

# Toms Voits

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## Areas of interest and specialisation

**Interests:** Neuro-/psycholinguistics; neuroscience of language; bilingualism; executive functions  
**Specialisation:** Cognitive and neural consequences of bilingualism; aging.

## Appointments

- 2020-present **Postdoctoral research fellow.** AcqVA Aurora centre, UiT the Arctic University of Norway
- 2015-2017 **Teaching fellow.** University of Latvia, Riga Medical College

## Education

- 2020 PhD in Psycholinguistics, University of Reading, United Kingdom  
Project title: *Bilingualism as a neuroprotective factor in ageing: Insights from healthy and clinical populations*  
Supervisors: Dr. Christos Pliatsikas, Dr. Holly Robson, Prof. Jason Rothman
- 2014 MSc in Neuroscience, Language, and Communication, University College London, United Kingdom  
Project title: *Discourse-related word order variation in Latvian*  
Supervisor: Dr. Hans van de Koot
- 2013 BSc in Neuroscience with Cognitive Science, University of Sussex, United Kingdom  
Project title: *Examining the relationship between functional synaptic vesicle pool fractional size, release probability and pharmacological modulators in hippocampal cultured neurons*  
Supervisor: Dr. Kevin Staras

## Publications

### JOURNAL ARTICLES

- in prep **Voits, T., DeLuca, V. & Abutalebi, J.** (in prep.) A lifetime of experiences and bilingualism: Bridging across disciplines for a more nuanced appreciation of reserve contributors.

- Voits, T.,** Rothman, J., Robson, H., Calabria, M., Marín Marín, L., Costumero, V., Aguirre, N., & Pliatsikas C. (in prep.) Bilingualism-related neural adaptations in Mild Cognitive Impairment patients are modulated by language experiences.
- Gallo, F., DeLuca, V., Prystauka, Y., Rothman, J., **Voits, T.** & Abutalebi, J. (in prep.) The Case of Bilingualism as a Factor for Increased Healthy (Cognitive/Brain) Life Expectancy
- submitted DeLuca, V. & **Voits, T.** (under review) Bilingual experience affects white matter integrity across the lifespan. *Neuropsychologia*.
- Voits, T.,** Robson, H., Rothman, J., & Pliatsikas, C. (under review) The effects of bilingualism on the structure of the hippocampus and on memory performance in ageing bilinguals. *Brain Structure and Function*. Preprint available on PsyArXiv. DOI: [10.31234/osf.io/8hcxz](https://doi.org/10.31234/osf.io/8hcxz)
- 2021 Pliatsikas, C., Ansaldo, A.I., & **Voits, T.** (2021) Bilingualism and the declining brain. *Linguistic Approaches to Bilingualism* 11(4), pp.453-458. ISSN 1879-9272. DOI:[10.1075/lab.00031.int](https://doi.org/10.1075/lab.00031.int)
- Pliatsikas, C., Soares, S.M.P., **Voits, T.**, DeLuca, V., & Rothman, J. (2021) Long-term cognitively challenging experiences modulate metabolite concentrations in the healthy brain: the case of bilingualism. *Scientific Reports* 11, 7090. DOI:[10.1038/s41598-021-86443-4](https://doi.org/10.1038/s41598-021-86443-4)
- 2020 **Voits, T.,** Pliatsikas, C., Robson, H., & Rothman, J. (2020) Beyond Alzheimer's disease: Can bilingualism be a more generalized protective factor in neurodegeneration? *Neuropsychologia* 147, 107593. DOI: [10.1016/j.neuropsychologia.2020.107593](https://doi.org/10.1016/j.neuropsychologia.2020.107593)
- Pliatsikas, C., DeLuca, V. & **Voits, T.** (2020) The many shades of bilingualism: language experiences modulate adaptations in brain structure. *Language Learning*. ISSN 0023-8333. DOI: [10.1111/lang.12386](https://doi.org/10.1111/lang.12386)
- 2016 Kauliņa, A., Voita, D., Trubina, I. & **Voits, T.** (2016) Children with Special Educational Needs and Their Inclusion in the Educational System: Pedagogical and Psychological Aspects. *Signum Temporis* 8(1): 37-42. DOI: [10.1515/sigtem-2016-0015](https://doi.org/10.1515/sigtem-2016-0015)
- 2014 **Voits, T.** (2014) Discourse-related word order variation in Latvian. *Valoda: Nozīme un Forma* 5, 144-156. Rīga: LU Akadēmiskais apgāds. Available for download from the [University of Latvia repository](https://www.repository.lu.lv/).

