil) May 2007: Moscas têm sinais de livre arbítrio
- CapeTimes (Southafrika) May 2007: Behaviour of fruit fly is evidence of the existence of free will, researchers say
- ArsTechnica (USA) May 2007: Fruit flies and free will

National**Radio**

- Open Science Radio, 01.03.2018: Academic Publishing Infrastructures with Björn Brembs. <http://www.openscienceraudio.org/2018/03/01/osr098-academic-publishing-infrastructures-with-bjoern-brembs-en/>
- RBB Kulturradio, 15.08.2012: Fruchtfliegenforschung für Jedermann – wozu soll das gut sein? (interview with Christian Schruff)
- WDR 5, 04.04.2011: Die Freiheit der Fliegen (Lab-Interview by Volkart Wildermuth for „Leonardo“)
- RBB Radio Eins, 19.02.2011: Wie Fruchtfliegen uns Menschen den Freien Willen retten. („Die Profis“, Interview by Anja Goerz)
- RBB Radio Fritz, July 2010: Die Radiofritzen am Morgen (Interview with Sabrina Vetter and Johannes Nichelmann)
- RBB Kulturradio, 02.02.2010: Fliegengehirn – Kein Schimpfwort mehr (Interview by Frank Rawel)
- Deutsche Welle, July 2008: Discovering an operant learning gene
- Deutschlandfunk, May 2007: *Drosophila* mit Dickkopf
- NDR, May 2007: LOGO

Print/Online

- Spektrum der Wissenschaft, 09.09.2015: Auf der Suche nach messbaren Erfolgen (Quirin Schiermeier, Richard van Noorden)
- Laborjournal, 08.01.2015: Universitäten in der Bürokratie-Falle. (Hans Zauner)
- Mittelbayerische Zeitung, 08.09.2014: Ein „Sprachgen“ lässt Fliegen lernen. (Louisa Knobloch)
- Tageszeitung (taz), 30.09.2012: Transparenz beim Publizieren - „Open Access“ in der Wissenschaft (Guiseppe Paletta)
- Tageszeitung (taz), 18.08.2012: Papier ist Macht: Der Aufstand der Forscher (Maria Rossbauer)
- Süddeutsche Zeitung, 10.02.2011: Die Freiheit der Fruchtfliege (Ulrich Pontes)

- Frankfurter Allgemeine Zeitung, 15.12.2010: Im Fliegenglas (Helmut Mayer)
- AOK-Magazin unilife, July 2010: Ausgefragt: Tickst Du noch richtig? (Birgit Schyma)
- Deutsches Ärzteblatt, March 2010: Randnotiz: Von Fliegen und Menschen (Vera Zylka-Menhorn)
- Die Zeit, 04.02.2010: Verlierer im Fliegenquiz (Maria Rossbauer)
- Tagesspiegel, 29.08.2008: Wie Fliegen Erfahrungen speichern
- Natur+Cosmos, January 2008: Gibt es den freien Willen? (Peter Laufmann)
- DPA, May 2007: Fruchtfliegen haben einen freien Willen. Picked up by most German newspapers, e.g., Welt, Frankfurter Rundschau, Handelsblatt, etc.
- Spektrum-direkt, May 2007: Forscher attestieren Taufliegen einen freien Willen
- Berliner Zeitung, May 2007: Fruchtfliegen haben einen freien Willen

Other

- Panelist at "Gutachteritis oder Garant hoher Standards". Wissenschaftsrat (AU & D): "Qualitätsstandard oder leeres Ritual? Begutachtungen in der Diskussion", Palais Ferstel, Vienna, Austria, 8./9.11.2018
- Discussant in the public debate "This House believes there is nothing special about human intelligence". Debate Chamber, Cambridge University Society, Cambridge, UK. 07.06.2018
- 2017-2019: Team member development "OpenKnowledge-Maps"
- Panelist for "Consciousness". The Forum, London School of Economics, 07.06.2017
- Invited speaker for "Festival der Spontanität" in Bielefeld, Germany, 23.-25.10.2015: "The neurobiology of spontaneity in an evolutionary context"
- Invited speaker for "Science Circle", lecture of the Goethe Institute in Bangalore, India, 31.10.2014: "The biological nature of free will"
- Panelist on the MS Wissenschaft "Dialog an Deck" 15.09.2014: Wissenschaft und Freies Wissen - Fortschrittsmotor und Gemeingut der Informationsgesellschaft.

- Scientific expert for a series of children's news articles on fruit flies, dpa-Kindernachrichten, 09.07.2014: „Der Herr der Fliegen“, „Die Super-Schnell-Seher“, „Fliegen Fangen leicht gemacht“. (Stefanie Paul)
- Invited expert for an Abgeordnetenhaus Berlin hearing on open access. Berlin, 04.12.2013
- Panelist „Soziale Netzwerke für die Wissenschaft: etablierte Akteure und neue Rollen“ Leibniz-Publik-Tagung, Bayerische Staatsbibliothek, Munich, 24.10.2013
- Panelist „Die Konzentration im wissenschaftlichen Verlagswesen und die Zusammenarbeit mit Bibliotheken“. Book Fair Frankfurt, b.i.t. sofa, Frankfurt, 11.10.2013
- Panelist „Social Reading“. Book Fair Frankfurt, organized by Berufsverband Information Bibliothek, Frankfurt, 10.10.2013
- Invited speaker: „Free will as an evolved brain function“. The Lost Lectures, Berlin, 04.04.2013
- Invited scientific contributor to the official exhibition catalog for the art exhibit *“BIOS – Concepts of life in contemporary sculpture”* at the Georg Kolbe Museum Berlin (26.08.-11.11.2012) with the article: „The taming of chance – relations between art and nature“
- Invited speaker: „Willensfreiheit in der Neurophysiologie“ Freiheit und Reformation, Evangelische Akademie Meißen, Germany, 18.11.2011
- Invited speaker: „Decision-making: Input from Neurobiology“ Annual Foresight Fellows Camp 2011, Siemens AG, Zug, Switzerland, 04.10.2011
- Invited speaker: „Könnten wir nicht frei wählen, gäbe es uns nicht.“ OPEN SOURCE 2011, Account Planning Group (Verband Deutscher Marketing Strategen e.V.) annual conference, Hamburg, Germany, 27.06.2011
- Scientific expert for chapter eight in "Biologie für Einsteiger" (Olaf Fritsche) Spektrum Akademischer Verlag, March 2010
- Scientific expert for „Mein kleiner Tick und ich“ (Nico Cramer) Maxi, March 2010
- Invited expert for „table talks“ at the art exhibition „Bekontext“, Berlin, 3.8.2009
- Scientific advisor for „Tick, tick, tick“ (Stefan Koch) Hannoverische Allgemeine, 30.7.2009
- Guest lecture 20.06.2009: Wie Nervenzellen Gedächtnisspuren ablegen - Lernen aus neurobiologischer Sicht. Science on Stage, Workshop: Teaching Science in Europe 3, Berlin-Buch

- Invited expert for the discussion after the Berlin premiere of the motion picture "In search of memory", Biography of Nobel laureate Eric Kandel, June 2009
- Scientific advisor for the Staatstheater Karlsruhe (09/2008-01/2009): "Wild werden. Ein Notstand" Directed by Burmester/Nolte.
- Scientific expert for „10 Versuche über die Geschlechter" (Barbara Kollmann) Tagesspiegel, 09.2008
- Guest lecture 14.02.2008: JoVE/SciVee: Wissenschaftliche Video-Publikation. Medienforum "Videokommunikation in der Biotechnologie", IWF Wissen und Medien gGmbH, Göttingen

Personal**Website**

brembs.net

Documenting my research with background information and explanations for a lay audience since 1999. ~3,000 unique visitors/month

Blog

bjoern.brembs.net

Covering and explaining my own research, science in general and advocating science policy since 2003. ~5,000 unique visitors/month

Regensburg, February 22, 2019



Publications

h-index: 26

Peer-reviewed original research:

