

# *Curriculum Vitae of FRIEDEMANN PULVERMÜLLER*



## **EDUCATION**

<i>Dr. rer.soc. (Ph.D.)</i>	Psychology, Universität Konstanz	1999
<i>Habilitation</i>	Psychology, Universität Konstanz	1998
<i>Habilitation</i>	Behavioral Neuroscience, Universität Tübingen	1995
<i>Dr. phil. (Ph.D.)</i>	Linguistics, Universität Tübingen	1989
<i>Staatsexamen (M.A.)</i>	Biology, German Linguistics, Universität Tübingen	1985

## **SCIENTIFIC APPOINTMENTS AND TEACHING**

<i>Professor (W3) in Neuroscience of Language and Pragmatics</i>		
	Dept of Philosophy and Humanities, Freie Universität Berlin	2011-
<i>Head of MEG</i>	MRC Cognition & Brain Sciences Unit, Cambridge	2007-2011
<i>Programme Leader in the Cognitive Neuroscience of Language</i>		
	MRC Cognition & Brain Sciences Unit, Cambridge	2000-2011
<i>Heisenberg Fellow</i>	Department of Psychology, Universität Konstanz	1996-2000
<i>Helmholtz Fellow</i>	Medical School, Universität Tübingen	1993-1996
<i>Post-doctoral fellow</i>	Dept. of Applied Linguistics, UCLA	1991-1993
<i>Research Associate</i>	Max-Planck-Institute of Biological Cybernetics	1990-1991
<i>Doctoral Fellow</i>	Linguistics, Universität Tübingen	1986-1990
<i>Lecturer</i>	Linguistics, Universität Tübingen	1986

**OTHER PROFESSIONAL ACTIVITIES**

<i>Visiting Scientist</i>	MRC Cognition & Brain Sciences Unit, Cambridge	2011-2013
<i>Visiting Scientist</i>	Neurosci. Inst., University of California, Berkeley	2006
<i>Visiting Scientist</i>	Centre for Medicine and Health, Univ. of Malaga	2005-
<i>Visiting Scientist</i>	BioMag Lab, Helsinki University Central Hospital	1999-2005
<i>Visiting Scientist</i>	Cognitive Brain Res. Unit	Univ. of Helsinki 1998-
<i>Visiting Scientist</i>	Cognitive Science Lab	Univ. of Trento 1998-1999
<i>Visiting Scientist</i>	Dept. of Applied Linguistics	UCLA 1995, 1998
<i>Visiting Scientist</i>	Res. group Biomagnetism	Universität Münster 1993
<i>Visiting Scientist</i>	Max Planck-Institut for Psycholinguistics	1993

**HONORS, HONORARY DEGREES, AWARDS, AND FELLOWSHIPS**

<i>ERC Advanced Grant</i>	European Research Council	2000-2026
<i>Faculty Member</i>	Einstein Center for Neurosciences Berlin	2016-
<i>Honorary Professor</i>	Dept of Psychology, University of Malaga	2015-
<i>Honorary Doctor</i>	Inst of Behavioral Sciences, University of Helsinki	2014-
<i>Faculty Member</i>	Berlin School of Mind and Brain, Humboldt Universität zu Berlin	2013-
<i>Honorary Professor</i>	School of Computing, University of Plymouth	2012-2017
<i>Visiting Professor</i>	University of Helsinki	2011
<i>Visiting Professor</i>	Anglia Ruskin University Cambridge	2007-2011
<i>Visiting Professor</i>	Faculty of Biology, St.Petersburg State University	2007-2010
<i>Honorary Professor</i>	School of Psychology, University of Wales, Bangor	2004-
<i>Honorary Lecturer</i>	Depart of Linguistics, Cambridge University	2003-2011
<i>Fellow</i>	Wolfson College, Cambridge University	2003-2011
<i>Member</i>	Rodin Remediation Academy, Stockholm	1999-
<i>Heisenberg fellowship</i>	Deutsche Forschungsgemeinschaft	1996
<i>Distinguished Scientific Award for Early Career Contributions to Psychophysiology</i>	Society for Psychophysiological Research	1995
<i>Attempto-Award for Brain Research</i>	Universität Tübingen	1994
<i>Helmholtz Fellowship</i>	Bundesministerium für Forschung	1993
<i>Visiting Professor</i>	Dept. of Applied Linguistics, UCLA	1992-1993
<i>Postdoctoral fellowship</i>	Deutsche Forschungsgemeinschaft	1991
<i>Research fellowship</i>	Stiftung zur Förderung der Philosophie	1988

