

## Vitória Piai

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Radboud University  
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Date of Birth: August 25<sup>th</sup>, 1982  
Nationalities: Brazilian, Italian

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### Positions

<b>Senior Researcher</b> <i>Radboud University, Donders Centre for Cognition &amp; Radboud University Medical Centre, Medical Psychology, Nijmegen</i>	2016-present
<b>Postdoctoral Fellow</b> <i>University of California, Berkeley Center for Aphasia and Related Disorders, Veterans Affairs Health Care System Northern, Martinez, California Advisors: Prof. Robert T. Knight, Prof. Nina F. Dronkers</i>	2014-2016
<b>Neurosurgery Department Affiliate</b> <i>University of California, San Francisco</i>	2015-2016

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### Education

<b>PhD in Cognitive Neuroscience</b> (Highest distinction) <i>Radboud University, Graduate School for Cognitive Neuroscience &amp; International Max Planck Research School for Language Sciences</i>	2009-2013
<b>MSc in Cognitive Neuroscience</b> <i>Radboud University</i>	2007-2009
<b>BA in Linguistics</b> <i>Utrecht University</i>	2004-2007
<b>BA in Portuguese Language and Culture</b> <i>Utrecht University</i>	2004-2007

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### Grants and Awards

<b>Rubicon</b> <i>Netherlands Organisation for Scientific Research Towards a neural mechanism of context-driven memory access in language: prefrontal cortex and neuronal oscillations</i>	2014-2016
<b>Niels Stensen</b> (Declined due to Rubicon) <i>Towards a neuronal mechanism of context-dependent memory access in spoken word production</i>	2014-2015

<b>Frye Stipendium</b>	2012
<i>Radboud University</i>	
Awarded to ten most promising female researchers	
<b>Poster Prize</b>	2011
<i>2nd IMPRS NeuroCom Summer School. London, UK.</i>	
Electrophysiological evidence for a common lexical locus of semantic and Stroop-like interference effects in overt naming performance.	

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**Research  
Experience**

<b>University of California, Berkeley</b>	2014-2016
<i>Advisors: Prof. Robert T. Knight, Prof. Nina F. Dronkers</i>	
Research on brain organisation in relation to language and memory	
<ul style="list-style-type: none"> <li>- Methods: Intracranial EEG, Scalp EEG, MEG, eye-tracking</li> <li>- Patient populations: stroke, brain tumour, epilepsy</li> </ul>	
<b>Radboud University Nijmegen</b>	2009-2013
<i>Advisors: Prof. Herbert Schriefers, Prof. Ardi Roelofs</i>	
PhD research on the role of executive functioning in word production	
<ul style="list-style-type: none"> <li>- Methods: Scalp EEG, MEG, fMRI</li> </ul>	
<b>Radboud University Nijmegen</b>	2007-2009
<i>Advisors: Prof. Robert Schreuder, Dr. Marcel C. M. Bastiaansen</i>	
MSc research on particle-verb processing during comprehension	
<ul style="list-style-type: none"> <li>- Method: Scalp EEG</li> </ul>	
<b>Radboud University Nijmegen, Donders Centre for Cognition</b>	2009
<i>Research Assistant, Prof. Herbert Schriefers, Prof. Ardi Roelofs</i>	
<ul style="list-style-type: none"> <li>- Running experiments, analysing behavioural data on word production</li> </ul>	
<b>Max Planck Institute for Psycholinguistics</b>	2007-2009
<i>Research Assistant, Prof. Mirjam Ernestus</i>	
<ul style="list-style-type: none"> <li>- Running experiments, analysing spontaneous speech</li> </ul>	
<b>Utrecht University</b>	2005-2006
<i>Research Assistant, Prof. Paulo de Medeiros</i>	
<ul style="list-style-type: none"> <li>- Database management</li> </ul>	

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**Skills**

**Research Methods**

- MEG, scalp and intracranial EEG, fMRI, eye-tracking, electromyogram
- Temporal and spectral analysis of electrophysiological signals
- Temporal and spectral analysis of (spontaneous) speech

**Software**

Matlab, FieldTrip, Brain Vision Analyzer, MNE, SPM8, Freesurfer, MRICro, MRICron, R, SPSS, AWK, E-prime, Presentation, Praat, Linux

