

# Vitória Piai

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ℝ<sup>6</sup> [Vitória Piai](#) 🐦 [@vipiai](#) 📖 [Google Scholar](#) 🌀 [OSF](#) 📄 [Publons](#) 📊 [Impact Story](#)

## Research Summary

As a PhD candidate at Radboud University, supervised by Ardi Roelofs and Herbert Schriefers, I did research on the role of executive control in word production using behavioural methods, scalp electrophysiology, and functional MRI. Halfway into my PhD, I initiated my own, independent, research programme on the electrophysiology of language production in healthy speakers. I then obtained personal post-doctoral funding to go to the University of California Berkeley and expand my research towards populations with acquired language impairment. Under the mentoring of Bob Knight and Nina Dronkers, I used intracranial and scalp electrophysiology to investigate the neurophysiological underpinnings of language and language neuroplasticity.

Since 2017, I head the Language Function and Dysfunction group at the Donders Institute for Brain, Cognition and Behaviour in Nijmegen. My research programme focuses on the neuropsychological and neurophysiological basis of language in healthy adults and the impairment of language functioning after brain injury or damage to the speech organs. My research is characterised by bridging across the domains of language, memory, and executive control and by the way I use my strong fundamental and methodological background to approach the study of language disorders. Electrophysiology holds an important place in my research programme, which I combine with behavioural measures, non-invasive brain stimulation and lesion-symptom models.

## Positions

**Associate Principal Investigator**, *Radboud University, Donders Centre for Cognition, Department of Neuropsychology and Rehabilitation Psychology and Radboud University Medical Centre, Donders Centre for Medical Neuroscience, Department of Medical Psychology, Nijmegen, the Netherlands*

2016-present

**Postdoctoral Fellow**, *Helen Wills Neuroscience Institute, University of California, Berkeley and Center for Aphasia and Related Disorders, Veterans Affairs Health Care System Northern, California, USA*

2014-2016

**Neurosurgery Department Affiliate, University of California, San Francisco, California, USA**

2015-2016

## Clinical Duties

Monitoring of function during awake craniotomies, developing and improving protocols for intraoperative assessments  
*Radboud University Medical Centre*

2016-present

## Education

**Ph.D. in Cognitive Neuroscience** (distinction: "cum laude"), *Radboud University, Donders Graduate School for Cognitive Neuroscience & International Max Planck Research School for Language Sciences, Nijmegen, the Netherlands*

2009-2013

**M.Sc. in Cognitive Neuroscience** (distinction: "bene meritum"), *Radboud University, Nijmegen, the Netherlands*

2007-2009

**B.A. in Linguistics** (distinction: "cum laude"), *Utrecht University, Utrecht, the Netherlands*

2004-2007

**B.A. in Portuguese Language and Culture** (distinction: "cum laude"), *Utrecht University, Utrecht, the Netherlands*

## Certificates

Basic course on Regulations and Organisation for clinical investigators (BROK)  
Dutch University Teaching Qualification

2016

2013

## Competitive Funding

Principal Investigator

**Junior Principal Investigator premium, Radboud University Medical Center, Radboudumc funds** dedicated to research excellence (€ 125,000)

2020-2024

**Internal PhD-grant round, Radboud University, Donders Centre for Cognition, "Unravelling how prefrontal cortex recruitment supports language functioning"** (€ 250,000)

2019-2023

**Veni, Netherlands Organisation for Scientific Research (NWO), "Reorganising language: Neuroplasticity after left-hemisphere stroke through right-hemisphere recruitment"** (€ 250,000)

2017-2020

**Rubicon, Netherlands Organisation for Scientific Research (NWO), "Towards a neural mechanism of context-driven memory access in language: prefrontal cortex and neuronal oscillations"** (€ 127,690)

2014-2016

**Niels Stensen Fellowship, Niels Stensen Stichting, "Towards a neuronal mechanism of context-dependent memory access in spoken word production"** (€ 43,736). Declined due to Rubicon

2014-2015

Co-Investigator

**Discovery Project, Australian Research Council, "How the brain produces speech: Neuronal oscillations to neuromodulation"**

2020-2024

**Internal PhD-grant round**, *Radboud University, Donders Centre for Cognition*, "The lexical interface in the brain" (€ 234,000) 2016–2020

**Internal Utilisation Grant Round**, *Language in Interaction Consortium*, "SimpTell, an application for the training of elliptical language production style by patients with chronic Broca's aphasia" (€ 25,000) 2016

## Awards and Prizes

**Early Career Award**, *Dutch Psychonomic Society* 2019

**Early Career Award**, *Society for the Neurobiology of Language*

**Early Career Award**, *Dutch Society of Neuropsychology* 2018

**Top reviewer for Radboud University (Arts and Humanities)**, *Publons* 2017

**Top 10% of review contributions to field of Psychology**, *Publons* 2016

**Frye Stipend**, *Radboud University, Nijmegen*, Awarded yearly to the ten most promising female researchers across Radboud University 2012

## Publications

Publication list also available in [Google Scholar](#) and [ORCID](#). Full-texts of all published papers available through my [website](#)