Doctoral fellowship                      State of Baden-Württemberg                      1986

### MAJOR RESEARCH GRANTS

1. Principal Investigator: F. Pulvermüller  
Topic: *Neurobiology of Word Processing* 1993-1995  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/2-1  
Amount of funding: ca. 100,000 €
2. Principal Investigator: F. Pulvermüller  
Topic: *Lexical Deficits after Stroke* 1995-1998  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/2-2)  
Amount of funding: ca. 180,000 €
3. Principal Investigator: F. Pulvermüller  
Topic: *Neurobiology of Word Processing II* 1996-1999  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/2-3)  
Amount of funding: ca. 100,000 €
4. Principal Investigator: F. Pulvermüller  
Topic: *Activity Dynamics of Cortical Representations* 1997-2001  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/10-1)  
Amount of funding: ca. 70,000 €
5. Principal Investigator: F. Pulvermüller  
Topic: *Psychophysiology of Word Meaning* 1998-2001  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/11-1)  
Amount of funding: ca. 70,000 €
6. Principal Investigator: F. Pulvermüller  
Topic: *The right hemisphere's role in word processing* 2000--2001  
Granting agency: Universität Konstanz  
Amount of funding: ca. 40,000 €
7. Principal Investigator: F. Pulvermüller  
Topic: *Neural basis of words, meaning and syntax* 2000--2004  
Granting agency: Medical Research Council, MC\_US\_A060\_0034  
Amount of funding: ca. € 1.2 Mio
8. Principal Investigators: B. Rockstroh & F. Pulvermüller  
Topic: *Constraint-Induced Aphasia Therapy* 2001--2002  
Granting agency: Stiftung ZNS (German CNS foundation)  
Amount of funding: ca. 50,000 €
9. Principal Investigator: F. Pulvermüller, Group coordinator: Stefan Wermter  
Topic: *Mirrorbot: Language, action and perception in monkeys, humans and artifacts* 2002--2005  
Granting agency: European Union  
Amount of funding: ca. € 1.7 Mio. overall, € 435,000 to Cambridge part
10. Principal Investigator: F. Pulvermüller  
Topic: *Neural basis of words, meaning and syntax* 2004--2009

- Granting agency: Medical Research Council MC\_US\_A060\_0034  
Amount of funding: ca. € 1.5 Mio
11. Application team: W. Marslen-Wilson, F. Pulvermüller, R. Henson, Y. Shtyrov  
Equipment: MEG device Elekta-Neuromag Vectorview + MSR 2006  
Granting agency: Medical Research Council  
Amount of funding: ca. € 2.16 Mio
12. Principal Investigator: F. Pulvermüller, Group coordinator: S. Wermter  
Topic: NESTcom: What it means to Communicate  
Cambridge Part On Cognitive Neuroscience 2006--2008  
Granting agency: European Union NEST-2005-PATH-HUM 043374  
Amount of funding: ca. € 249,000 overall, € 82,000 to Cambridge part
13. Principal Investigator: W. Marslen-Wilson, F. Pulvermüller, R. Henson, Y. Shtyrov  
Topic: MRC-Elekta MEG Clinical Research Collaboration 2007--2010  
Granting agency: Elekta-Neuromag, Stockholm/Helsinki  
Amount of funding: ca. € 150,000
14. Principal Investigator: F. Pulvermüller, Y. Shtyrov (for MRC Cambridge)  
Topic: MEG Biomarkers of Schizophrenia 2008--2011  
Granting agency: Gaxo-Smith-Kline  
Amount of funding: ca. € 200,000
15. Principal Investigator: F. Pulvermüller  
Topic: Brain dynamics of language in time and space 2009--2013  
Granting agency: Medical Research Council U1055.04.003.00001.01  
Amount of funding: ca. € 2.35 Mio.
16. Principal Investigator: F. Pulvermüller  
Topic: Startup grant 2011--2016  
Granting agency: Freie Universität Berlin  
Amount of funding: ca. € 610,000
17. Principal Investigator: H Kappelhoff et al., PI; F Pulvermüller, group coordinator  
Topic: Interaction between motor, perceptual and linguistic systems  
Granting agency: Deutsche Forschungsgemeinschaft 2012--2014  
Amount of funding: ca. € 6.1 Mio overall, ca. € 305,000 for group
18. Principal Investigator: F. Pulvermüller  
Topic: Bioinspired Architecture for Brain Embodied Language: BABEL  
Granting agency: EPSRC (UK), EP/J004561/1 2012--2017  
Amount of funding: ca. € 550,000
19. Principle Investigator: Marian Brady, Glasgow; Germany coordinator: F. Pulvermüller  
Topic: COST Action Collaboration of Aphasia Trialists 2013--2017  
Granting agency: European Union  
Amount of funding: ca. € 512,000
20. Principle Investigator: Sue Denham, Plymouth; FU Berlin partner: F. Pulvermüller  
Topic: CogNovo Project, FP7-PEOPLE-2013-ITN 2013--2016  
Granting agency: European Union  
Amount of funding: ca. € 4.07 Mio