1. Damrau C, Toshima N, Tanimura T, **Brembs B***, Colomb J (2018): Octopamine and Tyramine contribute separately to the counterregulatory response to sugar deficit in *Drosophila*. Front Syst. Neurosci. 11:100
2. Gorostiza E.; Colomb J. and **Brembs B.*** (2016): A decision underlies phototaxis in an insect. Roy. Soc. Open Biology 6:160229
3. Colomb J. and **Brembs B.*** (2016): PKC in motorneurons underlies self-learning, a form of motor learning in *Drosophila* PeerJ 4:e1971 <https://doi.org/10.7717/peerj.1971>
4. Rahman R.; Chirn G.; Kanodia A.; Sytnikova Y.A.; **Brembs B.**; Bergman C.M.; and Lau N.C. (2015): Unique transposon landscapes are pervasive across *Drosophila melanogaster* genomes. Nucl. Acids Res. 43(22):10655-10672
5. Colomb J. and **Brembs B.*** (2014): Sub-strains of *Drosophila* Canton-S differ markedly in their locomotor behavior [v2; ref status: indexed, <http://f1000r.es/57i>] F1000Res. 3:176 (doi: 10.12688/f1000research.4263.2)
6. Mendoza E.; Colomb J.; Rybak J.; Pflüger H.J.; Zars T.; Scharff C. and **Brembs B.*** (2014): *Drosophila* FoxP mutants are deficient in operant self-learning. PLoS One 9(6): e100648
7. Colomb J.; Reiter L.; Blaszkiewicz J.; Wessnitzer J.; **Brembs B.** (2012): Open source tracking and analysis of adult *Drosophila* locomotion in Buridan's paradigm with and without visual targets. PLoS One 7(8): e42247
8. Pauly D.; Chacana P.A.; Calzado E.G.; **Brembs B.**; Schade R. (2011): IgY Technology: Extraction of Chicken Antibodies from Egg Yolk by Polyethylene Glycol (PEG) Precipitation. J Vis Exp. 51, <http://www.jove.com/details.stp?id=3084> doi: 10.3791/3084.
9. van Swinderen B and **Brembs B.** (2010): Attention deficit and hyperactivity in a *Drosophila* memory mutant. J. Neurosci. 30(3):1003-1014
10. **Brembs B.*** (2009): Mushroom-bodies regulate habit formation in *Drosophila*. Curr. Biol. 19(16): 1351–1355
11. **Brembs B.*** and Plendl, W. (2008): Double dissociation of PKC and AC manipulations on operant and classical learning in *Drosophila*. Curr. Biol. 18(15): 1168-1171
12. **Brembs B.*** (2008): Operant learning of *Drosophila* at the torque meter. J. vis. Exp. 16. <http://www.jove.com/index/Details.stp?ID=731>, doi: 10.3791/731
13. **Brembs B.**; Christiansen F.; Pflüger H.J. and Duch C. (2007): Flight initiation and maintenance deficits in flies with genetically altered biogenic amine levels. J. Neurosci. 27, 11122-11131
14. Maye, A.; Hsieh, C.; Sugihara, G. and **Brembs, B.*** (2007): Order in spontaneous behavior. PLoS One 2: e443

15. **Brembs B.*** and Hempel de Ibarra, N. (2006): Different parameters support discrimination and generalization in *Drosophila* at the flight simulator. Learn. Mem. *13*, 629-637
16. **Brembs B.*** and Wiener J. (2006): Context generalization and occasion setting in *Drosophila* visual learning. Learn. Mem. *13*, 618-628
17. Phillips A.M.; Smart R.; Strauss R.; **Brembs B.** and Kelly, L.E. (2005): The *Drosophila black* enigma: the molecular and behavioural characterization of the *black¹* mutant allele. Gene *351C*, 131-142.
18. **Brembs B.***; Baxter D.A. and Byrne J.H. (2004): Extending *in vitro* conditioning in *Aplysia* to analyze operant and classical processes in the same preparation. Learn. Mem. *11*, 412-420.
19. **Brembs B.**; Lorenzetti F.D.; Reyes F.D.; Baxter D.A. and Byrne J.H. (2002): Operant Reward Learning in *Aplysia*: Neuronal Correlates and Mechanisms. Science *296*, 1706-1709.
20. Baier A.; Wittek B. and **Brembs B.*** (2002): *Drosophila* as a new model organism for the neurobiology of aggression? J. Exp. Biol. *205*, 1233-1240.
21. **Brembs B.*** and Heisenberg M. (2001): Conditioning with compound stimuli in *Drosophila* at the flight simulator. J. Exp. Biol. *204*, 2849-2859
22. **Brembs B.** and Heisenberg M. (2000): The Operant and the Classical in conditioned orientation of *Drosophila melanogaster* at the flight simulator. Learn. Mem. *7*, 104-115.
23. Cutts C.J.; **Brembs B.**; Metcalfe N.B. and Taylor A.C. (1999): Prior residence, territory quality and life-history strategies in juvenile Atlantic salmon (*Salmo salar* L.). J. Fish. Biol. *55*, 784-794.

Raw data for research publications:

1. Damrau C, Toshima N, Tanimura T, **Brembs B**, Colomb J (2017): Octopamine and counterregulatory response to starvation. Raw data. figshare. DOI: 10.6084/m9.figshare.4663666
2. Gorostiza E.; Colomb J. and **Brembs B.** (2016): Phototactic flexibility. Raw data. figshare. DOI: 10.6084/m9.figshare.1502427.v8
3. Bergman C. and **Brembs B.** (2015): *Drosophila melanogaster* Canton-S sub-strain genome sequencing project. ENA accession number PRJEB8324
4. Colomb J. and **Brembs B.** (2014): Buridan raw data: Sub-strains of *Drosophila* Canton-S differ markedly in their locomotor behavior. figshare. DOI: 10.6084/m9.figshare.1014264
5. Mendoza E.; Colomb J.; Rybak J.; Pflüger H.J.; Zars T.; Scharff C. and **Brembs B.** (2013): *Drosophila* FoxP molecular, anatomical and behavioral raw data. figshare. DOI: 10.6084/m9.figshare.740444
6. Maye A.; Hsieh C.; Sugihara G. and **Brembs B.** (2007): Evaluation codes, yaw torque and spike data. figshare. DOI: 10.6084/m9.figshare.904850

*Review articles:***Invited Reviews**

1. **Brembs B.*** (2018): Prestigious science journals struggle to reach even average reliability. *Front. Hum. Neurosci.* 12:37. doi: 10.3389/fnhum.2018.00037
2. **Brembs B.*** (2011): Spontaneous decisions and operant conditioning in fruit flies. *Behav. Proc.* 87(1), 157-164
3. **Brembs B.*** (2011): Towards a scientific concept of free will as a biological trait: spontaneous actions and decision-making in invertebrates. *Proc. R. Soc. B.* 278(1707), 930-939
4. Colomb J. and **Brembs B.*** (2010): The biology of psychology: 'simple' conditioning? *Comm. Integr. Biol.* 3(2), 142-145
5. **Brembs B.*** (2009): The importance of being active. *J. Neurogen.* 23(1), 120-126
6. **Brembs B.*** (2003): Operant conditioning in invertebrates. *Curr. Opin. Neurobiol.* 13, 710-717.
7. **Brembs B.*** (2003): Operant reward learning in *Aplysia*. *Curr. Dir. Psychol. Sci.* 12, 218-221.

Reviews

8. Benjamin D, Berger J, Johannesson M, Nosek B, Wagenmakers EJ, Berk R, Bollen K, **Brembs B**, Brown L, Camerer C, Cesarini D, Chambers C, Clyde M, Cook T, De Boeck P, Dienes Z, Dreber A, Easwaran K, Efferson C, Fehr E, Fidler F, Field A, Forster M, George E, Gonzalez R, Goodman S, Green E, Green D, Greenwald A, Hadfield J, Hedges LV, Held L, Ho T, Hoiijtink H, Jones JH, Hruschka DJ, Imai K, Imbens G, Ioannidis JPA, Jeon M, Kirchler M, Laibson D, List J, Little R, Lupia A, Machery E, Maxwell S, McCarthy M, Moore D, Morgan S, Munafó M, Nakagawa S, Nyhan B, Parker T, Pericchi L, Perugini M, Rouder J, Rousseau J, Savalei V, Schoenbrodt F, Sellke T, Sinclair B, Tingley D, Van Zandt T, Vazire S, Watts D, Winship C, Wolpert RL, Xie Y, Young C, Zinman J, Johnson V (2017): Redefine statistical significance. *Nat Hum Behav*, doi:10.1038/s41562-017-0189-z.
9. **Brembs B.***; Button K. and Munafó M. (2013): Deep impact: unintended consequences of journal rank. *Front. Hum. Neurosci.*, 7: 291.
10. Heisenberg M.; Wolf R. and **Brembs B.** (2001): Flexibility in a single behavioral variable of *Drosophila*. *Learn. Mem.* 8, 1-10.
11. **Brembs B.*** (1996): Chaos, cheating and cooperation: potential solutions to the Prisoner's Dilemma. *OIKOS* 76, 14-24.