#### BOOK CHAPTERS

- in prep Rossi, E., DeLuca, V. & **Voits, T.** (in prep) Using structural neuroimaging to investigate L2. In Morgan-Short, K. & van Hell, J. (Eds.) *The Routledge Handbook of Second Language Acquisition and Neurolinguistics*.
- under review **Voits, T.** (under review) Role of bilingualism in neurodegenerative disease II: Beyond Alzheimer's. In Anderson J., Grundy J. & Luk G. (Eds.) *Understanding Language and Cognition through Bilingualism*. Studies in Bilingualism. Amsterdam, The Netherlands: John Benjamins publishing company

#### BOOKS

- under contract Rothman, J., DeLuca, V., Pereira Soares, S.M., & **Voits, T.** (under contract). *Bilingualism and the Brain: Experience and Neuroplasticity*. Cambridge, UK: Cambridge University Press

#### EDITORIAL WORK

- in prep Rothman, J., DeLuca, V., Luque, A., Prystauka, Y. & **Voits, T.** (in prep) Cognitive Neuroscience Perspectives on Language Acquisition and Processing. Special issue of *Brain Sciences*
- 2021 Pliatsikas C., Ansaldo, A., & **Voits, T.** (2021): Bi-Multilingualism and the Declining brain. Special issue of *Linguistic Approaches to Bilingualism* 11:4. DOI: [10.1075/lab.11.4](https://doi.org/10.1075/lab.11.4)

## Presentations

### CONFERENCE PRESENTATIONS

- 2021 DeLuca, V. & **Voits, T.** Bilingualism affects white matter integrity across the lifespan. Talk presented at: New Approaches to Bilingualism and Multilingualism and Language Learning/Teaching Conference (BiMuLT), University of Cyprus, Cyprus (online; 20-21 November, 2021)
- DeLuca, V. & **Voits, T.** Bilingualism affects white matter integrity across the lifespan. Talk presented at: Society for the Neurobiology of Language virtual meeting. (online; 5-8 October, 2021)
- Voits, T.**, Rothman, J., Robson, H., Calabria, M., Marín Marín, L., Costumero, V., Aguirre, N., & Pliatsikas C. Bilingualism-related neural adaptations in Mild Cognitive Impairment patients are modulated by language experiences. Talk presented at: International Symposium on Bilingualism 13, University of Warsaw, Poland. (online; 10-14 July 2021)
- 2020 **Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. The effects of bilingualism on the structure of the hippocampus and on memory performance in ageing bilinguals. Poster presented at: Conference on Multilingualism (COM2020), University of Reading, United Kingdom. (online; 23-25 June 2020)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. The effects of bilingualism on the structure of the hippocampus and on memory performance in ageing bilinguals. Talk presented at: Experimental Psychology Society meeting, University College London, United Kingdom. (8-10 January 2020)
- 2019 Soares, S.M.P., **Voits, T.**, DeLuca, V., Pliatsikas, C., Rothman, J., Christakou, A., & Bialystok, E. Beyond structure: Investigating neurochemical bases for bilingualism-induced neural plasticity. Talk presented at: AMLaP 2019 satellite symposium 'Bilingualism and Cognition'. (5 September 2019)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. Bilingualism as a source of brain structure variability in ageing: an MRI study. Poster presented at: AMLaP 2019 satellite symposium 'Bilingualism and Cognition'. (5 September 2019)
- Soares, S.M.P., **Voits, T.**, DeLuca, V., Pliatsikas, C., Rothman, J., Christakou, A., & Bialystok, E. Beyond structure: Investigating neurochemical bases for bilingualism-induced neural plasticity. Talk presented at: Capturing and Quantifying Individual Differences in Bilingualism workshop, UiT, The Arctic University of Norway, Norway. (2-3 September 2019)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. Bilingualism as a source of brain structure variability in ageing: an MRI study. Poster presented at: Capturing and Quantifying Individual Differences in Bilingualism workshop, UiT, The Arctic University of Norway, Norway. (2-3 September 2019)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. The Cognitive and Neurological Effects of Bilingualism on Healthy Ageing. Poster presented at: International Symposium for Bilingualism 12, University of Alberta, Canada. (23-28 June 2019)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. Beyond Dementia: Bilingualism and Neurodegenerative Diseases. Talk presented at: Language Studies PhD Conference 2019, University of Reading, United Kingdom. (25 March 2019)
- 2018 **Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. Beyond Dementia: Bilingualism and Neurodegenerative Diseases. Poster presented at: Cognitive Neuroscience of Second and Artificial Language Learning (CoNSALL) meeting, Bangor University, United Kingdom. (21-23 September 2018)
- Voits, T.**, Robson, H., Rothman, J., & Pliatsikas C. Beyond Dementia: Bilingualism and Neurodegenerative Diseases. Poster presented at: Society for the Neurobiology of Language 10th annual meeting, Québec City, Canada. (16-18 August 2018)