21. Principle Investigator: F. Pulvermüller  
Topic: Constructions and Combinations 2014--2017  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/16-1  
Amount of funding: ca. € 300,000
22. Principle Investigators: F. Pulvermüller & B. Mohr  
Topic: Intensive Language Action Therapy 2014--2024  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/15-1 and 2  
Amount of funding: ca. € 700,000
23. Principle Investigator: F. Pulvermüller  
Topic: The sound of meaning 2017--2023  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/22-1  
Amount of funding: ca. € 500,000
24. Principle Investigator: F. Pulvermüller  
Topic: SPP XPrag.de: Brain Signatures of Communication 2017--2023  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/23-1  
Amount of funding: ca. € 330,000
25. Principle Investigator: W. Schäffner et al., F. Pulvermüller, Co-PI  
Topic: Cluster of Excellence Matters of Activity, MoA 2019—2025  
Granting agency: Deutsche Forschungsgemeinschaft, DFG, EXC 2025/1 – 390648296  
Amount of funding: overall ca. € 36 Mio., FU Berlin and lab part ca. € 300.000
26. Principle Investigator: K. Strijkers, F. Pulvermüller  
Topic: Phonological Networks, PhoNet 2020—2025  
Granting agency: Deutsche Forschungsgemeinschaft, DFG Pu 97/26-1 & ANR, France  
Amount of funding: overall ca. € 480.000, Berlin part ca. € 360,000 €
27. Principle Investigator: Noel Nguyen-Trong et al., F. Pulvermüller Co-PI  
Topic: Conversational Brains (CoBra), ITN 2020—2024  
Granting agency: European Union, Horizon 2020, MSCA-ITN-2019-859588.  
Amount of funding: overall ca. € 4 Mio., FU Berlin part ca. € 250.000
28. Principle Investigator: F. Pulvermüller 2020—2025  
Topic: Material Constraints Enabling Human Cognition, (MatCo)  
Granting agency: European Research Council, ERC-2019-ADG 883811  
Amount of funding: ca. € 2.5 Mio.

#### **TEACHING AT GRADUATE AND UNDERGRADUATE LEVELS IN THE AREAS OF**

Cognitive Neuroscience, Psychophysiology, Neuropsychology  
Linguistics, Psycholinguistics, Neurolinguistics, Neuroscience of Language  
General Psychology (attention, emotion, language, memory, perception)  
Research Methods in Cognitive Science, Neuroimaging, especially MEG, EEG

#### **ADMINISTRATIVE ACTIVITIES**

Member of administrative committees at MRC CBSU, including  
*Unit Management Committee*

*Imaging Management Committee*  
*Graduate Student Admission and Evaluation Committee*  
*MEG Management Committee (Chair)*  
At Freie Universität Berlin:  
*Head, Brain Language Laboratory*  
*Deputy member, Institute Management Committee, Inst Dt Ndl Philology*  
At Berlin School of Mind and Brain:  
*Member, Committee for Early Career Support*  
*Member, Curriculum Committee and Teaching Board*