* Corresponding author

Book Chapters:

1. **Brembs B.** (2017): Genetic analysis of behavior in *Drosophila*. In: Byrne JH (ed.) The Oxford Handbook of Invertebrate Neurobiology. Oxford University Press DOI: 10.1093/oxfordhb/9780190456757.013.37
2. **Brembs B.** (2017): Operant Behavior in Model Systems. In: Menzel R (ed) Learning and Memory: A Comprehensive Reference 2E, Elsevier. DOI: 10.1016/B978-0-12-809324-5.21032-8

3. **Brembs B.** (2008): Operant conditioning. In: Windhorst, U. Binder, M.D. and Hirokawa, N. (eds) *Encyclopedia of Neuroscience*. Springer, Berlin, Heidelberg; pp. 3031-3033
4. Menzel R.; **Brembs, B.** and Giurfa M. (2006): Cognition in Invertebrates. In: Kaas, J.H. (ed.) *Evolution of Nervous Systems*. Chapter No. 1.26. Academic Press, Oxford; pp. 403-422
5. **Brembs B.** (2001): Hamilton's Theory. In: Brenner, S. and Miller, J. (eds) *Encyclopedia of Genetics*, Academic Press, London, New York; pp. 906-910.

Editorials:

1. **Brembs B.** (2013): What ranking journals has in common with astrology. *Res. Pol. & Eval.* **1**(1), 1-7 DOI: 10.13130/2282-5398/3378
2. **Brembs B.** (2013): Invertebrate behavior—actions or responses? *Front. Neurosci.* **7**:221. DOI: 10.3389/fnins.2013.00221

Edited collections:

1. **Brembs B.** (ed., 2015): Beyond literature: a scholarly infrastructure for text, data and software. *Publications*, **3** Articles, available at: http://www.mdpi.com/journal/publications/special_issues/marketing-publishing
2. **Brembs B.** (ed., 2012): Decision-making in invertebrates. *Front. Neurosci.*, **12** articles, e-Book: http://www.frontiersin.org/books/Decision-making_in_invertebrates/239.

Invited General/Popular Science Articles:

1. **Brembs B.** (2019). Reliable novelty: New should not trump true. *PLOS Biology*, **17**(2), e3000117. DOI: 10.1371/journal.pbio.3000117
2. **Brembs B.** (2018): Auftrag und Selbstverständnis der Hochschullehrer in Zeiten alternativer Fakten. *Laborjournal* 10-2018, 24-27
3. Holcombe A. and **Brembs B.** (2017): Open Access in Germany: the best DEAL is no deal. *Times Higher Education*, December 27, <https://www.timeshighereducation.com/blog/open-access-germany-best-deal-no-deal>
4. **Brembs B.** (2016): We have no choice but to cancel all subscriptions. *REVEY* **39**(3): 24.
5. **Brembs B.** (2015): Open Science als eine Lösung der Infrastrukturkrise in der Wissenschaft. *Information. Wissenschaft & Praxis* **66**(2-3): 151-158 (DOI: 10.1515/iwp-2015-0027)
6. **Brembs B.** (2014): Sind Wissenschaftler überhaupt sozial? *BuB* **66**(10): 694-696.
7. **Brembs B.** (2014): Digitale Steinzeit: Blockierte Literatur ist nur die Spitze des Eisbergs. *Laborjournal* **20**, 7-8
8. **Brembs B.** (2013): Open Access and the Looming Crisis in Science. *The Conversation*. July 8, <http://theconversation.com/open-access-and-the-looming-crisis-in-science-14950>

9. **Brembs B.** (2012): The taming of chance - relations between art and nature. Exhibition catalog for the art exhibit "BIOS – Concepts of life in contemporary sculpture" Georg Kolbe Museum Berlin (26.08.-11.11.2012).
10. **Brembs B.** (2011): Do fruit flies dream of electric bananas? The Scientist, February/2011
11. **Brembs B.** (2010): Q&A. Curr. Biol. 20(14), R588
12. **Brembs B.** (2010): Desperate Houseflies: Entscheidungsfindung bei *Drosophila*. Laborjournal 5/2010, 66-67
13. **Brembs B.** (2009): Wissenschaftler quantifiziert. Laborjournal 6/2009, 22-25
14. **Brembs B.** (2009): Methoden richtig umsetzen – mit JoVE. Laborjournal 6/2009, 74-75
15. **Brembs B.** (2009): Wissenschaftler als Videostars. Laborjournal 1-2/2009, 62-63
16. **Brembs B.** (2008): Flies are creatures of habit. The Naked Scientists, BBC, <http://www.thenakedscientists.com/HTML/articles/article/flies-are-creatures-of-habit>
17. **Brembs B.** (2008): Put your paper onto video. LabTimes 6-2008, 54-55

Presentations:

Keynote Addresses:

1. **27.05.2017:** Peering into Skinner's Black Box: the evolutionary conserved neurobiology of operant learning. B.F. Skinner Lecture, Annual Convention of the Association for Behavior Analysis International, Denver, Co, USA
2. **22.02.2017:** Charlatans and Chancers: how we are dismantling the bedrock of science. Berlin Winter School Ethics and Neuroscience, Berlin, Germany
3. **28.11.2016:** The evolutionary conserved neurobiology of operant learning. Annual meeting of the Mind-Brain College of the University of Lisbon, Portugal
4. **27.11.2016:** A replication crisis in the making: How we reward bad science. Annual meeting of the Mind-Brain College of the University of Lisbon, Portugal
5. **05.10.2016:** We have to solve more than our access problems. Open Access Workshop, Roskilde University, Roskilde, Denmark
6. **20.06.2016:** The common biology of motor learning, operant conditioning and model-free learning. The 12th Karniel Computational Motor Control Workshop, Beer-Sheva, Israel
7. **14.11.2015:** Making Open the Default. OpenCon, Brussels, Belgium
8. **07.05.2015:** The neurobiology of free will. School of Biological Sciences Seminar Series, University of Essex, UK
9. **26.11.2014:** When decade-old functionality would be progress – the desolate state of our scholarly infrastructure. Munin Conference on Scholarly Publishing, University of Tromsø, Norway, DOI: 10.7557/5.3226
10. **01.04.2014:** Access is just the tip of the iceberg: science lacks a functional infrastructure. Meetingplace Open Access, Växjö, Sweden

11. **08.02.2014:** Pavlovian and Skinnerian processes are genetically separable. Winter Conference on Animal Learning and Behavior, Winter Park, Colorado, USA
12. **26.09.2012:** Limited access is a symptom and not the disease. Open Access Days 2012, University of Vienna, Austria
13. **02.03.2012:** World- and self-learning, two learning systems that determine who we are. 26th Annual Royce Conference, University of Alberta, Canada

Invited Conference Talks:

