**Colloquium/Seminar *Progress in Brain Language Research***

This research seminar focuses on reviewing and discussing recent progress in the cognitive neuroscience of language and in the field of semantics/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 and publications,
3. Recently published research articles in the domain of semantics, pragmatics and brain language research will be reviewed by the participants to highlight the latest progress in the field,
4. National and international invited guest scientists and specialists in brain language research will report on their latest results.

Hot seminar topics will be experimental findings from new research projects including the research focus on the *Material Basis of Symbols* of the excellence cluster *Matters of Activity*, the EU’s International Training Network *Conversational Brains (CoBra)* and the French-German research initiative on *Phonological Networks in Speech Production and Understanding (PhoNet)* along with more established ones addressing experimental pragmatics (*Brain Signatures of Communication*), neurosemantics (*The Sound of Meaning*), and speech language rehabilitation (*Intensive Language Action Therapy*). Funding support by the Deutsche Forschungsgemeinschaft and the European Union is kindly acknowledged.

Presentations will be given in English or German. To participate in this colloquium, please register with Verena.Arndt@fu-berlin.de and/or talk to Friedemann Pulvermüller in his office hour.

Topic related recent publications:

Dreyer, F. R., Picht, T., Frey, D., Vajkoczy, P., & Pulvermüller, F. (2020). The functional relevance of dorsal motor systems for processing tool nouns- evidence from patients with focal lesions. *Neuropsychologia*, 107384. doi: 10.1016/j.neuropsychologia.2020.107384

Grisoni, L., Mohr, B., & Pulvermüller, F. (2019). Prediction mechanisms in motor and auditory areas and their role in sound perception and language understanding. *Neuroimage, 199*, 206-216. doi: 10.1016/j.neuroimage.2019.05.071

Grisoni, L., Moseley, R. L., Motlagh, S., Kandia, D., Sener, N., Pulvermüller, F., Roepke, S., & Mohr, B. (2019). Prediction and Mismatch Negativity Responses Reflect Impairments in Action Semantic Processing in Adults With Autism Spectrum Disorders. *Front Hum Neurosci, 13*, 395. doi: 10.3389/fnhum.2019.00395

Margiotoudi, K., Allritz, M., Bohn, M., & Pulvermüller, F. (2019). Sound symbolic congruency detection in humans but not in great apes. *Sci Rep, 9*(1), 12705. doi: 10.1038/s41598-019-49101-4

Schmidt, T. T., Miller, T. M., Blankenburg, F., & Pulvermüller, F. (2019). Neuronal correlates of label facilitated tactile perception. *Sci Rep, 9*(1), 1606. doi: 10.1038/s41598-018-37877-w

Tomasello, R., Kim, C., Dreyer, F. R., Grisoni, L., & Pulvermüller, F. (2019). Neurophysiological evidence for rapid processing of verbal and gestural information in understanding communicative actions. *Sci Rep, 9*(1), 16285. doi: 10.1038/s41598-019-52158-w

Tomasello, R., Wennekers, T., Garagnani, M., & Pulvermüller, F. (2019). Visual cortex recruitment during language processing in blind individuals is explained by Hebbian learning. *Sci Rep, 9*(1), 3579.

**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.

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.geisteswissenschaften.fu-berlin.de/v/brainlang/teaching/index.html>

# Seminar Program

For this Seminar, the following time slot and room have been reserved: Wednesdays, 16:15 – 17:45 h, in room JK 28/130 of the main building of the Freie Universität Berlin, Habelschwerdter Allee 45, 14195 Berlin.

Due to the corona crisis, the first sessions will use the program Webex (<https://fu-berlin.webex.com>) for online teaching and interaction. In preparation of the Seminar, please download the free version of ‘Cisco Webex Meetings’ and make sure that you have communicated your email address to verena.arndt@fu-berlin.de !

# 22.04. Introduction, Seminar Planning

# Friedemann Pulvermüller: This semester’s colloquium program and current research at the Brain Language Laboratory

**29.04. Research talks**

 Luise Henneberg, BLL: Effects of lexical aspect on the mental representation of situations:

An eye-tracking study of the non-aspect language German

Dr. Luigi Grisoni, BLL: Correlated brain indexes of semantic predictions and prediction errors: brain localization and category specificity – Quiz: Guess what they said?

**06.05. Research talks**

Lucius Fekonja und Ziqian Wang, Charité: Project presentations "VLSM on AAT scores from Glioma patients" and "Retrospective analysis and machine learning classification of nrTMS language mapping"

**Fri, 15.05., 10:15am, Guest lecture**

 **Prof. Dr. Markus Kiefer, Universität Ulm**

 **Cancelled due to Corona crisis; and postponed to 11.11.2020**

# Replaced by planning for new ERC Advanced Grant project “Material Constraints on Human Cognition”, MatCo.

# 20.05. Research talks

# Konstantina Margiotoudi, BLL: Action sound shape congruencies explain sound symbolism

# Dr. Rosario Tomasello, BLL: Prosodic cues to speech act understanding in Italian

**27.05. Research talks**

Dr. Felix Dreyer, BLL: fMRI correlates of language improvement following intensive language action therapy

Lea Doppelbauer, BLL: Journal club presentation: Research paper on intensive therapy in aphasia

**03.06. Research talk**

 Marika Constant & Dr. Rosario Tomasello, BLL: Simulating fast mapping

# 10.06. Guest lecture

# Prof. Dr. Dr. Horst Müller, Fakultät für Linguistik und Literaturwissenschaft, Universität Bielefeld: Modellannahmen zur Hirnfunktion: Technikmetaphern in der Neurowissenschaft der Sprache

# Postponed to 20.1.2020, due to Corona crisis

# 17.06. Guest lecture

# Dr. Amie Fairs, PhoNet Project, Université Aix-Marseille & CNRS Laboratoire Parole et Langage: Title TBA

# Postponed to 5.12.2020, due to Corona-crisis

# Replaced by Session on Experimental Pragmatics, with contributions of members of DFG grant project “Brain Signatures of Communication”, BraiSiCo, and EU ITN project “Conversational Brains”, CoBra.

# 24.06. Research talk

Isabella Boux, BLL: Does theory of mind contribute to comprehension of indirect communication? Preliminary results

# 25.06., 12hct, Research talk, location: virtual room of Seminar ‘Sprache und Denken’

# Philipp Molnos, MA: Linguistische Forschungen zum Einfluss der Sprache auf die Wahrnehmung

# 01.07. Research talks

 Milena Osterloh, BLL: Task-free EEG paradigm for assessing automatic speech processing in

the brain (Vorstellung Bachelorarbeit)

# Tally Miller, BLL: Are words special? Results of perceptual changes using language and tonal pairings with unique tactile patterns.

 **Maxime Carrière: tba**

# Postponed to 18.11.2020, due to Corona-crisis

# 08.07. Research talk

postponed

# 15.07. Planning of program for the semester break and the coming semester

 Research talk

Dr. Malte Henningsen, BLL: Whorfian effects in a neurocomputational model of
semantic category learning