#### **PROFESSIONAL ORGANIZATION MEMBERSHIPS**

Cognitive Neuroscience Society (CNS), USA  
Experimental Psychology Society (EPS), UK  
Society for Psychophysiological Research (SPR), USA  
Society for Neuroscience (SfN), USA  
World Federation of Neurology (WFN) – Research Group on Aphasia and Cognitive Disorders (RGACD)  
Society for the Neurobiology of Language (NBL), USA

#### **EDITORIAL ACTIVITIES**

Guest Editor, <i>Cortex</i>	2009-2012
Guest Editor, <i>Brain and Language</i>	2008-2011
Guest Editor, <i>Neural Networks</i>	2007-2009
Editorial Board, <i>Biolinguistics</i>	2010-
Review Editor, <i>Frontiers in Human Neuroscience</i>	2007-
Editorial Board, <i>Brain and Language</i>	2007-
Editorial Board, <i>Brain Topography</i>	2007-
Editorial Board, <i>Aphasiology</i>	1999-

#### **REFEREE FOR SCIENTIFIC ORGANIZATIONS**

*Biotechnology and Biological Sciences Research Council (BBSRC), UK*  
*Deutsche Forschungsgemeinschaft (DFG), Germany*  
*Dutch Science Foundation, The Netherlands*  
*Engineering and Physical Sciences Research Council (EPSRC), UK*  
*Finnish Academy of Science, Finland*  
*Medical Research Council (MRC), UK*  
*National Science Foundation (NSF), USA*  
*Stiftung ZNS, Germany*  
*Stroke Association, UK*  
*Wellcome Trust, UK*  
*and many others*

**REFEREE FOR SCIENTIFIC JOURNALS (EXAMPLES)**

*Aphasiology*  
*Behavioral and Brain Sciences*  
*Biological Psychology*  
*Brain and Language*  
*Brain Research / Cognitive Brain Research*  
*Cerebral Cortex*  
*Cortex*  
*Clinical Neurophysiology / Electroencephalography and Clinical Neurophysiology*  
*Cognitive Neuropsychology*  
*Cognitive Psychology*  
*Cognitive Science*  
*Connection Science*  
*Current Biology*  
*European Journal of Neuroscience*  
*Experimental Brain Research*  
*International Journal of Psychophysiology*  
*Issues in Applied Linguistics*  
*Journal of Cognitive Neuroscience*  
*Journal of Neuroscience*  
*Journal of Psychophysiology*  
*Language and Cognitive Processes / Language, Cognition & Neuroscience*  
*Nature, Nature Neuroscience, Nature Reviews Neuroscience, Nature Communications*  
*Neural Networks*  
*Neurocase*  
*Neuroimage*  
*Neuron*  
*Neuropsychologia*  
*Proceedings of the National Academy of Sciences, USA*  
*Progress in Neurobiology*  
*Psychophysiology*  
*Trends in Cognitive Sciences*  
*Science, Scientific Reports*  
*and many others*

**BIBLIOGRAPHICAL INFORMATION**

Number of publications: >300, incl. >250 reviewed journal papers, 9 books & edited volumes

Hirsch (h) index: 96; Number of citations: ca 40,000 (google scholar)