Submitted with open data and code

**Piai, V.**, Nieberlein, L., & Hartwigsen, G. Transcranial magnetic stimulation over the left posterior superior temporal gyrus facilitates phonological retrieval during word production. 🔄

Todorova, L., Neville, D., & **Piai, V.** Lexical-semantic and executive deficits revealed by computational modelling: a drift diffusion model perspective. 🔄

Garg, A., **Piai, V.**, McQueen, J., & Roelofs, A. The comprehension-production interface: insights from cumulative semantic effects. 🔄

## Journal Articles

**Piai, V.**, Klaus, J., & Rossetto, E. The lexical nature of alpha-beta oscillations in context-driven word production. *Journal of Neurolinguistics*. doi: [10.1016/j.jneuroling.2020.100905](https://doi.org/10.1016/j.jneuroling.2020.100905) 🔄 [Open data](#) 2020


**Piai, V.**, De Witte, E., Sierpowska, J., Zheng, X., Hinkley, L. B., Mizuri, D., Knight, R. T., Berger, M. S., & Nagarajan, S. S. Language neuroplasticity in brain tumour patients revealed by magnetoencephalography. *Journal of Cognitive Neuroscience* 🔄

Ferreira, J., Roelofs, A., & **Piai, V.** The role of inhibition in inflectional encoding: producing the past tense. *Cognition* 🔄 [Open data](#)

Williams Roberson, S., Shah, P., **Piai, V.**, Gatens, H., Krieger, A.M., Lucas II, T.H., Litt, B. Electroencephalography reveals spatiotemporal neuronal activation patterns of verbal fluency in patients with epilepsy. *Neuropsychologia*.

Jongman, S. R., **Piai, V.**, & Meyer, A. S. (2020). Planning for language production: the electrophysiological signature of attention to the cue to speak. *Language, Cognition and Neuroscience*. doi: [10.1080/23273798.2019.1690153](https://doi.org/10.1080/23273798.2019.1690153)

2019

Klaus, J., Schutter, D. J. L. G., & **Piai, V.** (2019). Transient perturbation of the left temporal cortex evokes plasticity-related reconfiguration of the lexical network. *Human Brain Mapping*. doi: [10.1002/hbm.24860](https://doi.org/10.1002/hbm.24860)  [Open data](#)

**Piai, V.**, et al. (2019). Assessment of neurocognitive impairment and speech functioning before head and neck cancer treatment. *JAMA Otolaryngology-Head & Neck Surgery*, *145*, 251-257. doi: [10.1001/jamaoto.2018.3981](https://doi.org/10.1001/jamaoto.2018.3981)

**Piai, V.**, Vos, S. H., Idelberger, R., Gans, P., Doorduyn, J., & ter Laan, M. (2019). Awake surgery for a violin player: monitoring motor and music performance, a case report. *Archives of Clinical Neuropsychology*, *34*, 132-137. doi: [10.1093/arclin/acy009](https://doi.org/10.1093/arclin/acy009)

Riès, S. K., **Piai, V.**, Perry, D., Griffin, S., Jordan, K., Henry, R., Knight, R. T., & Berger, M. S. (2019). Roles of ventral versus dorsal pathways in language production: an awake language mapping study. *Brain & Language*, *191*, 17-27. doi: [10.1016/j.bandl.2019.01.001](https://doi.org/10.1016/j.bandl.2019.01.001)

De Witte, E., **Piai, V.**, Kurteff, G., Cai, R., Mariën, P., Dronkers, N., Chang, E., & Berger, M. (2019). A valid alternative for in-person language assessments in brain tumor patients: feasibility and validity measures of the new TeleLanguage test. *Neuro-Oncology Practice*, *6*, 93-102. doi: [10.1093/nop/npy020](https://doi.org/10.1093/nop/npy020)

2018

**Piai, V.**, Rommers, J., & Knight, R. T. (2018). Lesion evidence for a critical role of left posterior but not frontal areas in alpha-beta power decreases during context-driven word production. *European Journal of Neuroscience*, *48*, 2622-2629. doi: [10.1111/ejn.13695](https://doi.org/10.1111/ejn.13695)

**Piai, V.**, & Knight, R. T. (2018). Lexical selection with competing distractors: Evidence from left temporal lobe lesions. *Psychonomic Bulletin & Review*, *25*, 710-717. doi: [10.3758/s13423-017-1301-0](https://doi.org/10.3758/s13423-017-1301-0)

Baldo, J. V., Kacinik, N., Ludy, C., Paulraj, S., Moncrief, A., **Piai, V.**, Curran, B., Turken, A., Herron, T., & Dronkers, N. F. (2018). Voxel-based lesion analysis of brain regions underlying reading and writing. *Neuropsychologia*, *115*, 51-59. doi: [10.1016/j.neuropsychologia.2018.03.021](https://doi.org/10.1016/j.neuropsychologia.2018.03.021)

Wesdorp, M., et al. (2018). Heterozygous missense variants of LMX1A lead to nonsyndromic hearing impairment and vestibular dysfunction. *Human Genetics*, *137*, 389-400. doi: [10.1007/s00439-018-1880-5](https://doi.org/10.1007/s00439-018-1880-5)

