Colloquium/Seminar
16788, Progress in Brain Language Research
Friedemann Pulvermüller
2 SWS, Seminar/Colloquium, WiSe 2024/2025
Zeit/Time: Mi/Wed 16-18 h (start: 16:15h)
Ort/Location: FU Berlin, room JK 31/122 (Habelschwerdter Allee 45)
On Webex: https://fu-berlin.webex.com/fu-berlin-en/j.php?MTID=m9cc19996bf2b2b2ffb483aea27d a8b50
Meeting number (access code): 2734 907 7679, Meeting password: sRMRZHMe665

Colloquium/Seminar *Progress in Brain Language Research*

Einführung

Dieses Seminar und Forschungskolloquium richtet sich an BA, MA und PhD Studierende und an Forscher*innen mit einem Interesse an Sprache und den der Sprache zugrundeliegenden Mechanismen. Thematisch stehen die Bedeutung sprachlicher Einheiten und ihr Gebrauch in der Kommunikation im Mittelpunkt, wobei ein besonderes Augenmerk den Gehirnmechanismen von Sprache und Kommunikation gilt. Der Kurs hat vier Komponenten:

1. BA und MA Kandidat*innen stellen erste Ideen, Arbeitspläne oder Resultate ihrer wissenschaftlichen Arbeit vor und lassen diese diskutieren,
2. Forscher*innen an der FU Berlin, insbesondere aus dem Labor für Gehirn- und Sprachforschung, stellen ihre laufenden Projekte und neue Resultate vor, die vom Plenum besprochen werden.
3. Richtungsweisende neuere Publikationen werden zusammengefasst und diskutiert,
4. Gastredner*innen aus dem In- und Ausland halten Vorträge zu sprachwissenschaftlichen Themen, wobei auch hier die Sprachmechanismen im menschlichen Gehirn im Vordergrund stehen.

Die im Arbeitsbereich „Neurowissenschaft der Sprache, Semantik und Pragmatik“ laufenden DFG-, EU und ERC-geförderten Forschungsprojekte bilden einen wesentlichen Teil der Veranstaltung, da die neuesten Forschungsresultate aus diesen Projekten im Kolloquium besprochen werden.

Da unser Team internationaler Forscher*innen die Kommunikation auf Englisch notwendig macht, bitten wir um Verständnis, dass die Veranstaltung in der Regel auf Englisch durchgeführt wird. Präsentationen und Diskussionsbeiträge auf Deutsch sind jedoch immer möglich und willkommen.

Studierende, die an einer Teilnahme interessiert sind, sollten sich bitte bei Verena.Arndt@fu-berlin.de oder Friedemann Pulvermüller anmelden.

Introduction

This seminar is for BA, MA and PhD students and for researchers interested in language science. The course will focus on reviewing and discussing recent progress in the cognitive neuroscience of language and in the fields of semantics and pragmatics. The seminar has four main strands:

1. BA and MA candidates working in the field of semantics, pragmatics or brain language research will present their work plans and first results,
2. Researchers at the FU Berlin’s Brain Language Laboratory will present their ongoing work and explain their recent findings or summarize their recent publications,
3. Recently published remarkable research articles in the fields of brain language research, semantics and pragmatics will be reviewed by the participants to highlight the progress in the field,
4. National and international expert speakers will present their research in cognitive neuroscience of language and linguistics.

There will be a focus on research related to the ongoing ERC Advanced Grant Project Material

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Constraints Enabling Human Cognition (MatCo), where we are trying to specify the mechanistic neuronal circuits underlying human language use. Ongoing research from a range of other current research endeavors will also be featured.

Most presentations will be given in English, but presentations in German are welcome too.

Students and researchers who are interested to participate in this colloquium are kindly requested to contact Verena.Arndt@fu-berlin.de or Friedemann Pulvermüller.

Seminar related recent publications:

Antoine, S., Grisoni, L., Tomasello, R., & Pulvermüller, F. (2024). The prediction potential indexes the meaning and communicative function of upcoming utterances. *Cortex*, 177, 346-362. https://doi.org/10.1016/j.cortex.2024.05.011

Dobler, F. R., Henningsen-Schomers, M. R. & Pulvermüller, F. (2024). Temporal dynamics of concrete and abstract concept and symbol processing: A brain constrained modelling study. *Language Learning*, 74 (S1), 258-295. https://onlinelibrary.wiley.com/doi/10.1111/lang.12646

Grisoni, L., Boux, I. P., & Pulvermüller, F. (2024). Predictive brain activity shows congruent semantic specificity in language comprehension and production. *Journal of Neuroscience*, 44(12). https://doi.org/https://doi.org/10.1523/JNEUROSCI.1723-23.2023

Nguyen, P. T. U., Henningsen-Schomers, M. R., & Pulvermüller, F. (2024). Causal Influence of Linguistic Learning on Perceptual and Conceptual Processing: A Brain-Constrained Deep Neural Network Study of Proper Names and Category Terms. *Journal of Neuroscience*, 44(9). https://www.jneurosci.org/content/44/9/e1048232023

Pulvermüller, F. (2023). Neurobiological Mechanisms for Language, Symbols and Concepts: Clues From Brain-constrained Deep Neural Networks. *Progress in Neurobiology*, 102511. https://doi.org/10.1016/j.pneurobio.2023.102511

Tomasello, R., Carriere, M., & Pulvermüller, F. (2024). The impact of early and late blindness on language and verbal working memory: A brain-constrained neural model. *Neuropsychologia*, 196. https://doi.org/ARTN 10881610.1016/j.neuropsychologia.2024.108816

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 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 language related topics.

