

16893 Colloquium/Seminar

Progress in Brain Language Research

Friedemann Pulvermüller

2 SWS, Seminar/Colloquium

Zeit/Time: Mi/Wed 16-18 h

Ort/Location: JK 31/122 Geschäftszimmer (Habelschwerdter Allee 45)

This research seminar focuses on reviewing and discussing recent progress in the cognitive neuroscience of language. It has three main strands. 1) External speakers will set the stage for focused discussions. 2) In depth reviews of research publications will provide insights into recent progress in specific research areas. 3) Researchers at the FU Berlin's Brain Language Laboratory and seminar participants interested in semantics, pragmatics and/or their cognitive and brain basis will present their own research plans and aspects of their ongoing work to open discussion of future perspectives. In this context, MA and BA students may present work for their theses.

Hot seminar topics in the new semester include new experimental findings in the context of three ongoing research projects, which respectively focus on experimental pragmatics, neurosemantics and therapy of language and communication.

Recommended reading:

Dreyer, F. R., & Pulvermüller, F. (2018). Abstract semantics in the motor system?—An event-related fMRI study on passive reading of semantic word categories carrying abstract emotional and mental meaning. *Cortex*, in press.

Grisoni, L., Miller, T. M., & Pulvermüller, F. (2017). Neural Correlates of Semantic Prediction and Resolution in Sentence Processing. *J Neurosci*, 37(18), 4848-4858. doi:10.1523/JNEUROSCI.2800-16.2017

Miller, T. M., Schmidt, T. T., Blankenburg, F., & Pulvermüller, F. (2017). Verbal labels facilitate tactile perception. *Cognition*, 171, 172-179. doi:10.1016/j.cognition.2017.10.010.

Pulvermüller, F. (2018). Neural reuse of action perception circuits for language, concepts and communication. *Progress in Neurobiology*, in press. doi:10.1016/j.pneurobio.2017.07.001.

Pulvermüller, F. (2018). The case of CAUSE: Neurobiological mechanisms for grounding an abstract concept. *Philosophical Transactions of the Royal Society, London, B: Biological Sciences*, in press

Schomers, M. R., Garagnani, M., & Pulvermüller, F. (2017). Neurocomputational consequences of evolutionary connectivity changes in perisylvian language cortex. *J Neurosci*, 37(11), 3045-3055.

Stahl, B., Mohr, B., Büscher, V., Dreyer, F. R., Lucchese, G., & Pulvermüller, F. (2018). Efficacy of intensive aphasia therapy in chronic stroke patients: A randomised controlled trial. *Journal of Neurology, Neurosurgery, and Psychiatry*, in press.

Tomasello, R., Garagnani, M., Wennekers, T., & Pulvermüller, F. (2017). Brain connections of words, perceptions and actions: A neurobiological model of spatio-temporal semantic activation in the human cortex. *Neuropsychologia*, 98(4), 111–129. doi:10.1016/j.neuropsychologia.2016.07.004.

Technicalities

The course is part of the teaching offered by the Freie Universität's FB Philosophy and Humanities and by the Berlin School of Mind and Brain at the Humboldt Universität. It is open to interested students from all departments. It will be chaired by Friedemann Pulvermüller and co-organised by XXX under the admin support of Verena Arndt.

To obtain a certificate of attendance, it is necessary to

- attend most of the sessions (maximum misses: three),
- pre- and reprocess the session content by reading the recommended key papers, and
- present a key paper, own research or a research plan addressing the language mechanisms of the human brain. Presentations can be brief or last up to 30'.

Contact and more information:

Verena Arndt (Sekretariat), rm JK 31/234; phone: +49 (0)30 838 58140

E-mail: verena.arndt@fu-berlin.de

Friedemann Pulvermüller, rm JK 31/232; Office hour: Wed 12-13 h

For more information and updates, please visit:

<http://www.brainlang.fu-berlin.de/teaching>, <http://www.brainlang.fu-berlin.de/talks>

Seminar Program

Unless otherwise noted, the Seminar will be held on Wednesdays, from 16:15 – 17:45 h in room JK 31/122 of the main building of the Freie Universität Berlin, Habelschwerdter Allee 45, 14195 Berlin.

05.04. Research talk

Lea Doppelbauer, FUB: Practice talk aphasia therapy and simulation of language reorganization

18.04. Seminar overview and planning of the summer term

25.04. Research talk

Rosario Tomasello, FUB: A neurobiologically constrained neural network of semantic processing of the sighted and blind brain

Fri, 27.04., 5 pm, JK 31/102, Guest lecture/Workshop:

Prof Yury Shtyrov, Aarhus University

Neurophysiology of word acquisition: EEG, MEG, MRI and TMS evidence

02.05. Research talk

Dr. Felix Dreyer, FUB: Rivera-Rivera et al. (2017): Cortical plasticity catalyzed by prehabilitation enables extensive resection of brain tumors in eloquent areas

Valerie Keller, FUB: The influence of the motor cortex on the perception of images and language: a study plan

09.05. Research talk

Dr. Luigi Grisoni, FUB: Phonological Priming

16.05. Research talk

Lea Doppelbauer, FUB: Current research results on aphasia therapy

23.05. Research talk

Konstantina Margiotoudi, Berlin School Mind & Brain: Sound symbolism in humans and great apes. New perspectives on the evolution of language

30.05. Research talk

Isabella Boux, Einstein Centre of Neuroscience: Investigating indirectness in language: study ideas
Natasha Janzen Ulbricht: Time, space and direction; experimental proposal

Fri, 01.06., 2 pm, K 31/201, Guest lecture:

Prof Christina Kauschke, Philipps-Universität Marburg
Die Versprachlichung von Emotionen im Spracherwerb und bei klinischen Populationen

06.06. Research talk

Tally Miller, FUB: Regier, T.; Xu, Y. (2017) The Sapir-Whorf hypothesis and inference under uncertainty. Wiley Interdiscip. Rev. Cogn. Sci. 8, doi:10.1002/wcs.1440

Inna Vorobei: Theories of language evolution / Spracherwerbstheorien
Fitch, W.T. Empirical Approaches to the Study of language Evolution.
Psychon Bull Rev (2017) 24: 3. <https://doi.org/10.3758/s13423-017-1236-5>

Fri, 08.06., 4 pm, JK 31/122, Guest lecture:

Dr Napoleon Katsos, University of Oxford
How children learn “some”, “all”, and “most”, words

Tue, 12.06., 12h, JK 31/102, Guest lecture:

Prof Dr Gunter Gebauer, FU Berlin
Wie können wir über Emotionen sprechen?

13.06. No seminar

20.06. Research talk

Dr. Felix Dreyer, FUB: fMRI correlates of aphasia therapy effects

Meindert Peters: How to talk differently about 'task unrelated thought': an example from literature

27.06. Project presentations

Melinda Mende, Universität Potsdam: The meaning of negation

Maria Nikolaeva: Theories of neural correlates of abstract semantics: Similarities and contradictions

04.07. No seminar

11.07. Project presentation

Elena Kulkova: Non-Literal Language Processing: A Grip-Force Study

18.07. Seminar evaluation and outlook

Maria Nikolaeva: Theories of neural correlates of abstract semantics: Similarities and contradictions

Planning of program for the semester break and winter term