Singh, T., Phillip, L., Behroozmand, R., Gleichgerrcht, E., **Piai, V.**, Fridriksson, J., & Bonilha, L. (2018). Pre-articulatory electrical activity associated with correct naming in individuals with aphasia. *Brain & Language*, *177-178*, 1-6. doi: [10.1016/j.bandl.2018.01.002](https://doi.org/10.1016/j.bandl.2018.01.002)

2017

**Piai, V.**, Meyer, L., Dronkers, N. F., & Knight, R. T. (2017). Neuroplasticity of language in left-hemisphere stroke: subsecond electrophysiology and structural connections. *Human Brain Mapping*, *38*, 3151-3162. doi: [10.1002/hbm.23581](https://doi.org/10.1002/hbm.23581)

Jafarpour, A., **Piai, V.**, Lin, J. J., & Knight, R. T. (2017). Human hippocampal pre-activation predicts behavior. *Scientific Reports*, 7, 5959. doi: [10.1038/s41598-017-06477-5](https://doi.org/10.1038/s41598-017-06477-5)

Roelofs, A., & **Piai, V.** (2017). Distributional analysis of semantic interference in picture naming. *Quarterly Journal of Experimental Psychology*, 70, 782-792. doi: [10.1080/17470218.2016.1165264](https://doi.org/10.1080/17470218.2016.1165264)

2016

**Piai, V.**, Anderson, K.L., Lin, J. J., Dewar, C., Parvizi, J., Dronkers, N. F., & Knight, R. T. (2016). Direct brain recordings reveal hippocampal rhythm underpinnings of language processing. *Proceedings of the National Academy of Sciences*, 113, 11366-11371. doi: [10.1073/pnas.1603312113](https://doi.org/10.1073/pnas.1603312113)

**Piai, V.**, Riès, S. K., & Swick, D. (2016). Lesions to lateral prefrontal cortex impair interference control in word production. *Frontiers in Human Neuroscience*, 9, 721. doi: [10.3389/fnhum.2015.00721](https://doi.org/10.3389/fnhum.2015.00721)

**Piai, V.** (2016). The role of electrophysiology in informing theories of word production: a critical standpoint. *Language, Cognition and Neuroscience*, 31, 471-473. doi: [10.1080/23273798.2015.1100749](https://doi.org/10.1080/23273798.2015.1100749)

Roelofs, A., **Piai, V.**, Garrido Rodriguez, G., & Chwilla, D. J. (2016). Electrophysiology of cross-language interference and facilitation in picture naming. *Cortex*, 76, 1-16. doi: [10.1016/j.cortex.2015.12.003](https://doi.org/10.1016/j.cortex.2015.12.003)

2015

**Piai, V.**, Roelofs, A., Rommers, J., Dahlslätt, K., & Maris, E. (2015). Withholding planned speech is reflected in synchronized beta-band oscillations. *Frontiers in Human Neuroscience*, 9, 549. doi: [10.3389/fnhum.2015.00549](https://doi.org/10.3389/fnhum.2015.00549)

**Piai, V.**, Roelofs, A., Rommers, J., & Maris, E. (2015). Beta oscillations reflect memory and motor aspects of spoken word production. *Human Brain Mapping*, 36, 2767-2780. doi: [10.1002/hbm.22806](https://doi.org/10.1002/hbm.22806)

**Piai, V.**, Roelofs, A. & Roete, I. (2015). Semantic interference in picture naming does not vary with reading ability. *Quarterly Journal of Experimental Psychology*, 68, 1758-1768. doi: [10.1080/17470218.2014.985689](https://doi.org/10.1080/17470218.2014.985689)

**Piai, V.**, Roelofs, A., & Schriefers, H. (2015). Task choice and semantic interference in picture naming. *Acta Psychologica*, 157, 13-22. doi: [10.1016/j.actpsy.2015.02.003](https://doi.org/10.1016/j.actpsy.2015.02.003)

**Piai, V.**, Riès, S. K., & Knight, R. T. (2015). The electrophysiology of language production: What could be improved. *Frontiers in Human Neuroscience*, 5, 5160. doi: [10.3389/fpsyg.2014.01560](https://doi.org/10.3389/fpsyg.2014.01560)

**Piai, V.**, Dahlslätt, K., & Maris, E. (2015). Statistically comparing EEG/MEG waveforms on the basis of successive univariate test statistics: How bad can it be? *Psychophysiology*, 52, 440-443. doi: [10.1111/psyp.12335](https://doi.org/10.1111/psyp.12335)

Roelofs, A., & **Piai, V.** (2015). Aspects of competition in word production: Reply to Mahon and Navarrete. *Cortex*, 69, 420-424. doi: [10.1016/j.cortex.2014.10.016](https://doi.org/10.1016/j.cortex.2014.10.016)

2014

**Piai, V.**, Roelofs, A., Jensen, O., Schoffelen, J. M., & Bonnefond, M. (2014). Distinct patterns of

brain activity characterise lexical activation and competition in spoken word production. *PLoS ONE* 9(2): e88674. doi: [10.1371/journal.pone.0088674](https://doi.org/10.1371/journal.pone.0088674)