ORCHID-ID; 0000-0003-3210-7112; Researcher-ID: I-2830-2017

## **List of Publications**

### **[A] BOOKS, DISSERTATIONS, EDITED VOLUMES**

1. Pulvermüller, F. 1990. ***Aphasische Kommunikation. Grundfragen ihrer Analyse und Therapie. Sprachtherapie 2.*** [Aphasic Communication. Key questions of its analysis and therapy]. Gunter Narr Verlag: Tübingen.
2. Pulvermüller, F. 1996. ***Neurobiologie der Sprache*** [Neurobiology Of Language]. ***Gehirntheoretische Überlegungen und empirische Befunde zur Sprachverarbeitung. Psychologia Universalis 1.*** Pabst Science Publishers: Lengerich, Berlin.
3. Pulvermüller, F. 2001. ***Neuronal grammar. An essay on brain mechanisms of serial order.*** Doctoral dissertation, University of Konstanz.
4. Pulvermüller, F. 2003. ***The Neuroscience Of Language: On Brain Circuits Of Words and Serial Order.*** Cambridge University Press, Cambridge, UK.
5. Shtyrov, Y. & Pulvermüller, F. (eds.) 2006. ***Fourth Conference On Mismatch Negativity (MMN) And Its Clinical And Scientific Applications***, April 22-26, 2006. MRC Cognition and Brain Sciences Unit, Cambridge, UK.
6. Wermter, S., Page, M., Knowles, M., Gallese, V., Pulvermüller, F., & Taylor, J. (eds.) 2009. ***Multimodal communication in animals, humans and robots.*** Special issue of the journal *Neural Networks*, **22** (2).
7. Knoeferle, P., Crocker, M. W., & Pulvermüller, F. (eds.) 2010. ***Embodied sentence processing.*** Special issue of the journal *Brain and Language*, **112** (3).
8. Cappa, S., & Pulvermüller, F. (eds.) 2012. ***Language and the Motor System.*** Special Issue of the Journal *Cortex*, **48** (7).
9. Berthier, M. L., Green, C., Juárez, R., Lara, J. P., & Pulvermüller, F. 2014. ***REGIA: Rehabilitación grupal intensiva de la afasia.*** Madrid: TEA Ediciones, S.A.

### **[B] ARTICLES IN REFEREED INTERNATIONAL JOURNALS**

#### **1991**

10. Pulvermüller, F. & Preißl, H. 1991: A cell assembly model of language. *Network: Computation in Neural Systems* **2**, 455-468.
11. Pulvermüller, F. & Roth, V.M. 1991: Communicative aphasia treatment as a further development of PACE-therapy. *Aphasiology* **5**, 39-50.



**1992**

12. Pulvermüller, F. 1992: Constituents of a neurological theory of language. *Concepts in Neuroscience* **3**, 157-200.
13. Braitenberg, V. & Pulvermüller, F. 1992: Entwurf einer neurologischen Theorie der Sprache. *Naturwissenschaften* **79**, 103-117.

**1993**

14. Pulvermüller, F. & Schönle, P.-W. 1993: Behavioral and neuronal changes during treatment of mixed transcortical aphasia. *Cognition* **48**, 139-161.

**1994**

15. Pulvermüller, F. 1994: Why cell assembly ignition should lead to gamma band responses. *Psychology* **5 (65)**, 1-6.
16. Pulvermüller, F. & Lutzenberger, W. 1994: Specific gamma-band depression and linguistic units. *Psychology* **5 (68)**, 1-8.
17. Pulvermüller, F. & Preißl, H. 1994: Explaining aphasias in neuronal terms. *Journal of Neurolinguistics* **8**, 75-81
18. Pulvermüller, F. Preißl, H., Eulitz, C., Pantev, C., Lutzenberger, W., Elbert, T. & Birbaumer, N. 1994: Brain rhythms, cell assemblies and cognition: evidence from the processing of words and pseudowords. *Psychology* **5 (48)**, 1-30.
19. Pulvermüller, F., Preißl, H., Lutzenberger, W. & Birbaumer, N. 1994: Simple models first. *Psychology* **5 (66)**, 1-4.
20. Pulvermüller, F. & Schumann, J.H. 1994: Neurobiological mechanisms of language acquisition. *Language Learning* **44**, 681-734.
21. Lutzenberger, W., Pulvermüller, F. & Birbaumer, N. 1994: Words and pseudowords elicit distinct patterns of 30-Hz EEG responses in humans. *Neuroscience Letters* **176**, 115-118.
22. Lutzenberger, W., Pulvermüller, F., Elbert, T. & Birbaumer, N. 1994: Increased gamma-band power: new data against old prejudices. *Psychology* **5 (67)**, 1-9.
23. Mohr, B., Pulvermüller, F., Rayman, J. & Zaidel, E. 1994: Interhemispheric cooperation during lexical processing is mediated by the corpus callosum: evidence from the split-brain. *Neuroscience Letters* **181**, 17-21.
24. Mohr, B., Pulvermüller, F. & Zaidel, E. 1994: Lexical decision after left, right, and bilateral presentation of content words, function words, and non-words: evidence for interhemispheric interaction. *Neuropsychologia* **32**, 105-124.