14. **08.06.2018:** Spontaneous behaviour in animals. Or: Why you don't want self-driving cars to be autonomous vehicles. Varieties of mind conference, Cambridge, UK
15. **23.10.2017:** Multiple memory systems interact to trade off exploration and exploitation. Memory workshop, Alicante, Spain
16. **26.06.2017:** The neurobiology of arbitrary decisions in invertebrates. Sigtuna conference on free will. Sigtuna, Sweden
17. **07.06.2017:** The neurogenetics of creative problem solving. Workshop "Origins of Consciousness", LSE, London, UK.
18. **31.05.2016:** What does Open Science need? Upgrade the Scholarly Infrastructure. OpenAire National Workshop, Rome, Italy
19. **27.04.2016:** Ways out of the infrastructure crisis in science. Workshop „Launch of the Open Peer Review Module“, Madrid, Spain
20. **01.03.2016:** Cognition? Intentionality? Expectation? Anticipation? Self? Symposium Intentionality, University of Konstanz, Germany
21. **11.11.2015:** Neurobiologische Grundlagen von Spontanverhalten – eine notwendige Voraussetzung für Willensfreiheit? Symposium "Zufall in der belebten Natur", University of Duisburg-Essen, Duisburg, Germany
22. **06.10.2015:** Why we need to fix our infrastructure now 5th Meeting of the Junior European Drosophila Investigators, Kreuth, Germany, Oct. 5-7, 2015
23. **23.07.2015:** #dsos requires a digital infrastructure. Dagstuhl Perspectives Workshop 15302 "Digital Scholarship and Open Science in Psychology and the Behavioral Sciences" Dagstuhl, Germany
24. **15.07.2015:** Figments of our imagination: do our current performance metrics hurt science? Symposium "Governance, Performance & Leadership of Research and Public Organizations", Munich
25. **15.06.2015:** General brain function: Action – Outcome Evaluation. Seminar: "Brain, Cognition, Behavior, Evolution: Polyglot to Monoglot?" Sao Paulo, Brazil
26. **29.04.2015:** The biological nature of free will. Symposium of the Neurostimulation Workgroup within the Tinnitus Research Initiative, Regensburg
27. **03.12.2014:** If only access were the only problem with our infrastructure! Open Access Ambassadors conference, Munich, Germany
28. **29.10.2014:** Hide if you can't fly? Behavioral flexibility in phototaxis in *Drosophila*. Neuromodulation of Behavior, Bangalore, India.

29. **25.09.2014:** Science Online? 1:AM Conference, London, UK
30. **23.09.2014:** Exploiting Predictable Responses. Study Group: Anticipation across Disciplines, Hanse-Wissenschafts-Kolleg, Delmenhorst, Germany.
31. **08.07.2013:** Die Infrastrukturkrise in der Wissenschaft aus der Forscherperspektive. 40th anniversary symposium HBZ, Cologne, Germany
32. **25.06.2013:** The infrastructure crisis at scientific institutions. SPARC Europe Open Session. Munich, Germany
33. **09.04.2013:** "Voluntariness": Behavioural Freedom and Decision-Making in Flies British Neuroscience Festival, London, UK
34. **24.02.2013:** Automated (meta-)data deposition as a use case for behavior ontologies. Behavior Ontology Workshop, RCN summit meeting, Raleigh, NC, USA
35. **30.01.2013:** Developing technology that ought to be institutional infrastructure using R, FigShare and DataCite. SciencePAD Persistent Identifiers Workshop, CERN, Zürich, Switzerland
36. **12.12.2012:** Open Source, Open Data, Open Science: three easy words, many obstacles. DataCite Workshop, GESIS Cologne, Germany
37. **23.10.2012:** Behavioral choice in *Drosophila*. Workshop on comparative cognition, Macquarie University, Sydney, Australia.
38. **05.07.2012:** Behavioral Freedom and Decision-Making in Flies: an Evolutionary Precursor of 'Free Will'? Evolution and function of consciousness, 2012 Summer School in Cognitive Sciences, University of Québec at Montréal, Canada.
39. **29.01.2012:** What can fruit flies tell us about the evolutionary roots of language? Winter Conference on Animal Learning and Behavior, Winter Park, Colorado, USA
40. **26.01.2012:** Spontaneous decisions and operant self-learning in *Drosophila*. Winter Conference on Brain Research, Snowbird, Utah, USA
41. **30.11.2011:** What needs to happen in a scholarly publishing reform? Semantic Web in Bibliotheken (SWIB 2011), Hamburg, Germany
42. **28.08.2011:** The *Drosophila* FoxP gene and operant self-learning: What can flies tell us about language acquisition? 10th Advanced School of Neurochemistry, International Society for Neurochemistry, Delphi, Greece
43. **30.06.2011:** Scholarly Publishing Reform: What Needs to Change? Open Knowledge Foundation Conference OKCon 2011, Berlin, Germany
44. **16.05.2011:** Action – outcome evaluation: FoxP in *Drosophila* self-learning. Janelia Farm Conference: "Learning and Memory: A Synthesis of Flies and Honeybees", Janelia Farm Research Campus, USA
45. **15.02.2011:** Invited panelist for „The public, the media and politics: intellectual debate and science in the age of digital communication“, Institute for Advanced Study of the Humanities, Essen, Germany
46. **28.05.2010:** Spontaneous decisions and operant conditioning in fruit flies. Annual Symposium of the Society for the Quantitative Analyses of Behavior, San Antonio, TX, USA

47. **21.05.2010:** Fly decision-making: spontaneous actions or habitual responses? 15th Biennial Meeting, International Society for Comparative Psychology, Hyogo, Japan
48. **23.09.2009:** Fly decision-making: actions, habits and Science 2.0. eSI Virtual Fly Brain Workshop, Magdalen College, University of Oxford, UK
49. **17.09.2009:** The neurobiology of spontaneous actions and operant learning in *Drosophila*. 32nd Japan Neuroscience Conference, Nagoya, Japan. *J Neurosci Res.* 65, Supp. 1, S25, SY2-H1-7
50. **04.05.2009:** Spontaneous decisions in *Drosophila* and their modulation by experience. Berlin Behavioural Biology Symposium, Germany
51. **24.-26.11.2008:** Learning the consequences: state-dependent modulation of spontaneous decisions in flies. Simpler Cognitive Systems, Gatsby Charitable Foundation workshop, London, UK.
52. **14.02.2008:** PLoS One/SciVee: Wissenschaftliche Video-Publikation. Medienforum "Videokommunikation in der Biotechnologie", IWF Wissen und Medien gGmbH, Göttingen, Germany
53. **05.-09.06.2007:** *Aplysia* as an attractive alternative for analyzing agency? "Gastropod Neuroscience: Past Successes and Future Prospects." University of Washington, Friday Harbor Labs, San Juan Island, USA
54. **13.-15.03.2007:** Brains as Output/Input Systems. Janelia Farm Conference: "Insect Behavior: Small Brains, Big Functions", Janelia Farm Research Campus, USA
55. **17.-22.09.2006:** Brains as Output/Input Devices. XIII Summer School, Nicolás Cabrera Institute: "Biophysics of Biological Circuits: from Molecules to Networks." Universidad Autónoma de Madrid, Spain.
56. **19.-23.07.2004:** Discussant, Novartis Foundation Symposium No. 268 on "Molecular Mechanisms Influencing Aggressive Behaviours." London, England, UK.

Invited Presentations:

57. **16.06.2018:** Multiple interacting memory systems in *Drosophila*. University of Zurich, IMLS Scientific Retreat 2018, Morschach, Switzerland
58. **21.03.2018:** The evolutionary conserved neurobiology of operant learning. Temporal Dynamics of Learning Center, seminar series, UCSD, San Diego, Ca., USA
59. **08.01.2018:** Upgrading our scholarly infrastructure. Max-Planck Institute for Intelligent Systems, Tübingen, Germany
60. **18.01.2017:** Die Neurobiologie des freien Willens. Continuing Medical Education: Psychiatry. Regensburg, Germany
61. **06.10.2016:** Self and non-self as a fundamental distinction in learning. Seminar series Institute of Neuroscience, University of Alicante, Alicante, Spain
62. **09.05.2016:** A value-based behavioral choice underlies phototaxis in *Drosophila*. Zoological Colloquium, Köln, Germany
63. **24.02.2015:** What's Wrong with Us? Or: How accountability is killing science. Center for Integrative Neurosciences, Tübingen, Germany