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Contact and more information:

Verena Arndt (Sekretariat), online or rm JK 31/234; phone: +49 (0)30 838 58140 E-mail: verena.arndt@fu-berlin.de
Friedemann Pulvermüller, online or rm JK 31/232; Office hour: Wed 12-13 h
Johann Berger, email: bergjoha@hu-berlin.de
Fynn Dobler, email: fynn.dobler@fu-berlin.de
For more information and updates, please visit:
http://www.brainlang.fu-berlin.de/teaching
http://www.geisteswissenschaften.fu-berlin.de/v/brainlang/teaching/index.html

Comments on the Seminar Program

This term, most of the seminars will be held at the Freie Universität 'in-presence'; however, some sessions where speakers cannot come to Berlin will be 'virtual' seminars (as indicated by *blue text*). We will start with a session on Webex (https://fu-berlin.webex.com). In preparation, please install the free version of 'Cisco Webex Meetings' available from the FU website if you haven't already done so, and make sure that you have communicated your email address to verena.arndt@fu-berlin.de! There are also free versions of Webex which are available online.

You can partake in the virtual sessions by clicking the link:

https://fu-berlin.webex.com/fu-berlin-en/j.php?MTID=m9cc19996bf2b2b2ffb483aea27da8b50

For non-virtual 'in Präsenz' sessions of this seminar, the following time slot and room have been reserved: **Wednesdays, 16:15 – 17:45 h, room JK 31/122 of the main building of the Freie Universität Berlin, Habelschwerdter Allee 45, 14195 Berlin**.

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Seminar Program

sessions will be virtual only (blue) or in real life ('in presence'). Real-life sessions may be broadcasted via webex, too, but will not necessary.

Webex link to the colloquium and lecture room: see header above.

11.09. Practice talks and poster presentations for the Annual Conference of the Academy of Aphasia

02.10. Practice talks for the Annual Conference of the Academy of Aphasia

Effy Ntemou on lesion symptom mapping of speech production and understanding in left- hemispheric tumor patients

Milena Osterloh on double application of Intensive Language Action Therapy

16.10. – no seminar –

23.10. Introduction, Seminar Planning (via webex)

Introduction and planning of this semester's colloquium program

30.10. Conference Update, by those from the BLL who attended the events:

Academy of Aphasia Conference 2024, Nara, Japan

Cognestic workshop 2024, MRC-CBU Cambridge, UK

Bernstein Conference 2024, Frankfurt/M.

Experimental Pragmatics 2024, Venice, Italy

German Cognitive Linguistics Society Meeting, Osnabrück

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06.11. – no seminar –

13.11. Journal club presentation:

Effy Ntemou presents Reilly et al: What we mean when we say 'semantic': Toward a multidisciplinary semantic glossary

20.11. Research Report:

Dr Laura Ciaccio, BLL

Results of a novel big semantic rating study of 480 German nouns and verbs (MatCoRat)

27.11. Guest lecture:

Dr Vadim Nikulin, MPI for Human Cognitive Neuroscience, Leipzig

Unifying evoked responses and oscillations in EEG/MEG research

Tuesday, 03.12., 16hct, Hörsaal L116: Guest lecture (also as part of the Dahlem Lectures in Linguistics):

Prof Dr Angelika Redder, Universität Hamburg

Versprachlichen, Verbalisieren, Formulieren – zentrale kognitive Prozesse beim (mehr)sprachlichen Handeln

11.12. seminar postponed

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18.12. Research talk:

Jonas Leferink

Meaning as a kind of hallucination?

Journal Club:

Tally M. Miller presents Kemmerer, "Grounded cognition entails linguistic relativity: A neglected implication of a major semantic theory." Topics in Cognitive Science 15.4 (2023): 615-647

08.01. Research report:

Lorenz Stroppa & Fynn Dobler, BLL

Developmental trajectories of concrete and abstract semantic learning

15.01. Research Report:

Luigi Grisoni & Effy Ntemou, BLL

Phonological activity in the sensorimotor system? – ECoG data presentation

22.01. Research Report:

Johann Berger & Laura Ciaccio, BLL

Research Report on BraVov EEG results: effects of word repetition

29.01. MA project presentations:

Lily Schrewe, FUB

Kommunikationsanalyse von therapeutischen Dialogen

Johanna Knechtges, Potsdam University

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Aphasic repair strategies in Intensive Language Action Therapy

05.02. Research Report:

Dr Laura Ciaccio and Milena Osterloh, BLL

Results of MatCo BraVoc EEG study

12.02. Research Report:

Kubra Fatulajewa & Anna-Thekla Jäger, BLL

Structural changes in grey matter across intensive language action therapy