**1995**

25. Pulvermüller, F. 1995: Agrammatism: behavioral description and neurobiological explanation. *Journal of Cognitive Neuroscience* **7**, 165-181.
26. Pulvermüller, F. 1995: What neurobiology can buy language theory. *Studies in Second Language Acquisition* **17**, 73-77.
27. Pulvermüller, F. 1995: Neurobiologie der Wortverarbeitung. *Naturwissenschaften* **82**, 279-287.
28. Pulvermüller, F., Lutzenberger, W. & Birbaumer, N. 1995: Electro cortical distinction of vocabulary types. *Electroencephalography and Clinical Neurophysiology* **94**, 357-370.
29. Pulvermüller, F., Lutzenberger, W. Preißl, H. & Birbaumer, N. 1995: Motor programming in both hemispheres: an EEG study of the human brain. *Neuroscience Letters* **189**, 5-8.
30. Pulvermüller, F., Lutzenberger, W. Preißl, H. & Birbaumer, N. 1995: Spectral responses in the gamma-band: physiological signs of higher cognitive processes? *NeuroReport* **6**, 2059-2064.
31. Pulvermüller, F. & Preißl, H. 1995: Local or transcortical assemblies? Evidence from cognitive neuroscience (Response to D. Amit). *Behavioral and Brain Sciences* **18**, 640-641.
32. Pulvermüller, F. & Schumann, J.H. 1995: On the interpretation of earlier recovery of the second language after injection of sodium Amytal in the left middle cerebral artery. *Language Learning* **45**, 729-73
33. Lutzenberger, W., Preißl, H. & Pulvermüller, F. 1995: Fractal dimension of EEG time series and underlying brain processes. *Biological Cybernetics* **73**, 477-482.
34. Lutzenberger, W., Pulvermüller, F., Elbert, T. & Birbaumer, N. 1995: Visual stimulation alters local 40-Hz responses in humans: an EEG study. *Neuroscience Letters* **183**, 39-42.
35. Preißl, H., Pulvermüller, F., Lutzenberger, W. & Birbaumer, N. 1995: Evoked potentials distinguish between nouns and verbs. *Neuroscience Letters* **197**, 81-83.

### 1996

36. Pulvermüller, F. 1996: Hebb's concept of cell assemblies and the psychophysiology of word processing. *Psychophysiology* **33**, 317-333.
37. Pulvermüller, F., Eulitz, C., Pantev, C., Mohr, B., Feige, B., Lutzenberger, W., Elbert, T. & Birbaumer, N. 1996: High-frequency cortical responses reflect lexical processing: an MEG study. *Electroencephalography and Clinical Neurophysiology* **98**, 76-85.

38. Pulvermüller, F., Lutzenberger, W., Müller, V., Mohr, B., Dichgans, J. & Birbaumer, N. 1996: P3 and contingent negative variation in Parkinson's disease. *Electroencephalography and Clinical Neurophysiology* **98**, 456-467.
39. Pulvermüller, F. & Mohr, B. 1996: Transcortical cell assemblies: A key to the understanding of cortical lateralization and interhemispheric interaction. *Neuroscience and Biobehavioral Reviews* **30**, 557-566.
40. Pulvermüller, F., Mohr, B. & Preißl, H. 1996: Biology of language: principles, predictions, and evidence. *Behavioral and Brain Sciences* **19**, 643-644.
41. Pulvermüller, F., Mohr, B., Sedat, N., Hadler, B. & Rayman, J. 1996: Word class specific deficits in Wernicke's aphasia. *Neurocase* **2**, 203-212.
42. Pulvermüller, F., Preißl, H., Lutzenberger, W. & Birbaumer, N. 1996: Brain rhythms of language: nouns versus verbs. *European Journal of Neuroscience* **8**, 937-941.
43. Mohr, B., Pulvermüller, F., Mittelstädt, K. & Rayman, J. 1996: Multiple simultaneous stimulus presentation facilitates lexical processing. *Neuropsychologia* **34**, 1003-1013.
44. Mohr, B., Müller, V., Mattes, R., Rosin, R., Federmann, B., Strehl, U., Pulvermüller, F., Müller, F. & Birbaumer, N. 1996: Behavioral treatment of Parkinson's disease leads to improvement of motor skills and to tremor reduction. *Behavior Therapy* **27**, 235-255.
45. Montoya, P., Larbig, W., Pulvermüller, F., Flor, H. & Birbaumer, N. 1996: Cortical correlates of semantic classical conditioning. *Psychophysiology* **33**, 644-649.
46. Preißl, H., Lutzenberger, W. & Pulvermüller, F. 1996: Is there chaos in the brain? *Behavioral and Brain Sciences* **19**, 307-308.

