

## **Maria Varkanitsa, PhD**

### **Assistant Scientific Director | Research Assistant Professor**

Center for Brain Recovery

Boston University

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### **Academic Appointments**

<b>2022 – Present</b>	Research Assistant Professor, Boston University
<b>2017 – 2020</b>	Adjunct Tutor, Hellenic Open University
<b>2016 – 2017</b>	External Examiner, Canterbury Christ Church University
<b>2012 – 2015</b>	Post-graduate Teaching Assistant, University College London

### **Education**

<b>2015</b>	PhD in Linguistics, University College London Dissertation: Processing of syntactic dependencies in agrammatism: The role of predictability
<b>2010</b>	MSc in Neuroscience, Language and Communication, University College London Dissertation: Quantitative and error analysis of connected speech: Evidence from Greek-speaking patients with aphasia and normal speakers
<b>2008</b>	MA in Linguistics, National and Kapodistrian University of Athens Dissertation: Negotiation of meaning and vocabulary acquisition in L1: A case study
<b>2005</b>	BSc in Greek Literature (major in Linguistics), National and Kapodistrian University of Athens

### **Postdoctoral Training**

<b>2019 – 2022</b>	Postdoctoral Research Associate, Aphasia Research Laboratory, Boston University
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### **Awards & Honors**

<b>2023</b>	Alzheimer's Disease Research Center Development Grant, Boston University
<b>2019</b>	Dudley Allen Sargent Research Fund award, Boston University
<b>2014</b>	Travel Award for presenting in the Annual Meeting of the Linguistic Association of Great Britain, University College London
<b>2013</b>	Travel Award for presenting in the Annual Meeting of the Linguistic Association of Great Britain, University College London
<b>2013</b>	Travel Award for presenting in the 51st Annual Meeting of the Academy of Aphasia, University College London
<b>2012</b>	Travel Award for presenting in the 50th Annual Meeting of the Academy of Aphasia, University College London

<b>2012</b>	Travel Award for presenting in the 13th Science of Aphasia International Conference, University College London
<b>2012 – 2014</b>	Scholarship, Alexander S. Onassis Public Benefit Foundation
<b>2011 – 2014</b>	Scholarship, A.G. Leventis Foundation
<b>2009 – 2012</b>	Scholarship, Greek State Scholarship Foundation

### **Teaching Qualifications**

<b>2014</b>	Associate Fellow of the Higher Education Academy (HEA)
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### **Teaching Experience**

<b>2022</b>	Cognition & Neural Bases, Boston University
<b>2017 – 2020</b>	Academic and research skills in Linguistics, Hellenic Open University
<b>2017 – 2020</b>	Language processing, Hellenic Open University
<b>2012 – 2015</b>	Syntax I, University College London
<b>2012 – 2015</b>	Neurolinguistics, University College London
<b>2014 – 2015</b>	Introduction to children's language development, University College London
<b>2012 – 2013</b>	Language Disorders: Topics in aphasia & dementia

### **Research Supervision & Mentorship**

<b>2023 – present</b>	Supervising MSc student, Jadelyn Kurtz, MSc in Speech-Language Pathology, Boston University Thesis Title: Examining the relationship between theory of mind deficits, aphasia severity, and cerebral small vessel disease in individuals with post-stroke aphasia
<b>2021 – 2023</b>	Supervised MSc student, Kateri Killelea, MSc in Speech-Language Pathology, Boston University Thesis Title: Investigating the relationship between white matter integrity and linguistic and non-linguistic cognition in individuals with chronic aphasia. Successfully defended thesis in 2023, leading to a travel award for a poster presentation at the 62 <sup>nd</sup> Annual Meeting of the Academy of Aphasia
<b>2020 – 2022</b>	Supervised MSc student, Sophie Blankenheim, MSc in Speech-Language Pathology, Boston University Thesis Title: Semantic processing in bilingual people with aphasia: An eye-tracking study looking at semantic facilitation and interference. Successfully defended thesis in 2022, leading to a travel award for a poster presentation at the 61 <sup>st</sup> Annual Meeting of the Academy of Aphasia

### **Professional Memberships**

<b>2023 – present</b>	Member, Academy of Aphasia
<b>2016 – 2020</b>	Member, Society for the Neurobiology of Language

2012 – 2015

Member, Linguistic Association of Great Britain

### **Editorial & Review Activities**

- **Reviewer** for international scientific journals, including: *Aphasiology*, *Brain*, *Brain Communications*, *Neuropsychological Rehabilitation*, *Frontiers in Human Neuroscience*, *Frontiers in Neurology*, *International Journal of Speech-Language Pathology*, *Neurology*
- **Reviewer / member of the scientific committee** of the 2nd UCL Graduate Conference in Linguistics, November 12-13, 2015, Research Department of Linguistics, University College London, London, UK.
- **Editor** of UCL Working Papers in Linguistics, Vol. 24