**Piai, V.**, Roelofs, A., & Schriefers, H. (2014). Locus of semantic interference in picture naming: Evidence from dual-task performance. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 40, 147-165. doi: [10.1037/a0033745](https://doi.org/10.1037/a0033745)

**Piai, V.**, Roelofs, A., & Maris, E. (2014). Oscillatory brain responses in spoken word production reflect lexical frequency and sentential constraint. *Neuropsychologia*, 53, 146-156. doi: [10.1016/j.neuropsychologia.2013.11.014](https://doi.org/10.1016/j.neuropsychologia.2013.11.014)

**Piai, V.**, Roelofs, A., Acheson, D. J., & Takashima, A. (2013). Attention for speaking: Domain-general control from anterior cingulate cortex in spoken word production. *Frontiers in Human Neuroscience*, 7:832. doi: [10.3389/fnhum.2013.00832](https://doi.org/10.3389/fnhum.2013.00832)

2013

**Piai, V.**, Meyer, L., Schreuder, R., & Bastiaansen, M. C. M. (2013). Sit down and read on: Working memory and long-term memory in particle-verb processing. *Brain & Language*, 127, 296-306. doi: [10.1016/j.bandl.2013.09.015](https://doi.org/10.1016/j.bandl.2013.09.015)

**Piai, V.** & Roelofs, A. (2013). Working memory capacity and dual-task interference in picture naming. *Acta Psychologica*, 142, 332-342. doi: [10.1016/j.actpsy.2013.01.006](https://doi.org/10.1016/j.actpsy.2013.01.006)

Roelofs, A., & **Piai, V.** (2013). Associative facilitation in the stroop task: Comment on Mahon et al. (2012). *Cortex*, 49, 1767-1769. doi: [10.1016/j.cortex.2013.03.001](https://doi.org/10.1016/j.cortex.2013.03.001)

Roelofs, A., **Piai, V.**, & Schriefers, H. (2013). Context effects and selective attention in picture naming and word reading: Competition versus response exclusion. *Language and Cognitive Processes*, 28, 655-671. doi: [10.1080/01690965.2011.615663](https://doi.org/10.1080/01690965.2011.615663)

Roelofs, A., **Piai, V.**, & Schriefers, H. (2013). Selection by competition in word production: Rejoinder to Janssen (2012). *Language and Cognitive Processes*, 28, 679-683. doi: [10.1080/01690965.2013.770890](https://doi.org/10.1080/01690965.2013.770890)

2012

**Piai, V.**, Roelofs, A., & Schriefers, H. (2012). Distractor strength and selective attention in picture naming performance. *Memory & Cognition*, 40, 614-627. doi: [10.3758/s13421-011-0171-3](https://doi.org/10.3758/s13421-011-0171-3)

**Piai, V.**, Roelofs, A., & Van der Meij, R. (2012). Event-related potentials and oscillatory brain responses associated with semantic and Stroop-like interference effects in overt naming. *Brain Research*, 1450, 87-101. doi: [10.1016/j.brainres.2012.02.050](https://doi.org/10.1016/j.brainres.2012.02.050)

2011

**Piai, V.**, Roelofs, A., & Schriefers, H. (2011). Semantic interference in immediate and delayed naming and reading: Attention and task decisions. *Journal of Memory and Language*, 64, 404-423. doi: [10.1016/j.jml.2011.01.004](https://doi.org/10.1016/j.jml.2011.01.004)

Roelofs A., & **Piai, V.** (2011). Attention demands of spoken word planning: A review. *Frontiers in Psychology*, 2:307. doi: [10.3389/fpsyg.2011.00307](https://doi.org/10.3389/fpsyg.2011.00307)

Roelofs, A., **Piai, V.**, & Garrido Rodriguez, G. (2011). Attentional inhibition in bilingual naming performance: Evidence from delta-plot analyses. *Frontiers in Psychology*, 2:184. doi: [10.3389/fpsyg.2011.00184](https://doi.org/10.3389/fpsyg.2011.00184)

Roelofs, A., **Piai, V.**, & Schriefers, H. (2011). Selective attention and distractor frequency in naming performance: Comment on Dhooge and Hartsuiker (2010). *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37, 1032-1038. doi: [10.1037/a0023328](https://doi.org/10.1037/a0023328)

#### Book chapters

**Piai, V.**, & Zheng, X. (2019). Speaking waves: neuronal oscillations in language production. *Psychology of Learning and Motivation*, 71, 265-302. doi: [10.1016/bs.plm.2019.07.002](https://doi.org/10.1016/bs.plm.2019.07.002)

de Zubicaray, G., & **Piai, V.** (2019). Investigating the spatial and temporal components of speech production. In G. de Zubicaray, & N. O. Schiller (Eds.), *The Oxford Handbook of Neurolinguistics*. Oxford University Press. doi: [10.1093/oxfordhb/9780190672027.013.19](https://doi.org/10.1093/oxfordhb/9780190672027.013.19)

Flinker, A., **Piai, V.**, & Knight, R. T. (2018). Intracranial electrophysiology in language research. In S-A. Rueschemeyer, & M. G. Gaskell (Eds.), *The Oxford Handbook of Psycholinguistics*. Oxford University Press. doi: [10.1093/oxfordhb/9780198786825.013.43](https://doi.org/10.1093/oxfordhb/9780198786825.013.43)

#### Products

##### Released

**"SimpTell"**, an application for the training of elliptical language production style by patients with chronic Broca's aphasia (*Co-developer*)

##### Under development

**"TeleLanguage"**, Dutch version, a telephone-based language test battery to assess patients with mild language disorders

**"Syntest"**, a Dutch test for the comprehension of (complex) syntactic structures

#### Invited talks

**Memory and control in spoken word production: evidence from electrophysiology and brain lesions.** Institute of Cognitive Neuroscience, University College London. February, 2020.