64. **28.07.2015:** Want to leave the infrastructure stone age? Cut all subscriptions now! Max-Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
65. **18.03.2015:** Skinner's black box: a neurobiology of operant learning. Honor Lecture, University of Minho, Porto, Portugal
66. **26.01.2015:** From Pavlov's bell to bad habits: Multiple, interacting memory systems in fruit flies. Zoologisches Kolloquium, Universität Würzburg, Germany
67. **28.11.2013:** Multiple interacting learning systems in *Drosophila*. Zoologisches Colloquium, RWTH Aachen, Germany
68. **11.06.2013:** Spontaneous actions and operant learning in *Drosophila*. Max-Planck-Institute for Neurobiology, Martinsried, Germany
69. **14.03.2013:** Behavioral Variability and decision-making in invertebrates. Department of Theoretical Physics, University of Innsbruck, Austria.
70. **20.11.2012:** Free will as an evolved brain function – evidence from invertebrates. BEEES (Behaviour, Ecology, Environment and Evolution Seminar), University of Zürich, Switzerland
71. **06.11.2012:** What's wrong with scholarly publishing today? Forschungszentrum Borstel, Germany
72. **13.09.2012:** The neurogenetics of spontaneous behavior and what a human gene involved in language has to do with it. Kolloquium, Department of Genetics, Universität Leipzig
73. **01.05.2012:** PKC and FoxP: evidence for a new molecular learning mechanism? Killam Seminar Series, McGill University, Montreal, Canada
74. **01.03.2012:** Hide if you cannot fly? Behavioral plasticity in simple orientation behaviors. Department of Neuroscience, University of Alberta, Canada
75. **22.11.2011:** FoxP in operant self-learning: what can flies tell us about the evolution of language? Chinese Academy of Sciences, Beijing, China
76. **19.10.2011:** Action – outcome evaluation: the genetics of *Drosophila* self-learning. PostDoc Invited Seminar Series, IMP Vienna, Austria.
77. **06.07.2011:** Was Fliegen uns über die Evolution von Sprache sagen können. BioClub, FU Berlin, Germany
78. **29.06.2011:** Functional conservation of FoxP: what can flies tell us about the evolution of language? Universität Leipzig, Germany
79. **29.06.2011:** Functional conservation of FoxP: what can flies tell us about the evolution of language? Max-Planck Institute for evolutionary Anthropology, Leipzig, Germany.
80. **01.04.2011:** The *Drosophila* FoxP gene is required for operant self-learning: implications for the evolution of language. Lise-Meitner Colloquium, Biochemistry department, FU Berlin, Germany
81. **09.02.2011:** What is wrong with scholarly publishing today? Department of Botany and Plant Ecology, FU Berlin, Germany

82. **31.01.2011:** More than synaptic plasticity: Evidence for a conserved mechanism for operant self-learning Research seminar series, Universität Köln, Cologne, Germany
83. **10.12.2010:** More than synaptic plasticity: Evidence for a conserved mechanism for operant self-learning. Virchow-Zentrum, Würzburg, Germany.
84. **04.11.2010:** Nothing makes sense in neurophysiology, except in the light of variability. Symposium in Neurophysiology, Freie Universität Berlin, Germany
85. **12.10.2010:** Actions not responses: behavioral choice in the fruit fly *Drosophila*. Colloquium, Leibniz Institute for Neurobiology, Magdeburg, Germany.
86. **09.07.2010:** Evolved not engineered: a systems neurobiology. Systems Biology Programme of the Center for Genomic Regulation, Barcelona, Spain.
87. **21.06.2010:** What is wrong with scholarly publishing today? Student lecture, University of Potsdam, Potsdam, Germany
88. **17.06.2010:** Entscheidungsfindung in *Drosophila*: wie Fliegengehirne die Balance zwischen Aktion und Reaktion finden. University of Regensburg, Germany
89. **24.02.2010:** What is wrong with scholarly publishing today? Idea and data club, Excellence Cluster "Language of Emotions" FU Berlin, Germany
90. **27.01.2010:** What is wrong with scholarly publishing today? CCR Lecture, Center for Cardiovascular Research, Charité University Hospital, Berlin, Germany
91. **13.10.2009:** What is wrong with scholarly publishing today? Max-Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany
92. **8.10.2009:** What is wrong with scholarly publishing today? Robert-Koch Institut, Berlin, Germany
93. **21.08.2009:** Wie Nervenzellen Gedächtnisspuren ablegen - Lernen aus neurobiologischer Sicht. Sommeruniversität, FU Berlin, Germany
94. **12.07.2009:** What is wrong with scholarly publishing today? Monthly Berlin meeting, BiologieNetz.de, Berlin, Germany
95. **23.06.2009:** What is wrong with scholarly publishing today? University of Potsdam, Potsdam, Germany
96. **22.06.2009:** What is wrong with scholarly publishing today? Research seminar, Dermatology Hospital, Charité University Hospital, Berlin, Germany
97. **20.06.2009:** Wie Nervenzellen Gedächtnisspuren ablegen - Lernen aus neurobiologischer Sicht. Science on Stage, Workshop: Teaching Science in Europe 3, Berlin-Buch, Germany
98. **08.06.2009:** Why is synaptic plasticity not the only learning mechanism? Zoology Seminar, Biocenter, University of Würzburg, Germany
99. **27.05.2009:** Learning the consequences: habits and spontaneous decisions in *Drosophila*. Neurobiology Seminars, University of Fribourg, Switzerland
100. **15.05.2009:** Actions not responses: spontaneous decisions in fruit flies. Lecture series for advanced students, University of Konstanz, Germany
101. **01.05.2009:** Genetic dissection of learning systems in *Drosophila*. Physiology Seminar, UCLA, USA

102. **15.04.2009:** What is wrong with scholarly publishing today? Graduate student seminar of the Dermatology Hospital, Charité University Hospital, Berlin, Germany
103. **07.04.2009:** Learning by doing: the neurogenetics of multiple learning systems in *Drosophila*. Adaptive and Neural Computation Seminar, University of Edinburgh, UK
104. **23.02.2009:** Learning the consequences: the neurobiology of state-dependent choice in *Drosophila*. Animal Behaviour Lecture Series, School of Psychology, University of Exeter, UK
105. **29.01.2009:** Learning the consequences: the neurobiology of state-dependent decision-making in *Drosophila*. McGill University, Montreal, Canada
106. **11.06.2008:** The molecular basis and hierarchical organization of adaptive behavioral choice in *Drosophila*. BMC Neuroscience Seminars, Uppsala Biomedicinska Centrum, Uppsala University, Uppsala, Sweden
107. **03.-06.05.2008:** The molecular basis and hierarchical organization of predictive learning in *Drosophila*. CIN Selection Symposium, Werner Reichardt - Center für integrative Neurowissenschaften, Tübingen, Germany
108. **08./09.01.2008:** Neurogenetic dissection of learning-by-doing in *Drosophila*. Symposium "Molecular Neurobiology of Behavior", Georg-August-Universität Göttingen, Germany
109. **27.11.007:** Dissecting learning-by-doing in *Drosophila*. Symposium in Systems Neuroscience, Ludwig-Maximilians Universität München, Germany.
110. **21.11.2007:** Genetic dissection of learning-by-doing in *Drosophila*. ALERGiC Seminar Series, University of Sussex, Brighton, UK.
111. **23.10.2007:** Order in the spontaneous behavior of *Drosophila*. Interdisciplinary Seminar Series: "Irreversible Prozesse und Selbstorganisation", Institut für Physik, Humboldt Universität zu Berlin, Germany
112. **21.10.2007:** The generation effect in flies. Monthly Berlin meeting, BiologieNetz.de, Berlin, Germany
113. **15./16.01.2007:** Brains as Output/Input Systems. Symposium in Molecular Neurobiology, Friedrich Miescher Institute, Basel, Switzerland.
114. **02.05.2002:** Operant reward learning in *Aplysia*, Lecture Series "Neurogenetics", Universität Würzburg, Germany

Peer-reviewed Conference Contributions

115. Hammitzsch, M.; Fritsch, B.; Reusser, D.; **Brembs, B.**; Deinzer, G.; Loewe, P.; Fenner, M.; van Edig, X.; Bertelmann, R.; Pampel, H.; Klump, J. and Wächter, J. (2015): Publishing Platform for Scientific Software - Lessons Learned. Geophysical Research Abstracts, Vol. 17, EGU2015-13068, General Assembly European Geosciences Union, Vienna, Austria
116. Colomb, J. and **Brembs, B.** (2014): Making Science Open by Default. General Online Research 2014, Cologne, Germany, #132
117. Mendoza E, Colomb J, Rybak J, Pflüger H-J, Zars T, Scharff C, **Brembs B** (2012): The *Drosophila* FoxP gene is required for operant self-learning: implications for

the evolution of language acquisition. In: The Evolution of Language (eds.: Scott-Phillips TC, Tamariz M, Cartmill EA, Hurford JR), Proceedings of the 9th international conference (EVOLANG9), Kyoto, Japan, World Scientific, 500-501