## Languages

Portuguese (native), English (near native), Dutch (near native), Swedish (excellent), French (very good), Italian (very good), Spanish (very good), Polish (intermediate)

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## Peer-Reviewed Publications

- Jafarpour, A., **Piai, V.**, Lin, J.J., & Knight, R.T. (accepted). Human hippocampal pre-activation predicts behavior. *Scientific Reports*.
- Piai, V.**, & Knight, R.T. (2017). Lexical selection with competing distractors: Evidence from left temporal lobe lesions. *Psychonomic Bulletin & Review*.
- 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.
- Roelofs, A., & **Piai, V.** (2017). Distributional analysis of semantic interference in picture naming. *Quarterly Journal of Experimental Psychology*, 70, 782-792.
- 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.
- 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.
- Piai, V.** (2016). The role of electrophysiology in informing theories of word production: a critical standpoint. *Language, Cognition and Neuroscience*, 31, 471-473.
- 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.
- Piai, V.**, Riès, S.K., & Swick, D. (2016). Lesions to lateral prefrontal cortex impair lexical interference control in word production. *Frontiers in Human Neuroscience*, 9, 721.
- Piai, V.**, Roelofs, A., Rommers, J., Dahlsätt, K., & Maris, E. (2015). Withholding planned speech is reflected in synchronized beta-band oscillations. *Frontiers in Human Neuroscience*, 9, 549.
- 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.
- 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.
- Piai, V.**, Roelofs, A., & Schriefers, H. (2015). Task choice and semantic interference in picture naming. *Acta Psychologica*, 157, 13-22.
- Piai, V.**, Riès, S.K., & Knight, R.T. (2015). The electrophysiology of language production: What could be improved. *Frontiers in Human Neuroscience*, 5, 5160.
- Piai, V.**, Dahlsätt, 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.
- Roelofs, A., & **Piai, V.** (2015). Aspects of competition in word production: Reply to Mahon and Navarrete. *Cortex*, 69, 420-424.

- 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.
- 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.
- Piai, V.,** Roelofs, A., & Maris, E. (2014). Oscillatory brain responses in spoken word production reflect lexical frequency and sentential constraint. *Neuropsychologia*, 53, 146-156.
- 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.
- 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.
- Piai, V.** & Roelofs, A. (2013). Working memory capacity and dual-task interference in picture naming. *Acta Psychologica*, 142, 332-342.
- Roelofs, A., & **Piai, V.** (2013). Associative Facilitation in the Stroop Task: Comment on Mahon et al. (2012). *Cortex*, 49, 1767-1769.
- 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.
- Roelofs, A., **Piai, V.,** & Schriefers, H. (2013). Selection by Competition in Word Production: Rejoinder to Janssen (2012). *Language and Cognitive Processes*, 28, 679-683.
- Piai, V.,** Roelofs, A., & Schriefers, H. (2012). Distractor strength and selective attention in picture naming performance. *Memory & Cognition*, 40, 614-627.
- 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.
- 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.
- Roelofs A., & **Piai, V.** (2011). Attention demands of spoken word planning: A review. *Frontiers in Psychology*, 2:307.
- Roelofs, A., **Piai, V.,** & Garrido Rodriguez, G. (2011). Attentional inhibition in bilingual naming performance: Evidence from delta-plot analyses. *Frontiers in Psychology*, 2, 184.
- 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.