2020

**Neurale processen tijdens het spreken.** Werkverband Amsterdamse Psycholinguïsten Symposium. Amsterdam, the Netherlands. January, 2020.

**The effects of head and neck tumours on neurocognition before and after treatment.**

2019

Autumn Conference of the Dutch Workgroup for Head and Neck Tumours. Maastricht, the Netherlands. October, 2019.

**Interfering and facilitating contexts in spoken word production.** Brownbag Lab Seminars. University of Geneva, Switzerland. June, 2019.

**Context effects in language production examined with electrophysiology.** International Symposium on Neurobiology of Language. Waseda University, Tokyo, Japan. February, 2019.

**Comprehending and producing words: scalp and intracranial electrophysiology.** Satellite Seminar on Neurobiology of Language. Waseda University, Tokyo, Japan. February, 2019.

**Context-driven word production through an electrophysiological lens.** Queensland University of Technology, Brisbane, Australia. November, 2018.

2018

- Language and speech functioning through an electrophysiological lens.** CLaS-CCD Colloquium Series. Macquarie University. November, 2018.
- Key considerations for EEG and language studies.** School of Psychology and Clinical Language Sciences, University of Reading, UK. June, 2018.
- Oscillations in language research.** Summer Neurolinguistics School, National Research University Higher School of Economics, Moscow, Russia. May, 2018.
- Neuropsychologie en de Psychologie van Taal.** Nederlandse Vereniging voor Neuropsychologie Voorjaarsconferentie 2018. Utrecht, the Netherlands. April, 2018.
- Intracranial electrophysiology in language research.** National Research University, Higher School of Economics, Moscow, Russia. November, 2017. 2017
- Taalverwerking in relatie tot geheugen: Van fundamenteel onderzoek naar klinische toepassing.** Afasieconferentie "State of the Art 2017". Zeist, the Netherlands. October, 2017.
- Language production and acquired language disorders.** International Radboud Summer School, Introduction to Cognitive Neuroscience. Nijmegen, the Netherlands. August, 2017.
- Oscillations as a bridge between language and other cognitive domains.** International Symposium on Neural Oscillations in Speech and Language Processing. Harnack Haus of the Max Planck Society, Berlin, Germany. May, 2017.
- Context-driven word production.** Department of Neuropsychology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany. October, 2016. 2016
- Context-driven word production in the healthy and stroke populations.** Introduction to International Max Planck Research School PhD students. Nijmegen, the Netherlands. September, 2016.
- Language production and acquired language disorders.** International Radboud Summer School, Introduction to Cognitive Neuroscience. Nijmegen, the Netherlands. August, 2016.
- Electrophysiology measured over the scalp and intracranially: examples from context-driven word production.** Summer School - Human Language: From Genes and Brains to Behaviour. Berg en Dal, the Netherlands. July, 2016.
- Where language production meets memory (or how).** Center for Mind and Brain, Davis, USA. February, 2016.
- The N450 in picture-word interference tasks.** Donders Discussion. Nijmegen, the Netherlands. October, 2011. 2011 and earlier
- Comprehending particle verbs.** Experimental Linguistics Talks Utrecht. Utrecht, the Netherlands. September, 2009.

## Conference Presentations

*Past 5 years. Asterisks indicate (graduate or undergraduate) student lead authors.*

Oral presentations

\*Camerino, I. L., Sierpowska, J., Meyer, N. H., Tuladhar, A. M., Reid, A. T., Kessels, R. P. C., de

2019



Leeuw, F.-E., & **Piai, V.** *White-matter bottleneck in small vessel disease: A lesion-symptom mapping study of executive-language functions*. 20th International Science of Aphasia Conference. Rome, Italy. September, 2019.

Sierpowska, J., Bryant, K., Römkens, M., Mangnus, M., Janssen, N., Kessels, R., Roelofs, A., Mars, R., & **Piai, V.** *The functional neuroanatomy of the left temporal lobe white matter – an interdisciplinary approach based on intraoperative and comparative studies*. 20th International Science of Aphasia Conference. Rome, Italy. September, 2019.

Sierpowska, J., Rofes, A., Mandonnet, E., ter Laan, M., & **Piai, V.** *The AFTERCARE survey - The assessment and intervention survey for professionals working with individuals after brain surgery*. 14th European Low Grade Glioma Network Meeting. London, UK. June, 2019.