Conference Talks:

118. Janosch S., Fuhrmann J. and **Brembs B.** (2017): A policy level helping hand to deal with research software. Force11 conference, Berlin.
119. **Brembs, B.** (2009): Reafferent control of spontaneous behavior. 19th Annual Meeting of the Society for the Neural Control of Movement, Hawaii, USA
120. van Swinderen, B. and **Brembs, B.** (2009): A short attention span in the memory consolidation mutant *radish*. ANS 2009 Abstracts. Australian Neuroscience Society 29th Annual Meeting, Canberra, ACT Australia, (33-33). 27–30 January, 2009
121. **Brembs, B.** (2008): Mushroom-bodies regulate habit formation in *Drosophila*. FENS Abstr. vol.4, 134.2
122. **Brembs, B.**; Christiansen, F.; Pflüger, H.J. and Duch, C. (2007): Flight motor performance deficits in flies with genetically altered biogenic amine levels. Soc. Neurosci. Abstr., 453.9

Conference Posters:

123. Eriksson AE, Palazzo O, **Brembs B** (2018): CRISPR/Cas9-based genome editing of the *FoxP* locus in *Drosophila*. Soc. Neurosci. Abstr., 407.23
124. Rohrsen C, **Brembs B.** (2018): Neurobiological mechanisms of spontaneous behavior and operant feedback in *Drosophila*. Soc. Neurosci. Abstr., 152.09
125. Rohrsen C, Avani Koparkar, Gaia Bianchini, Naman Agrawal, Saurabh Bedi, **Brembs B** (2018): Neurobiological mechanisms of spontaneous behavior and operant feedback in *Drosophila*. FENS Abstr., F050
126. **Brembs B**, Sun W (2018): Searching for more genetic components of operant self-learning in *Drosophila*. FENS Abstr., F18-1976
127. **Brembs B**, Sun W (2017): Searching for the genetic components of long-term memory for operant self-learning in *Drosophila*. Soc. Neurosci. Abstr., 317.01
128. Kraker P, Enkhbayar A, Schramm M, Kittel C, Chamberlain S, Skaug M, **Brembs B** (2017): Open Knowledge Maps: A Visual Interface to the World's Scientific Knowledge. Open Science Conference, Berlin.
129. Rohrsen C, de Bivort B, **Brembs B** (2016): A fine-grained analysis of dopamine as a reinforcer of operant behavior in *Drosophila*. Soc. Neurosci. Abstr., 642.24
130. Gorostiza EA, Steymans I, **Brembs B** (2016): Do flies in groups make individual choices? Soc. Neurosci. Abstr., 160.11
131. Gorostiza EA, **Brembs B** (2015): Double dissociation of octopamine and dopamine on choice behavior in *Drosophila*. Soc. Neurosci. Abstr., 530.14
132. Rohrsen C, **Brembs B** (2015): Are the neural circuits controlling the temporal structure of spontaneous actions involved in operant self-learning? Soc. Neurosci. Abstr., 630.06

133. Rohrsen C, **Brembs B** (2014): The role of different dopaminergic populations in *Drosophila* choice behavior. Soc. Neurosci. Abstr., 651.16
134. Gorostiza EA, **Brembs B** (2014): Behavioral flexibility in *Drosophila* phototaxis. Soc. Neurosci. Abstr., 651.17
135. Colomb J, **Brembs B** (2014): #OpenData: PKC Inhibition In Motorneurons Prevents Self-Learning. European *Drosophila* Neurobiology Meeting (Neurofly), Heraklion, Crete, Greece
136. Colomb J, **Brembs B** (2013): Is PKC53e-activity in motorneurons involved in operant self-learning in *Drosophila*?. Soc. Neurosci. Abstr., 672.01
137. Damrau C, **Brembs B**, Colomb J (2013): Genetic dissection of octopamine action in reward-related behavior and motor control in *Drosophila* Soc. Neurosci. Abstr., 169.20
138. Colomb J, **Brembs B** (2012): Identification and localization of the Protein Kinase C requirement for operant self-learning in *Drosophila*. Soc. Neurosci. Abstr., 582.23
139. Damrau C, Colomb J, **Brembs B** (2012): What role does octopamine play in behavioral control in *Drosophila*? Soc. Neurosci. Abstr., 398.04
140. Damrau C, Colomb J, **Brembs B** (2012): Role of Octopamine in walking behavior and sucrose responsiveness. European *Drosophila* Neurobiology Conference (Neurofly), Padua, Italy
141. Colomb J, **Brembs B** (2012): The what and where of operant self-learning: PKC53e necessity in motorneurons? European *Drosophila* Neurobiology Conference (Neurofly), Padua, Italy
142. Raja S, **Brembs B** (2012): Identification of neural circuits required for spontaneous behavioral variability. 10th International Congress of Neuroethology, College Park, Maryland, USA
143. Colomb J, **Brembs B** (2012): PKC and *dFoxP* are necessary for operant self-learning. FENS Abstr., Volume 6, p022.06
144. Damrau C, Colomb J, **Brembs B** (2011): Does starvation-resistance in flies without octopamine explain differences in sucrose preference and learning? Soc. Neurosci. Abstr., 615.11
145. **Brembs B**, Colomb J, Beuster B, Rentinck M-N (2011): Hide if you cannot fly? Behavioral plasticity in flightless *Drosophila*. Soc. Neurosci. Abstr., 198.24
146. Colomb J, Beuster B, Rentinck M-N, **Brembs B** (2011): Hide or fly: phototaxis in flightless *Drosophila*. Göttingen Neurobiology Report, LP-T24-1B
147. Gilles M, Graf Y, Rughöft S, Leinhoß K, **Brembs B** (2011): *Drosophila* courtship: Male hybrid vigor after crossing isogenic lines? Göttingen Neurobiology Report, LP-T19-1B
148. **Brembs B**, Pauly D, Schade R, Mendoza E, Pflüger H-J, Rybak J, Scharff C, Zars T (2011): The *Drosophila* FoxP gene is necessary for operant self-learning: Implications for the evolutionary origins of language. Göttingen Neurobiology Report, LP-T25-1B