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## Talks and Posters

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

- Piai, V.**, Meyer, L., Dronkers, N.F., & Knight, R.T. [poster]. 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. August, 2016. London, UK.
- Piai, V.**, Dronkers, N.F., & Knight, R.T. [poster]. Priming and competition of associated memory representations: A comparison between response times and event-related potentials following lesions to left temporal cortex. 53rd Annual Meeting of the Academy of Aphasia. Tucson, Arizona. October, 2015.
- Piai, V.**, Riès, S.K., & Swick, D. [poster]. Lesions to lateral prefrontal cortex impair control over response selection in word production. Seventh Annual Meeting of the Society for the Neurobiology of Language. Chicago, USA. October, 2015.
- Piai, V.**, Anderson, K.L., Lin, J.J., Dronkers, N.F., & Knight, R.T. [poster] Context-driven word retrieval is reflected in hippocampal theta oscillations. Organization for Human Brain Mapping Annual Meeting. Hawaii, USA. June 2015.
- Piai, V.**, Roelofs, A., Rommers, J., & Maris, E. [poster] Beta oscillations reflect memory and motor aspects of spoken word production. 22nd Annual Meeting of the Cognitive Neuroscience Society. San Francisco, USA. March, 2015.
- Piai, V.**, Roelofs, A., Rommers, J. & Maris, E. [poster] Planning of word production but not predicting in comprehension engages the cortical network for language production. 55th Annual Meeting of the Psychonomic Society. Long Beach, USA. November, 2014.
- Mulatti, C., **Piai, V.** & Job, R. [poster] Picture and word processing streams compete for limited resources in picture-word interference. Long Beach, USA. November, 2014.
- Piai, V.**, Roelofs, A., Rommers, J. & Maris, E. [poster] Beta-band desynchronisation in the language production network during spoken word planning. 8th International Workshop on Language Production. Geneva, Switzerland. July, 2014.
- Piai, V.**, Roelofs, A., Acheson, D., & Takashima, A. [poster] Attention for speaking: Domain-general control from anterior cingulate cortex in spoken word production. Society for the Neurobiology of Language. San Diego, USA. November, 2013.
- Piai, V.**, Roelofs, A., Jensen, O., Schoffelen, J.M., & Bonnefond, M. [poster] Distinct patterns of brain activity characterize lexical activation and competition in speech production. 20th Annual Meeting of the Cognitive Neuroscience Society. San Francisco, USA. April, 2013.
- Piai, V.**, Roelofs, A., Jensen, O., Schoffelen, J.M., & Bonnefond, M. [talk] Cortical dynamics of spreading activation and lexical competition during picture naming: An MEG study. 18th Annual Conference on Architectures and Mechanisms for Language Processing, Riva del Garda, Italy. September, 2012.
- Piai, V.**, Roelofs, A., Jensen, O., Schoffelen, J.M., & Bonnefond, M. [poster] Cortical dynamics of spreading activation and lexical competition during picture naming: An MEG study. 7th International Workshop on Language Production. New York, USA. July, 2012.
- Piai, V.**, Roelofs, A., Jensen, O., Schoffelen, J.M., & Bonnefond, M. [talk] Oscillatory activity in left inferior frontal gyrus during interference in overt picture naming: An MEG study. Psycholinguistics in Flanders. Nijmegen, the Netherlands. June, 2012.
- Piai, V.**, Roelofs, A., & Van der Meij, R. [poster] Electrophysiological evidence for a common lexical locus of semantic and Stroop-like interference effects in overt naming performance. 13th Winter Conference of the Dutch Psychonomic Society. Egmond aan Zee, the Netherlands. December, 2011.

- Piai, V.,** Roelofs, A., & Van der Meij, R. [poster] Electrophysiological evidence for a common lexical locus of semantic and Stroop-like interference effects in overt naming performance. 2nd IMPRS NeuroCom Summer School, London, UK. July, 2011. Prize winning poster.
- Piai, V.,** Roelofs, A., & Van der Meij, R. [talk] Electrophysiological evidence for a common lexical locus of semantic and Stroop-like interference effects in overt naming performance. 10th International Symposium of Psycholinguistics, San Sebastián, Spain. April, 2011.
- Piai, V.,** Roelofs, A., & Schriefers, H. [talk] Attention, distractor strength, and semantic effects in object naming performance: Insights from response time distributional analyses. 16th Annual Conference on Architectures and Mechanisms for Language Processing, York, UK. September, 2010.
- Piai, V.,** Roelofs, A., & Schriefers, H. [poster] Semantic interference in immediate and delayed word production: Role of attentional control. 6th International Workshop on Language Production. Edinburgh, UK. September, 2010.
- Piai, V.,** Roelofs, A., & Schriefers, H. [talk] Semantic interference in immediate and delayed word production: Role of attentional control. Psycholinguistics in Flanders, Ghent, Belgium. May, 2010.
- Piai, V.,** Roelofs, A., & Schriefers, H. [talk] Still semantic interference with distractor masking. Presentation to the Workshop on Competition Effects in Language Production, Nijmegen, the Netherlands. March, 2010.
- Piai, V.,** Roelofs, A., & Schriefers, H. [talk] No semantic interference in delayed naming. Presentation to the Workshop on Competition Effects in Language Production, Nijmegen, the Netherlands. March, 2010.
- Piai, V.,** Bastiaansen, M., & Schreuder, R. [talk] Comprehending Particle Verbs: an EEG approach. 30th TABU Dag. The Netherlands, 2009.
- Piai, V.** & Kuperman, V. [talk] Visual processing of Dutch Phrasal Verbs: An Experimental Approach. Presentation to the Dutch Linguistic Society, Utrecht, the Netherlands. February, 2008.

