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Research and Professional Experience

- 06/2017 – today **FWO [PEGASUS]² Marie Skłodowska-Curie Fellow**
Universiteit Gent, Belgium
Research group leader
Prof. Marcel Brass
Research Focus
Interaction of intentional and motivational control processes using mainly multivariate pattern analysis of fMRI data.
- 05/2016 – 05/2017 **Postdoctoral Research Fellow**
Universiteit Gent, Belgium
Research group leader
Prof. Marcel Brass
Research Focus
Effects of high-level cognitive processes, such as instructions, onto low-level fear learning mechanisms, using fMRI and psychophysiological measures.
- Administrative and teaching tasks**
Supervision of student experimental, master and PhD projects, teaching multivariate fMRI analysis methods, organizing visits for international guests
- 10/2008 – 04/2016 **PhD Fellow**
Bernstein Center for Computational Neuroscience, Berlin, Germany
SFB940 'Volition and Cognitive Control' Technische Universität Dresden, Germany
Berlin School of Mind and Brain, Germany
Thesis Topic
The neural correlates of intentional control: Motivational effects and functional organization, Grade: summa cum laude
Supervisor
Prof. John-Dylan Haynes
Research Focus
Interaction of motivational and intentional control processes in the brain and the functional architecture of the intentional control network, using multivariate pattern analysis of fMRI data.
- 10/2014 – 05/2016 **Lecturing**
'Communication, Interaction, Teamwork': Teaching communicative skills to medical students, including patient simulations, at Charité Universitätsmedizin Berlin, Germany

01/2013 – 05/2016

Project management

Administration and supervision of student assistants, organizing visits for international guests

Supervision

Supervision of a doctoral thesis, master thesis and lab-rotation

Publications

Kruschwitz J, Ludwig V, Waller L, List D, **Wisniewski D**, Wolfensteller U, Goschke T, Walter H (2018) Regulating Craving by Anticipating Positive and Negative Outcomes: A Multivariate Pattern Analysis and Network Connectivity Approach, *Frontiers in Behavioral Neuroscience*, doi: 10.3389/fnbeh.2018.00297

[\[FullText\]](#)

Wisniewski D (2018) Context-Dependence and Context-Invariance in the Neural Coding of Intentional Action, *Frontiers in Psychology*, doi.org/10.3389/fpsyg.2018.02310

[\[FullText\]](#)

Kruschwitz J, Waller L, List D, **Wisniewski D**, Ludwig V, Korb F, Wolfensteller U, Goschke T, Walter H (2018) Anticipating the good and the bad: A study on the neural correlates of bivalent emotion anticipation and their malleability via attentional deployment, *NeuroImage*, 183: 553-564

[\[Abstract\]](#)

Wisniewski D, Forstmann B, Brass M (2018) How exerting control over outcomes affects the neural coding of tasks and outcomes, *bioRxiv*, doi:10.1101/375642

[\[FullText\]](#)

Langerock N, **Wisniewski D**, Brass M, Vergauwe E (2018) An examination of refreshing in between-category sequences, *Annals of the New York Academy of Sciences*, doi:10.1111/nyas.1370

[\[Abstract\]](#)

Loose L*, **Wisniewski D***, Goschke T, Haynes JD. (2017) Switch independent task representations in frontal and parietal cortex, *Journal of Neuroscience*, 37: 8033-8042
Preprint available here: *bioRxiv* doi:10.1101/138230

[\[Abstract\]](#)

Wisniewski D, Goschke T, Haynes JD. (2016) Similar Coding of Freely Chosen and Externally Cued Intentions in a Fronto-Parietal Network. *NeuroImage*, 134: 450-58

[\[Abstract\]](#)

Wisniewski D, Reverberi D, Momennejad I, Kahnt T, Haynes JD. (2015) The Role of the Parietal Cortex in the Representation of Task–Reward Associations. *The Journal of Neuroscience*, 35: 12355–65

[\[Abstract\]](#)

Wisniewski D*, Reverberi C*, Tusche A, Haynes JD. (2015) The Neural Representation of Voluntary Task-Set Selection in Dynamic Environments. *Cerebral Cortex*, 25: 4715-26

[\[Abstract\]](#)

Tusche A, Kahnt T, **Wisniewski D**, Haynes JD. (2013) Automatic Processing of Political Preferences in the Human Brain. *NeuroImage*, 72: 174–82

[\[Abstract\]](#)

Wisniewski D. (2016) The neural correlates of intentional control: Motivational effects and functional organization. Doctoral thesis at Humboldt-Universität zu Berlin, Germany

[\[Full Text\]](#)

Haynes JD, **Wisniewski D**, Görden K, Momennejad I, Reverberi C. (2015) FMRI decoding of intentions: Compositionality, hierarchy and prospective memory. *Conference paper: 3rd International Winter Conference on Brain-Computer Interface*, South Korea

[\[Abstract\]](#)

*=these authors contributed equally

Service to the Field

Ad-hoc reviewer for Acta Psychologica, Consciousness and Cognition, NeuroImage, Neuropsychologia, Neuroscience of Consciousness

Grants

2019 – 2020	Research Foundation Flanders (FWO) Research Grant (39.630€)
2017 – 2020	Incoming [PEGASUS] ² Marie-Skłodowska-Curie Grant of the Research Foundation – Flanders and the European Union’s Horizon 2020 research and innovation program (160.000€).