149. **Brembs B**, Pauly D, Pflüger J, Schade R, Scharff C, Mendoza E, Zars T (2010): The *Drosophila* FoxP gene is necessary for operant self-learning: implications for the evolutionary origins of language. Soc. Neurosci. Abstr., 704.7
150. Colomb J, **Brembs B** (2010): The what and where of PKC action during operant learning in *Drosophila*. Soc. Neurosci. Abstr., 704.21
151. Colomb J, Raja S, **Brembs B** (2010): The what and where of operant self-learning mechanisms in *Drosophila*. 9th International Congress of Neuroethology, Salamanca, Spain
152. **Brembs B**, Rughöft S, Leinhoß K (2010): Unattractive males can sire attractive sons in *Drosophila melanogaster*. P 92, 9th International Congress of Neuroethology, Salamanca, Spain
153. van Swinderen B, **Brembs B** (2009): A short attention span in the memory consolidation mutant radish. Australian Neuroscience Society 29th Annual Meeting, ANS 2009 Abstracts, p33
154. Pflüger, HJ.; Vierk, R.; Kononenko, NL.; **Brembs, B.**; Stocker, B and Duch, C. (2009): Modulatory function of octopamine and tyramine in insects. Soc. Neurosci. Abstr., 178.8
155. **Brembs, B.** and van Swinderen, B. (2009): Attention deficit and hyperactivity in a *Drosophila* memory mutant. Soc. Neurosci. Abstr., 478.3
156. Rentinck, M.N.; Beuster, B. and **Brembs, B.** (2009): Mechanisms of plasticity in simple taxis behaviors in *Drosophila*. Soc. Neurosci. Abstr., 580.13
157. van Swinderen, B. and **Brembs, B.** (2009): Attention deficit and hyperactivity in a *Drosophila* memory mutant. 19th Annual Meeting of the Society for the Neural Control of Movement
158. **Brembs, B.** (2008): Adenylyl cyclase and PKC differentiate operant and classical learning in *Drosophila*. Soc. Neurosci. Abstr., 792.12
159. **Brembs, B.** (2008): Double dissociation of protein-kinase C and adenylyl cyclase manipulations on operant and classical learning in *Drosophila*. 12th European *Drosophila* Neurobiology Conference, Würzburg, Germany
160. **Brembs, B.** (2008): Neurogenetic dissection of learning-by-doing in *Drosophila*. Gordon Research Conference "Genes & Behavior", Barga, Italy
161. **Brembs, B.** (2007): Mushroom-bodies regulate habit formation in *Drosophila*. 8th International Congress of Neuroethology, Vancouver, Canada
162. **Brembs, B.**; Maye, A; Hsieh, C. and Sugihara, G. (2007): Do fruit flies have free will? 8th International Congress of Neuroethology, Vancouver, Canada
163. **Brembs, B.** (2006): Operant and classical components interact hierarchically in *Drosophila* predictive learning. Soc. Neurosci. Abstr., 813.26
164. Christiansen, F.; Pflüger, J.; Duch, C.; and **Brembs, B.** (2006): Profound flight performance deficit in *Drosophila* lacking octopamine. FENS Abstr., vol.3, A218.2
165. **Brembs, B.**; Hsieh, C.; Sugihara, G. and Maye, A (2006): Do fruit flies have free will? FENS Abstr., vol.3, A233.7
166. Wiener, J.; Gerber, B.; Hempel de Ibarra, N.; Menzel, R. and **Brembs, B.** (2005): Occasion setting in *Drosophila* at the flight simulator. Soc. Neurosci. Abstr., 777.9

167. **Brembs, B.**; Maye, A. and Greggers, U. (2005): Order in spontaneous behavior. Soc. Neurosci. Abstr., 754.2.
168. Carbon, C.C.; Leder, H.; Weber, J.; Sander, T.; Trahms, L.; Grueter, M.; Grueter, T.; **Brembs, B.** and Lueschow, A. (2004): Specific impairments of configural processing in prosopagnosics. Soc. Neurosci. Abstr., 200.23.
169. **Brembs B.**; Baxter D.A. and Byrne J.H. (2004): Extending *in vitro* conditioning in *Aplysia* to analyze operant and classical processes in the same preparation. 7th International Congress of Neuroethology, Nyborg, Denmark.
170. Evans C.G; Jing J.; Proekt A., **Brembs B.**; Rosen S. and Cropper E.C. (2003): Frequency-dependent regulation of afferent transmission in the feeding circuitry of *Aplysia*. Soc. Neurosci. Abstr. 604.1.
171. **Brembs B.**; Wilkinson E.; Reyes F.; Baxter D.A. and Byrne J.H. (2001): Operant conditioning of feeding behavior in *Aplysia*. 6th International Congress of Neuroethology, Bonn, Germany.
172. **Brembs B.**; Wilkinson E.; Reyes F.; Baxter D.A. and Byrne J.H. (2001): Operant conditioning of feeding behavior in *Aplysia* using self-stimulation. Soc. Neurosci. Abstr. 644.19
173. Baxter D.A.; **Brembs B.** and Byrne J.H. (2001): Operant conditioning of feeding behavior in *Aplysia*. Cold Spring Harbor Symposium on Learning and Memory.
174. **Brembs B.**; Wilkinson E.; Reyes F.; Baxter D.A. and Byrne J.H. (2001): Operant conditioning using self-stimulation in *Aplysia*. In: Kreutzberg GW and Elsner N (eds) Göttingen Neurobiology Report 2001. Georg Thieme Verlag Stuttgart, New York
175. Baxter D.A.; Cai Y.; **Brembs B.** and Byrne J.H. (2000): Simulating physiological and morphological properties of neurons with SNNAP (Simulator for Neural Networks and Action Potentials). Soc. Neurosci. Abstr. 26:21.64.
176. **Brembs B.**; Wolf R. and Heisenberg M. (1999): Classical Questions in an Operant Learning Paradigm. In: Elsner N and Eysel U (eds) Göttingen Neurobiology Report 1999. Georg Thieme Verlag Stuttgart, New York: 545.
177. **Brembs B.**; Wolf R. and Heisenberg M. (1998): Operant and Classical Learning at the Flight Simulator: What is the Role of the Context? In: Elsner N and Wehner R (eds) New Neuroethology on the Move. Georg Thieme Verlag Stuttgart, New York: 514.
178. **Brembs B.**; Wolf R. and Heisenberg M. (1998): How different are operant and classical conditioning at the flight simulator? 5th International Congress of Neuroethology, San Diego, Ca.
179. Wolf R.; **Brembs B.**; Ernst R. and Heisenberg M. (1998): Classification of learning in tethered flying *Drosophila*. In: Elsner N and Wehner R (eds) New Neuroethology on the Move. Georg Thieme Verlag Stuttgart, New York: 111 ([talk](#))
180. **Brembs B.**; Wolf R.; Heisenberg M. (1997): Is operant behavior facilitating classical conditioning of *Drosophila* at the flight simulator? In: Elsner N, Waessle H (eds) Göttingen Neurobiology Report 1997. Georg Thieme Verlag Stuttgart, New York: 652.

Teaching experience

Basic studies:

Practical courses (Regensburg)

WS 2012-19 *Evolutionsbiologie der Pflanzen und Tiere*, 12 SWS, ca. 30 participants

SS 2014-19 *Drosophila Neurogenetics*, 12 SWS, ca. 10 participants

Basic lectures (Regensburg)

SS/WS 2014-15 *Scientific writing*, 2 SWS, ca. 10 participants

SS 2018 *Scientific Literature*, 2SWS, ca. 70 participants

Seminars (Regensburg)

WS 2013-19 *Evolutionsbiologie der Pflanzen und Tiere*, 2 SWS, ca. 20 participants

Basic lectures (Leipzig)

SS 2012 *Genetik II (model systems)*, 3 SWS, ca. 10 participants

WS 2012-14 *Evolutionsbiologie der Pflanzen und Tiere*, 1 SWS, ca. 30 participants

Seminars (Leipzig)

SS 2012 *Genetik II. Student presentations*. 1 SWS, 10 participants

Basic lectures (Berlin)

SS 2009-2010 *Sinnesphysiologie*, 2 SWS, ca. 90 participants

SS/WS 2007-2011 *Einführung in die Verhaltens- und Neurobiologie*, 1 SWS, ca. 200 participants

SS/WS 2007-2011 *Einführung in die Biologie*, 3 SWS, ca. 200 participants

SS 2010 *Scientific English*, 1SWS, ca. 10 participants

Practical courses (Berlin)

SS/WS 2006-2012 *Neurobiologie: Basic course with seminar*. 6 SWS, 30 participants

Practical courses as student teaching assistant (Würzburg)

SS 1993-2000 *Entwicklungsbiologische Übungen*

Advanced studies:

Advanced lectures (Regensburg)

WS 2012-19 *Experimental and Clinical Neuroscience*. 4SWS, ca. 30 participants

Advanced lectures (Leipzig)

SS 2012 *Neurogenetics*. 2SWS, ca. 15 participants

Seminars (Leipzig)

SS 2012 *Verhaltensneurogenetik*. Student presentations. 1 SWS, 15 participants

Practical courses (Berlin)

SS 2008 *Zelluläre Verhaltensanalyse und Neuroanatomische Methoden: Insekten*. 10SWS, 12 participants

SS 2009-2011 *Neurobiology*, Master course (teacher's education), 4SWS, 12 participants

Advanced lectures (Berlin)

SS 2009 *Scientific publishing yesterday and today*. 1SWS, ca. 10 participants

WS 2008-2010 *Biology of Insects* (1) Morphology. (2) Anatomy. 2SWS, 70-80 participants

WS 2004-2006 *Neurobiology*. 1 SWS, 30-40 participants

SS 2009-2011 *Neurobiology*, teachers' education, 1SWS, 12 participants

Seminars (Berlin)

WS 2004-2006 *Neurobiology*. Student presentations. 2 SWS, 30-40 participants

Exercises (Würzburg)

SS 1999 *Übungsaufgaben in Genetik* (lecture, exercises and exam). 2SWS, 20-30 participants

Practical courses as student teaching assistant (Würzburg)

WS 1995-2000 *Fortgeschrittenenpraktikum I in Genetik*
Fortgeschrittenenpraktikum II in Genetik

Supervision:**Post-Docs**

2018-present **Anders Eriksson**: *Interactions between world- and self-learning*

2013-2018 **Ezequiel Axel Gorostiza**: *Flexibility in orientation behaviors*.