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## Invited Talks

- 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. 2017.
- Context-driven word production. Department of Neuropsychology, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany. October, 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. Radboud Summer School. 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. Bergen 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.

Comprehending particle verbs. Experimental Linguistics Talks Utrecht, Utrecht, The Netherlands. September, 2009.

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<b>Teaching and Supervision</b>	<b>Undergraduate and Graduate Programme in Neuroscience</b> <i>University of California, Berkeley</i> Co-supervisor for thesis of PhD students and Honors undergraduate student; supervision of undergraduate students	2014-present
	<b>Bachelor's Programme in Psychology</b> <i>Radboud University Nijmegen</i> Instructor for Applied Research Methods in Brain Studies, Health Psychology, Introduction to Brain Studies, Introduction to General Psychology, Theoretical Psychology	2010-2013
	<b>Bachelor's Programme in Artificial Intelligence</b> <i>Radboud University Nijmegen</i> Supervisor for Bachelor's student's thesis	2012-2013
	<b>Research Master's Programme Cognitive Neuroscience</b> <i>Radboud University Nijmegen</i> Co-supervisor for Master's students' theses	2009-2011

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<b>Professional Activities</b>	<b>Co-facilitator for Aphasia Stroke Support Group</b> <i>Veterans Affairs Hospital, Martinez, California</i>	2014-present
	<b>Organiser of the Language Division Meetings</b> <i>Radboud University Nijmegen, Donders Centre for Cognition</i>	2010-2013
	<b>Co-organiser of Psycholinguistics in Flanders Meeting</b> <i>Nijmegen, the Netherlands</i>	2012
	<b>Ad-hoc Reviewer</b> BMC Psychology; Brain and Language; Brain Topography; Cerebral Cortex; Cognition; Collabra; Emotion; Frontiers in Human Neuroscience; Frontiers in Language Sciences; Human Brain Mapping; Journal of Experimental Psychology: Human Perception and Performance; Journal of Experimental Psychology: Learning, Memory, and Cognition; Journal of Neurolinguistics; Journal of Neuroscience; Language and Cognitive Processes; Language and Speech; Language, Cognition and Neuroscience; PLoS ONE; PNAS; Psychonomic Bulletin and Review; Quarterly Journal of Experimental Psychology	2012-present

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<b>Other Professional Experience</b>	<b>Language Instructor for Portuguese, Dutch and English</b> <i>'s-Hertogenbosch, Utrecht, Nijmegen, the Netherlands</i>	2002-2012
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**Language Instructor for Portuguese and English** 2004-2007  
*Stoffels Talen, Nijmegen; Eurolinguist, Nijmegen; Talent Talen, Utrecht; Bogaers  
Taleninstituut, Tilburg, the Netherlands*

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**Volunteer  
Activities**

**Supervisor for “Adolescents in Discovering Science” Programme** 2008  
*De Jonge Akademie On Wheels, the Netherlands*

**Translator for Dutch and Portuguese** 2004-2007  
*Liliane Fonds, ‘s-Hertogenbosch, the Netherlands*

**Aide for mentally and physically disabled** 2001-2003  
*MEE, ‘s-Hertogenbosch, the Netherlands*

**Music teacher for low-income Brazilian children** 1997-1999  
*Gotas de Flor com Amor, São Paulo, Brazil*

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**Certificates**

**Dutch University Teaching Qualification** 2013  
*Radboud University Nijmegen*

Proof of didactic competence for lecturers in academic education

**Certificate of Proficiency in Italian** 2004  
*Italian Institute of Culture, Amsterdam, the Netherlands*

**Certificate of Proficiency in Dutch (NT2.2)** 2002  
*Tilburg, the Netherlands*

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