**Piai, V.** *Reconfiguration of the language network after brain damage*. Symposium "Cognitive Networks: Trends in Multimodal Approaches and Connectomics" at the 26th Annual Meeting of the Cognitive Neuroscience Society. San Francisco, USA. March, 2019.

2018

\*Garg, A., **Piai, V.**, McQueen, J., & Roelofs, A. *The perception-production interface: Insights from cumulative semantic effects*. 26th Annual Conference on Architectures and Mechanisms for Language Processing. Hyderabad, India. February, 2018.

2017

**Piai, V.** *Cognitive function in relation to speech problems in head and neck cancer prior to treatment*. 2nd NET-QUBIC Symposium. Utrecht, the Netherlands. November, 2017.

2016

**Piai, V.**, Meyer, L., Dronkers, N. F., & Knight, R. T. *Neuroplasticity of language in left-hemisphere stroke: evidence linking subsecond electrophysiology and structural connectivity*. 54th Annual Meeting of the Academy of Aphasia. Llandudno, Wales. October, 2016.

#### Poster presentations

2020

**Piai, V.**, Dahlsätt, K., Verdonck-de Leeuw, I., Prins, J., Takes, R., NET-QUBIC Consortium, & Kessels, R. *Cognitive and speech functioning in HNC: baseline prevalence and possible causes*. Meeting of the International Cognition and Cancer Task Force. Denver, USA. February, 2020.

2019

\*Ferreira, J., Roelofs, A., & **Piai, V.** *The role of inhibition in inflectional encoding: Producing the past tense*. 25th Annual Conference on Architectures and Mechanisms for Language Processing. Moscow, Russia. September, 2019.

\*Janssen, N., Mangnus, M., Roelofs, A., Sierpowska, J., Kessels, R. P. C., & **Piai, V.** *The role of the uncinat fasciculus and inferior longitudinal fasciculus in healthy and disordered language production*. 20th International Science of Aphasia Conference. Rome, Italy. September, 2019.

\*Garg, A., **Piai, V.**, Takashima, A., McQueen, J.M., & Roelofs, A. *Linking production and comprehension – Investigating the lexical interface*. 20th International Science of Aphasia Conference. Rome, Italy. September, 2019.

Vos, S., Kessels, R. P. C., & **Piai, V.** *The effect of deep brain stimulation of the subthalamic nucleus on language processing in Parkinson's Disease: a review.* 7th Scientific Meeting of the Federation of the European Societies of Neuropsychology. Milan, Italy, September 2019.

\*Garg, A., **Piai, V.**, Takashima, A., McQueen, J.M., & Roelofs, A. *Linking production and comprehension – Investigating the lexical interface.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

\*Camerino, I. L., Sierpowska, J., Meyer, N. H., Tuladhar, A. M., Reid, A. T., Kessels, R. P. C., de Leeuw, F.-E., & **Piai, V.** *White-matter bottleneck in small vessel disease: A lesion-symptom mapping study of executive-language functions.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

\*Dewenter, A. F., Sierpowska, J., Kessels, R. P. C., & **Piai, V.** *Investigating the semantic control network and its structural decline in mild cognitive impairment and mild dementia.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

Sierpowska, J., Janssen, N., Kessels, R. P. C., Roelofs, A., & **Piai, V.** *The frontal aslant white matter tract (FAT) and semantic selection in word production.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

\*Mangnus, M., Roelofs, A., Sierpowska, J., Kessels, R. P. C., **Piai, V.**, & Janssen, N. *The role of ventral fiber pathways in healthy and disordered language production.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

\*Ferreira, J., Roelofs, A., & **Piai, V.** *The role of inhibition in inflectional encoding: Producing the past tense.* Eleventh Annual Meeting of the Society for the Neurobiology of Language. Helsinki, Finland. August, 2019.

\*Abrahamse, R., Beynon, A. J., & **Piai, V.** *Auditory discrimination in prelingually deaf early implanted cochlear implant users: an ERP study.* XXVIth Biennial Symposium of the International Evoked Response Audiometry Study Group (IERASG). Sydney, Australia. June, 2019.

\*Todorova, L., Neville, D., Knight, R.T., & **Piai, V.** *Lexical-semantic and executive deficits revealed by computational modelling: a drift diffusion model perspective.* 26th Annual Meeting of the Cognitive Neuroscience Society. San Francisco, USA. March, 2019.

\*Garg, A., **Piai, V.**, McQueen, J.M., & Roelofs, A. *The perception-production interface: Insights from cumulative semantic effects.* 10th International Workshop on Language Production. Nijmegen, the Netherlands. July, 2018.

\*Camerino, I. L., Meyer, N. H., Sierpowska, J. M., Tuladhar, A. M., Reid, A. T., Kessels, R. P. C., de Leeuw, F.-E., & **Piai, V.** *Role of white matter lesions in cerebral small vessel disease: A voxel-based lesion symptom mapping study of language production.* 10th International Workshop on Language Production. Nijmegen, the Netherlands. July, 2018.

Rossetto, E., Klaus, J., & **Piai, V.** *The lexical nature of alpha-beta desynchronisation in context-driven word production.* 10th International Workshop on Language Production. Nijmegen, the Netherlands. July, 2018.