2009-2014 **Julien Colomb**: *Localization of an operant memory*.

2004-2007 **Alexander Maye**: *Order in spontaneous behavior*.

Graduate students

2018-present	Ottavia Palazzo: <i>Genome editing of the FoxP gene locus in Drosophila</i>
2018-2019	Saloni Rose: <i>Genetic and neurobiological mechanisms of operant self-learning in Drosophila</i>
2014-2019	Christian Rohrsen Mahony: <i>Spontaneous behavior and operant learning in Drosophila</i>
2010-2014	Christine Damrau: <i>Aminergic control of Drosophila behavior.</i>
2009-2013	Sathishkumar Raja: <i>The neurobiology of spontaneous variability in Drosophila turning behavior.</i>
2001-2002	Fredy D. Reyes, Fred D. Lorenzetti: <i>Operant Reward Learning in Aplysia: Neuronal Correlates and Mechanisms.</i>

Master's students

2017	Weitan Sun: Operant self-learning in <i>Drosophila</i> : candidate genes, feedback mechanisms and long-term memory
2013/2014	Christian Rohrsen Mahony: <i>Optogenetic screen for rewarding and punishing aminergic circuits in Drosophila</i>

International undergraduate students

2018	<p>Klara Krmpotic (Croatia): Phenotyping FoxP isoform B knock-out flies</p> <p>Avani Koparkar (India): Screening dopaminergic sub-population of neurons for their reinforcement value – T-Maze</p> <p>Saurabh Bedi (India): Screening dopaminergic sub-population of neurons for their reinforcement value - Joystick</p> <p>Naman Agrawal (India): Screening dopaminergic sub-population of neurons for their reinforcement value – T-Maze</p> <p>Anhoki Kashiparek (India): Are intracellular calcium-waves involved in <i>Drosophila</i> spontaneous behavior?</p> <p>Anthony H Vázquez (Puerto Rico): Electroretinograms of neurodegenerative mutants in <i>Drosophila</i></p> <p>Monica CM Pagan (Puerto Rico): Are intracellular calcium-waves involved in <i>Drosophila</i> spontaneous behavior?</p> <p>Amanda CT Arroyo (Puerto Rico): Screening dopaminergic sub-population of neurons for their reinforcement value – T-Maze</p>
2017	Saloni Rose (India): Are anxiety-related processes involved in the photopreference switch in flightless flies?
2015/2016	Pablo Martinez (Spain): <i>The neurobiology of spontaneous flight in Drosophila.</i>
2013	<p>Sime Luketa (Croatia): <i>Spontaneous behavior in Drosophila</i></p> <p>Lidia Castro Gonzales (Spain): <i>Flexibility in simple orientation behaviors in Drosophila.</i></p>

- 2012 **Tugce Demirtas** (Turkey): *Measuring spontaneous walking behavior in Drosophila with pySolo.*
- 2010 **Asli Akin** (Turkey): *Mechanisms of plasticity in simple taxis behaviors.*
- Nitin Singh Chouhan** (India): *Establishing a computer-controlled paradigm for the study of spontaneous walking behavior in Drosophila* (DAAD-funded scholarship)
- 2007 **Arun Nagar** (India): *Detecting walking flies in a video stream.*
- 2003 **Hyun Park** (South Korea): *Frequency-dependent regulation of afferent transmission in the feeding circuitry of Aplysia.*

Undergraduate students

- 2018 **Max von der Linde**: Establishing a new optomotor paradigm in *Drosophila* using a joystick platform.
- Julia Dobbert**: Genetic manipulation of the FoxP locus and expression analysis of FoxP-isoformB
- Gaia Bianchini**: Screening a dopaminergic sub-population of neurons for their reinforcement value on a joystick platform experiment for *Drosophila*
- 2016 **Lena Matzeder**: Is anxiety a contributing factor to photopreference in *Drosophila*? A pharmacological study
- 2015/2016 **Amelie Roedel**: *Temperature impact on phototactic behavior in Drosophila melanogaster*
- Bianca Birk**: *Identification of octopaminergic sub-populations crucial for behavioral flexibility in phototaxis*
- Isabelle Steymans**: *Behavioral variability in phototaxis*
- Lena Danyeli**: *Optogenetic identification of dopaminergic sub-populations involved in expressing behavioral preferences*
- Katrin Hofweber**: Optogenetic control of fly choice in the T-Maze
- 2014/2015 **Katrin Hofweber**: *Conditioned positive and negative phototaxis*
- 2014 **Hae In**: *Behavioral flexibility in simple taxis behaviors*
- 2013 **Christin Dräger**: *Behavioral flexibility in simple taxis behaviors*
- Bojana Janković**: *Spontaneous turning behavior in Drosophila*
- Christian Rohrsen Mahony**: *Behavioral flexibility in simple taxis behaviors*
- Andreas Grasskamp**: *Spontaneous flight behavior in fruit flies*
- Joel Wellbourne-Wood**: *Examining the effectiveness of all available RNAi lines for dFoxP using qPCR*

- 2012 **Madelaine-Marie Gilles:** *Does inbreeding reduce male attractiveness? A study in Drosophila melanogaster courtship behavior.*
- Denise Bock:** *Pharmacological rescue of Drosophila tβh mutants in Buridan's paradigm.*
- Yasmine Graf:** *Behavioral analysis of Drosophila learning mutants with and without methylphenidate treatment in Buridan's paradigm.*
- 2011 **Denise Bock:** *A wild type reference database for Buridan's paradigm.*
- Lucie Dieterich:** *Hide if you cannot fly? Behavioral plasticity in flightless Drosophila.*
- Ben Beuster, Marc-Nicolas Rentinck:** *Analysis of flies without octopamine in Buridan's experiment.*
- Yasmine Graf, Madeleine-Marie Gilles:** *Do flies without octopamine show alterations in 24h spontaneous walking behavior?*
- 2010 **Jedrzej Blaszkiwicz:** *Attention-deficit mutants in Buridan's paradigm*
- Ben Beuster, Marc-Nicolas Rentinck:** *Generating chicken IgY antibodies against Drosophila FoxP.*
- Saskia Rughöft, Kristin Leinhoss:** *Female mate choice in Drosophila.*
- 2009 **Lutz Reiter:** *Video analysis of Drosophila behavior*
- Phillip Vogt:** *Flight motor performance deficits in flies with genetically altered biogenic amine and FoxP levels*
- Ben Beuster, Julian Clauß:** *FoxP expression pattern analysis in Drosophila*
- Marc-Nicolas Rentinck, Ben Beuster:** *Plasticity in simple behaviors*
- Laure Geidel, Saskia Rughöft:** *Heritability of mate choice in Drosophila*
- 2008 **Anne-Marie Tumescheit:** *Developing Buridan's Paradigm for flies*
- Malte Hahn:** *Why is fast phototaxis reduced in flies with shortened wings?*
- Sylvia Kurth:** *The heritability of mate choice in Drosophila.*
- 2006-2007 **Frauke Christiansen:** *Flight motor performance deficits in flies with genetically altered biogenic amine levels.*
- 2002 **Vu Hyun:** *Extending In Vitro Conditioning in Aplysia to Analyze Operant and Classical Processes in the Same Preparation.*
- 2001 **Elizabeth Wilkinson:** *Operant Reward Learning in Aplysia: Neuronal Correlates and Mechanisms.*
- 1999/2000 **Jan Wiener:** *Kontext-Generalisierung in Drosophila melanogaster.*

1999

Andrea Baier, Britta Wittek: *Drosophila as a new model for the neurobiology of aggression?*