Education

10/2002 – 10/2008	Student Humboldt-Universität zu Berlin, Germany Study Focus Diploma in Psychology (equivalent to MSc), Grade: 1.3 (excellent) Thesis topic: Cognitive Control in Eriksen Flanker Tasks, investigated using EEG and dipole source localization
09/2006 – 03/2007	Student University of Glasgow, UK (ERASMUS exchange) Study Focus EEG data analysis using dipole source localization
09/2007 – 06/2008	Student Assistant Max Planck Institute for Human Development, Berlin Center for Adaptive Behavior and Cognition Prof. Gigerenzer, Dr. Scheibehenne, Dr. Mata

Work Focus

Behavioral experimental design and programming

12/2004 – 12/2007

Student Assistant

Department of Psychology, Humboldt-Universität zu Berlin

Biological Psychology Group

Prof. Sommer and Prof. Abdel-Rahman

Work Focus

EEG experimental design, programming, data acquisition and analysis

Scholarships and Awards

ERASMUS exchange scholarship

Max Planck PhD scholarship

Mind and Brain PhD scholarship

Poster Prize of the Berlin School of Mind and Brain, 2010

Public Outreach

Falling Walls Lab, Brussels, 2017 [\[link\]](#)

Science is Wonder-ful! Public science event organized by the Marie-Skłodowska-Curie

Actions of the European Commission, 2017 [\[link\]](#)

Invited Talks

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| 2015 | The functional organization of the intentional control network, Department of Experimental Psychology, Prof. Brass, <i>Ghent University</i> |
| 2014 | The neural basis of intentional and motivational control of behavior, Princeton Neuroscience Institute, Prof. Botvinick and Prof. Cohen, <i>Princeton University</i> , NJ, USA |
| 2014 | The role of parietal cortex in the representation of task-reward-associations, Junior Research Group 'Decision-making in obesity: neurobiology, behavior & plasticity', Dr. Horstmann, <i>Max Planck Institute for Human Cognitive and Brain Sciences</i> , Leipzig |
| 2013 | The role of parietal cortex in the representation of task-reward-associations, Biological Psychology and Cognitive Neuroscience, Prof. Heekeren, <i>Freie Universität</i> , Berlin |
| 2013 | The neural code of voluntary task-set selection in dynamic environments, Center for Adaptive Rationality, Dr. Mata, <i>Max Planck Institute for Human Development</i> , Berlin |
| 2012 | The neural code of voluntary task-set selection in dynamic environments, Department of Psychology, Prof. Leuthold, <i>Universität Tübingen</i> |
| 2012 | The neural code of voluntary task-set selection in dynamic environments, Department of Experimental Psychology, Prof. Brass, <i>Ghent University</i> |
| 2011 | The neural code of voluntary task-set selection in dynamic environments, Graduate School of Systemic Neurosciences, <i>Ludwig-Maximilians-Universität</i> , München |

Conference Session Chairs

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| 2018 | Nanosymposium Human Cognition and Behavior: Human Learning: Feedback, Reinforcement and Reward [link] |
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Conference Talks

- 2018 Outcome contingency modulates reward coding but not task coding in the brain, Neuroscience 2018, San Diego [\[link\]](#)
- 2017 Neural task representations during voluntary task switching, ESCOP, Potsdam [\[link\]](#)
- 2016 Using MVPA to identify the functional organization of the cognitive control network, NeuroCog2016, Leuven [\[link\]](#)
- 2012 Predicting decisions in a dynamically changing environment from activation patterns in the dorso-medial prefrontal cortex, *2nd Einstein Fellowship Symposium on 'Decision-making'*, Berlin [\[link\]](#)

Conference Poster Presentations

- 2017 Instruction-based and experience-dependent fear memories during fear reversal, 13th International conference for cognitive neuroscience, Amsterdam, Netherlands
- 2014 The role of parietal cortex in the representation of task-reward-associations, Annual Meeting of the Society for Neuroscience, Washington DC, USA
- 2014 The neural basis of task-reward associations, Neuronus IBRO & IRUN Neuroscience Forum, Krakow, Poland
- 2013 The neural basis of task-reward associations, Annual Meeting of the Organization for Human Brain Mapping, Seattle, USA
- 2011 Self-regulation of tasks under dynamic conditions, Interdisciplinary College on 'Autonomy, Decisions, and Free Will', Günne, Germany
- 2011 Self-regulation of tasks under dynamic conditions, Cognitive Neuroscience Society Meeting, San Francisco, USA
- 2010 The neural correlates of self-regulated behavior, Annual Meeting of the Society for Neuroscience, San Diego, USA

Key Skills

Design, conduction, analysis of fMRI, EEG, and behavioral experiments
Univariate and multivariate pattern analysis of fMRI data
Coding in Matlab, Python, and R
Project management