Klaus, J., Schutter, D., & **Piai, V.** *Oscillatory brain responses in language production following transient disruption of the left middle temporal gyrus: A cTBS-EEG study.* 10th International Workshop on Language Production. Nijmegen, the Netherlands. July, 2018.

\*Roos, N. & **Piai, V.** *Context-dependent language processing: towards a clinical tool.* International Max Planck Research School for the Language Sciences Conference. Nijmegen, the Netherlands. June, 2018.

\*Camerino, I. L., Meyer, N. H., Tuladhar, A. M., Reid, A. T., Kessels, R. P. C., de Leeuw, F.-E., & **Piai, V.** *Role of white matter hyperintensity at specific locations in cerebral small vessel disease: A voxel-based lesion symptom mapping study.* International Max Planck Research School for the Language Sciences Conference. Nijmegen, the Netherlands. June, 2018.

\*Abrahamse, S., A., Langereis, M., Vermeulen, A., Beynon, A., & **Piai, V.** *P300 versus MMN: The clinical potential of ERPs to assess auditory discrimination abilities.* International Max Planck Research School for the Language Sciences Conference. Nijmegen, the Netherlands. June, 2018.

\*Ferreira, J., Roelofs, A., & **Piai, V.** *Role of basal ganglia in producing inflections.* International Max Planck Research School for the Language Sciences Conference. Nijmegen, the Netherlands. June, 2018.

\*Garg, A., **Piai, V.**, McQueen, J.M., & Roelofs, A. *The perception-production interface: Insights from cumulative semantic effects.* International Max Planck Research School for the Language Sciences Conference. Nijmegen, the Netherlands. June, 2018.

Jongman, S. R., **Piai, V.**, & Meyer, A. S. *Withholding speech: does the EEG signal reflect planning for production or attention?* 31st Annual CUNY Conference on Human Sentence Processing. Davis, USA. March, 2018.

2017

**Piai, V.**, Rommers, J., & Knight, R. T. *Evidence for a causal link between left temporoparietal alpha-beta desynchronisation and context-driven word production.* Ninth Annual Meeting of the Society for the Neurobiology of Language. Baltimore, USA. November, 2017.

Riès, S. K., **Piai, V.**, Perry, D., Griffin, S., Jordan, K., Knight, R. T., & Berger, M. S. *Dissociating the roles of ventral versus dorsal pathways in language production: an awake language mapping study.* Ninth Annual Meeting of the Society for the Neurobiology of Language. Baltimore, USA. November, 2017.

Williams, S. T., Shah, P. A., **Piai, V.**, Gatens, H., Krieger, A., Lucas, T. H., & Litt, B. *Spatiotemporal neuronal activation patterns during verbal fluency tasks.* Ninth Annual Meeting of the Society for the Neurobiology of Language. Baltimore, USA. November, 2017.

Jafarpour, A., **Piai, V.**, Lin, J. J., & Knight, R. T. *Human hippocampal pre-activation predicts behavior.* Neuroscience 2017. Washington, USA. November, 2017.

Hoy, C., Anderson, K. L., **Piai, V.**, Lin, J. J., Millan, J. D. R., & Knight, R. T. *Conflict-sensitive high frequency activity and event-related potentials in medial and lateral prefrontal cortex during a Stroop task.* Neuroscience 2017. Washington, USA. November, 2017.

2016

**Piai, V.**, Meyer, L., Dronkers, N. F., & Knight, R. T. *Neuroplasticity of language in left-hemisphere*

*stroke: evidence linking subsecond electrophysiology and structural connectivity*. Eighth Annual Meeting of the Society for the Neurobiology of Language. London, UK. August, 2016.

## Supervision

Postdoctoral researchers	Joanna Sierpowska, <i>Radboud University</i>	2018-present	
	Jana Klaus, <i>Radboud University</i>	2017-2018	
PhD Candidates	Natascha Roos, <i>Radboud University</i>	2019-present	
	Yang Cao, <i>Radboud University</i>		
	Matteo Mascelloni, <i>Queensland University of Technology, Australia</i>	2018-present	
	Adrian Jodzio, <i>Radboud University</i>		
	Lara Todorova, <i>Radboud University</i>		
	João Ferreira, <i>Radboud University</i>	2017-present	
	Ileana Camerino, <i>Radboud University</i>		
Master's Students	Nikki Janssen, <i>Radboud University</i>		
	Arushi Garg, <i>Radboud University</i>	2016-present	
	I am an associated partner of the Erasmus+ Mundus Joint Master Degree programme in Clinical Linguistics		
	<b>Main supervision: thesis</b>		
	Priscila Borges, <i>European Master in Clinical Linguistics</i>		2020
	Irina Chupina, <i>European Master in Clinical Linguistics</i>		
	Christina Papoutsi, <i>Utrecht University</i>		
	Imke Wets, <i>Radboud University</i>		
	Cecilia Husta, <i>University of Groningen</i>		2019
	Anna Dewenter, <i>Radboud University</i>		2018-2019
	Laura ten Dijke, <i>University of Amsterdam</i>		2018
	Karleen van Dijk, <i>Radboud University</i>		
	Elena Rossetto, <i>University of Trento</i>		2017-2018
	Natascha Roos, <i>Radboud University</i>		
	Rosanne Abrahamse, <i>Radboud University</i>		
Manon Jacobs, <i>Radboud University</i>		2017	
Tessa Ruijs, <i>University of Amsterdam</i>			
<b>Co-supervision: thesis</b>			
Giulio Severijnen, <i>Radboud University</i> , with James McQueen		2019-present	
Margot Magnus, <i>Radboud University</i> , with Nikki Janssen		2018-2019	