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** Cognitive and neurological effects of bilingualism in healthy ageing and dementia. Talk presented at: Oxford Dementia Research Day 2018, University of Oxford, United Kingdom (12 July 2018)

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** Cognitive and neurological effects of bilingualism on the progression of dementia: a longitudinal study. Talk presented at: Reading - Southampton - Portsmouth PhD research day, University of Reading, United Kingdom (17 May 2018)

2015 **Voits T.** Discourse-Related Word Order Variation in Latvian. Paper presented at: Academia Salensis. 'Argument Realization and Clausal Architecture in Baltic (ARCAB)'. Salos, Lithuania. (26 July - 2 August 2015)

#### INVITED TALKS

2021 **Voits, T.** Bilingualism as a neuroprotective factor in aging: Insights from healthy and clinical populations. Talk presented at: Bilingualism and Aging lab, University of Groningen, the Netherlands (online; 16 November 2021)

DeLuca, V., **Voits, T.** & Rothman, J. Neurocognitive effects of bilingual experience. Talk presented at: Language Technology and Data Analysis Laboratory, The University of Queensland, Australia (online; 28 July 2021)

Vincent DeLuca, Jason Rothman & **Voits, T.** A tale of two spectra: Language experiences and neurocognitive adaptations. Talk presented at the University of Leiden, the Netherlands. (online; 18 March 2021)

Pliatsikas, C., Soares, S.M.P., **Voits, T.**, DeLuca, V., & Rothman, J. Bilingualism modulates metabolite concentrations in the healthy brain. Talk presented at University of California, Irvine, USA. (online; 8 Feb 2021)

2020 **Voits, T.** Bilingualism as a neuroprotective factor in aging: Insights from healthy and clinical populations. Talk presented at Bilingualism research group, University of Edinburgh, United Kingdom. (online; 16 November 2020)

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** Bilingualism as a source of brain structure variability in ageing: an MRI study. Talk presented at the University of Birmingham, United Kingdom. (17 March 2020) \*Cancelled due to COVID-19 outbreak

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** Bilingualism as a source of brain structure variability in ageing: an MRI study. Talk presented at UiT, the Arctic University of Norway, Tromsø, Norway. (5 March 2020)

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** Effects of bilingualism on healthy ageing and dementia. Talk presented at The Association for Science Education Annual conference, University of Reading, United Kingdom. (11 January 2020)

2018 **Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** The cognitive and neurological effects of bilingualism on healthy ageing and dementia: Study design. Talk presented at McGill University, Canada. (21 August 2018)

**Voits, T., Robson, H., Rothman, J., & Pliatsikas C.** The cognitive and neurological effects of bilingualism on the progression of dementia: Study design. Talk presented at the University of Sussex, United Kingdom. (11 June 2018)