**1997**

47. Pulvermüller, F. 1997: Aspects of language mechanisms: a Hebbian perspective. *European Review* **5**, 23-37.
48. Pulvermüller, F. 1997: Brain-theoretical perspectives on language. *Theoretical Linguistics* **23**, 281-302.
49. Pulvermüller, F., Birbaumer, N., Lutzenberger, W. & Mohr, B. 1997: High-frequency cortical activity: its possible role in attention, gestalt processing and language. *Progress in Neurobiology* **52**, 427-445.
50. Lutzenberger, W., Preißl, H., Birbaumer, N. & Pulvermüller, F. 1997: High-frequency cortical responses: do they not exist if they are small? *Electroencephalography and Clinical Neurophysiology* **102**, 64-66.

51. Müller, V., Mohr, B., Rosin, R., Pulvermüller, F., Müller, F. & Birbaumer, N. 1997: Short-term effects of behavioural treatment on movement initiation and postural control in Parkinson's disease: a controlled clinical study. *Movement Disorders* **12**, 306-314.
52. Preißl, H., Lutzenberger, W., Pulvermüller, F. & Birbaumer, N. 1997: Fractal dimensions of short EEG time series in humans. *Neuroscience Letters* **225**, 77-80.

**1998**

53. Pulvermüller, F. 1998: On the matter of rules. Past tense-formation and its relevance for cognitive neuroscience. *Network: Computation in Neural Systems* **9 R**, 1-52.
54. Mohr, B., Pulvermüller, F. & Schleichert, H. 1998: Learned changes of brain states alter cognitive processing in humans. *Neuroscience Letters* **253**, 159-162.
55. Dobel, C., Hauk, O., Zobel, E., Eulitz, C., Pulvermüller, F., Cohen, R., Schönle, P.W., Elbert, T. & Rockstroh, B. 1998: Monitoring brain activity of human subjects during delayed matching to sample tasks comparing verbal and pictorial stimuli with modal and cross-modal presentation: an event related potential study employing a source reconstruction method. *Neuroscience Letters* **253**, 179-182.

**1999**

56. Pulvermüller, F. 1999: Words in the brain's language (Target Article). *Behavioral and Brain Sciences* **22**, 253-279.
57. Pulvermüller, F. 1999: Toward a Cognitive Neuroscience of Language (Response to Commentaries). *Behavioral and Brain Sciences* **22**, 301-336.
58. Pulvermüller, F. 1999: Lexical access as a brain mechanism (Commentary on Levelt). *Behavioral and Brain Sciences* **22**, 50-52.
59. Pulvermüller, F. 1999: Mind the brain, and brain the mind! (Commentary on Clahsen). *Behavioral and Brain Sciences* **22**, 1035-1036.
60. Pulvermüller, F., Keil, A. & Elbert, T. 1999: High-frequency brain activity: perception or active memory? *Trends in Cognitive Sciences*, **3**, 250-252.
61. Pulvermüller, F., Preißl, H. & Lutzenberger, W. 1999: Nouns and verbs in the intact brain: evidence from event-related potentials and high-frequency cortical responses. *Cerebral Cortex*, **9**, 497-506.
62. Pulvermüller, F., Mohr, B. & Schleichert, H. 1999: Semantic or lexico-syntactic factors: What determines word-class-specific activity in the human brain? *Neuroscience Letters*, **275**, 81-84.

**2000**

63. Pulvermüller, F. 2000: Syntactic circuits: How does the brain create serial order in sentences? *Brain and Language*, **71**, 194-199.
64. Pulvermüller, F., Härle & Hummel, F. 2000: Neurophysiological distinction of semantic verb categories. *NeuroReport*, **11**, 2789-2793.
65. Pulvermüller, F., Mohr, B., Schleichert, H. & Veit, R. 2000: Operant conditioning of left-hemispheric slow cortical potentials and its effect on word processing. *Biological Psychology*, **53**, 177-215.
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### 2001

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