Manon Hendriks, <i>Radboud University</i> , with Ton Dijkstra	2017-2018
Svetlana Gerakakis, <i>Radboud University</i> , with Ardi Roelofs	2010-2011
Gabriela Garrido Rodriguez, <i>Radboud University</i> , with Ardi Roelofs	2009-2010

**Internship**

Anne Billot, <i>Pierre-and-Marie-Curie University, France</i>	2017
Nathalie Meyer, <i>École Polytechnique Fédérale de Lausanne, Switzerland</i>	

Bachelor's Students

**Honours thesis**

Laurie Marsman, <i>Radboud University</i>	2019-present
Joran Muller, <i>Radboud University</i>	
Tamar Ardesch, <i>Radboud University</i>	2018-2019
Rosemarije Weterings, <i>Radboud University</i>	2017-2018

**Thesis**

Ingeborg Roete, <i>Radboud University</i>	2012
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**Internship**

Sjoerd van Erp, <i>Radboud University</i>	2020
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Teaching

<i>Research Master's Programme in Cognitive Neuroscience, Radboud University</i>	
Lecturer for "Cognitive Neuroscience of Memory" (2017-2018), "Trends in Cognitive Sciences" (2018-2020), "Neurobiology of Language" (2019-2020)	2017-present
<i>Bachelor's Programme in Psychology, Radboud University</i>	
Lecturer for "Brain and Cognition"	2017-2018
Instructor for "Health Psychology", "Introduction to Brain Studies", "Introduction to General Psychology", "Theoretical Psychology" Lecturer for "Applied Research Methods in Brain Studies"	2010-2013

Media Coverage

Newspapers and Magazines

[De Volkskrant](#) | [The Asha Leader](#) | [The Daily Californian](#) | [California Magazine](#) | [Donders Newsletter](#) | [Algemeen Dagblad](#)

Radio

[Science Today on CBS Radio News](#)

Websites

[Nemo Kennislink 1](#) | [Nemo Kennislink 2](#) | [Nemo Kennislink 3](#) | [M.D./Alert](#) | [Quartz](#) | [NWO](#) | [ZME Science](#) | [Science Alert](#) | [Fanpage.it](#)

## Outreach

Radio interview: <a href="#">Relatie Brein En Taal</a> , <i>GL8 Media</i>	2018
Public talk: Hoe werkt ons taalsysteem? Over de relatie tussen taal en hersenen, <i>Loop- en Ontmoetingscentrum, Molenhoek</i>	
Laureate presentation at Rubicon information meeting, <i>Radboud University, Nijmegen</i>	2017
Interview and demo to high school students (Profielwerkstuk)	2016-2017
Co-facilitator for Aphasia Stroke Support Group, <i>Veterans Affairs Hospital, Martinez, California, USA</i>	2014-2016
Team member for De Jonge Akademie on Wheels, <i>Openbaar Zeister Lyceum, Zeist</i>	2008

## Professional Activities

Doctoral Examination Board	<i>Amie Fairs, Radboud University, Nijmegen</i> <i>Ana Murteira, Macquarie University, Sydney, Australia</i>	2019-present
PhD Opposition	<i>Radboud University, Nijmegen</i> Flora Vanlangendonck Natalia Shitova Ashley Lewis Jim Herring Xiaochen Zheng	2017-present
Recruiting Committees	<i>Radboud University, Max Planck Institute for Psycholinguistics</i>	2016-present
Ad-hoc Reviewer	See my <a href="#">Publons</a> profile for details BMC Psychology, Brain and Language, Brain Topography, Cerebral Cortex, Cognition, Collabra, Cortex, Emotion, Frontiers in Human Neuroscience, Frontiers in Language Sciences, Human Brain Mapping, Journal of Cognitive Neuroscience, Journal of Experiment Psychology: General, Journal of Experimental Psychology: Human Perception and Performance, Journal of Experimental Psychology: Learning, Memory, and Cognition, Journal of the International Neuropsychological Society, Journal of Neurolinguistics, Journal of Neuroscience, Language and Speech, Language, Cognition and Neuroscience, Nature Communications, Neuropsychologia, PLoS ONE, Proceedings of the National Academy of Sciences, Psychonomic Bulletin & Review, Quarterly Journal of Experimental Psychology	2012-present
Organisation	Research committee member, <i>Department of Medical Psychology, Radboudumc, Nijmegen</i> Co-organiser of Psycholinguistics in Flanders Meeting, <i>Nijmegen, the Netherlands</i> Organiser of the Language Division Meetings, <i>Donders Centre for Cognition</i>	2016-present 2012 2010-2013

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