## Public outreach

2020 'Effects of bilingualism on healthy aging and dementia'. Public event by Alzheimer's Research UK Oxford Network, John Radcliffe Hospital, Oxford, United Kingdom. (online; 20 October 2020)

2019 'Learning languages for a healthy brain'. Public event held by the Centre for Literacy and Multilingualism, University of Reading, United Kingdom, for the International Mother Tongue Day 2019. (21 February 2019)

## Funding & Grants

2019 CQIDB travel grant, UiT, The Arctic University of Norway (NOK 5,000)  
University of Reading Graduate School Travel Support Scheme (£300)  
University of Reading Centre for Literacy and Multilingualism Conference Funds (£600)

2018 University of Reading Research Travel Grant (£550)  
Alzheimer's Research UK Travel Grant (£250)

2017-2020 University of Reading Anniversary Studentship (£30,000 stipend; £3,000 training and development allowance; ~£13,500 tuition fees)

## Awards & Honours

2020 Fairbrother Lecture, University of Reading.  
*The Fairbrother Lecture is a prestigious annual event where a single doctoral researcher from the University is selected to present their research to the general public.*

## Other output (non peer-reviewed)

2018 Pliatsikas, C., DeLuca, V. & Voits, T. (2018): A conversation with the Bilingualism in the Brain Lab on YouTube: <https://www.youtube.com/watch?v=PgGa5wfb5BU>

## Teaching

UNIVERSITY OF READING, 2018 - 2020

Medicine 1. Introduction to Medicine (MSci and MSc in Speech and Language Therapy). Lectures. Research Methods (BSc in Psychology). Seminars.

UNIVERSITY OF LATVIA, RIGA MEDICAL COLLEGE, 2015 - 2017

Anatomy and Physiology (Professional Diploma in Nursing). Lectures and Seminars.  
Research Methods (Professional Diploma in Nursing). Lectures and Seminars.

## Relevant training

2019 Statistics for linguists in R. University of Reading, United Kingdom. (3-6 June 2019)

- 2018 Statistics for linguistics with R. University of Reading, United Kingdom. (18-22 June 2018)  
 Introduction to Bayesian statistics and Monte Carlo methods. University of Reading, United Kingdom. (4 June 2018)  
 FSL Course, University of Oxford, United Kingdom. (9-13 April 2018)
- 2017 Preparing to Teach. Reading Researcher Development Programme. University of Reading, United Kingdom. (16 November 2017)  
 Introduction to Good Clinical Practice eLearning (Secondary Care). (23 October 2017)
- 2015 Good Clinical Practice (ICH-GCP) certification, Riga, Latvia. (24 September 2015)
- 2014 Advanced Core Training in Linguistics (ACTL) Summer School, University College London, United Kingdom. (23-27 June 2014)

## Service to the profession

- 2021-present Review editor at *Frontiers in Psychology, Language Sciences*

### JOURNALS REVIEWED IN

- Brain Research (2021)  
 Journal of Alzheimer's Disease (2021)  
 Bilingualism: Language and Cognition (2021; 2020)  
 Neurobiology of Language (2021)  
 Scientific Reports (2021)  
 Journal for Neurolinguistics (2020)  
 Neurobiology of Aging (2019)  
 International Journal of Bilingualism (2019)

### GRANT EVALUATOR

- National Science Foundation (NSF) (2021)

### MEMBERSHIP OF COMMITTEES RELEVANT TO RESEARCH

- Member of the Society for the Neurobiology of Language (2021)  
 Member of board at Bilingualism Matters network Tromsø branch (Flere språk til flere) (2021)  
 Member of the Centre for Literacy and Multilingualism Steering Committee, University of Reading (2019-2020)

## Skills

**Software:** R, R Studio, SPSS, E-Prime, L<sup>A</sup>T<sub>E</sub>X, FSL, SPM

**Languages:** Latvian (native), English (advanced), Russian (upper-intermediate), Norwegian (beginner)

## References

Upon request