### **Publications**

#### **Peer-Reviewed Journal Articles**

- \*Falconer, I., \***Varkanitsa, M.**, & Kiran, S. (2024). Resting-state brain network connectivity is an independent predictor of responsiveness to language therapy in chronic post-stroke aphasia. *Cortex*, 173, 296-312.
- **Varkanitsa, M.**, Peñaloza, C., Charidimou, A., & Kiran, S. (2023). Cerebral small vessel disease burden: An independent biomarker for anomia treatment responsiveness in chronic stroke patients with aphasia. *Archives of Physical Medicine and Rehabilitation*, 104(10), 1630-1637.
- **Varkanitsa, M.**, Godecke, E., & Kiran, S. (2022). How much attention do we pay to attention deficits in poststroke aphasia? *Stroke*, 54, 55-66.
- **Varkanitsa, M.** & Kiran, S. (2022). Understanding, facilitating and predicting aphasia recovery after rehabilitation. *International journal of speech-language pathology*, 1-12.
- Billot, A., Lai, S., **Varkanitsa, M.**, Braun, E.J., Rapp, B., Parrish, T.B., Higgins, J., Kurani, A.S., Caplan, D., Thompson, C.K., Ishwar, P., Betke, M. & Kiran, S. (2022). Multimodal neural and behavioral data predict response to rehabilitation in chronic post-stroke aphasia. *Stroke: STROKEAHA.121.036749*.
- **Varkanitsa, M.**, Peñaloza, C., Charidimou, A., Caplan, D., & Kiran, S. (2020). White matter hyperintensities predict response to language treatment in poststroke aphasia. *Neurorehabilitation and Neural Repair*, 34(10): 945-953.
- \*Kasselimis, D., \***Varkanitsa, M.**, Angelopoulou, G., Evdokimidis, I., Goutsos, D., & Potagas, C. (2020). Word error analysis in aphasia: Introducing the Greek aphasia error corpus (GRAEC). *Frontiers in Psychology*, 11(August): 1–8.
- **Varkanitsa, M.**, Kasselimis, D., Boulouis, G., Fugard, A. J. B., Evdokimidis, I., Druks, J., Potagas, C., & Van de Koot, H. (2019). Verbal memory and sentence comprehension in aphasia: A case series. *Neurocase*, 25(5): 169–176.
- **Varkanitsa, M.** & Caplan, D. (2018). On the association between memory capacity and sentence comprehension: Insights from a systematic review and meta-analysis of the aphasia literature, *Journal of Neurolinguistics*, 48: 4–25.
- Angelopoulou, G., Kasselimis, D., Makrydakis, G., **Varkanitsa, M.**, Roussos, P., Goutsos, D., Evdokimidis, I. & Potagas, C. (2018). Silent pauses in aphasia. *Neuropsychologia*, 114: 41-49.

- **Varkanitsa, M.**, Kasselimis, D., Fugard, A.J.B, Evdokimidis, I., Druks, J., Potagas, C. & Van de Koot, H. (2016). Syntactic predictions and asyntactic comprehension in aphasia: Evidence from scope relations. *Journal of Neurolinguistics*, 40: 15-36.
- Charidimou, A., Kasselimis, D., **Varkanitsa, M.**, Selai, C., Potagas, C. & Evdokimidis, I. (2014). Why is it difficult to predict language impairment and outcome in patients with aphasia after stroke? *Journal of Clinical Neurology*, 10(2): 75-83.

## Book Chapters

- Kiran, S., **Varkanitsa, M.**, Billot, A., Carpenter, E. & Falconer, I. (in press). Individual differences in neuroplastic recovery. *Encyclopedia of the human brain*, 2nd edition, Elsevier.
- **Varkanitsa, M.**, Kiran, S., & Willmes, K. (2023). Measures of language and communication. *The SAGE Handbook of Clinical Neuropsychology* (2 Vols.; Editor: Greg Boyle).
- Kasselimis, D.S., **Varkanitsa, M.** (2015). Neurological Approaches to Agrammatism. In: James D. Wright (editor-in-chief), *International Encyclopedia of the Social & Behavioral Sciences*, 2nd edition, Vol 16. Oxford: Elsevier. pp. 690–697.
- **Varkanitsa, M.** (2012). Quantitative and error analysis of connected speech: Evidence from Greek-speaking patients with aphasia and normal speakers. In Fragaki, G., Georgakopoulos, A. & Themistocleous, C. (eds), *Current Trends in Greek Linguistics*. Cambridge: Cambridge Scholars Publishing. pp. 313-338.
- Goutsos, D., Potagas, C., Kasselimis, D., **Varkanitsa, M.** & Evdokimidis, I. (2011). Studying paraphasias in the Corpus of Greek Aphasic Speech. In Potagas, C. & Evdokimidis, I. (eds), *Speech and Memory*. Athens: Synapsis. pp. 23-59. (in Greek)

## Conference Proceedings

- Chennuri S., Billot A., Lai S., **Varkanitsa, M.**, Braun, E., Venkataraman, A. Konrad, J., Kiran S. Ishwar P., Betke M., (2023). Fusion approaches to predict post-stroke aphasia recovery from multimodal neuroimaging data. *International Conference on Computer Vision, Computer Vision for Automated Medical Diagnosis (ICCV-CVAMD) Workshop 2023*
- Gu, Y., Bahrani, M., Billot, A., Lai, S., Braun, E.J., **Varkanitsa, M.**, Bighetto, J. Rapp, B., Parrish, T.B., Caplan, D. Thompson, C.K., Kiran S. & Betke, M. (2020). A Machine Learning Approach for Predicting Post-stroke Aphasia Recovery: A Pilot Study. *Association for Computing Machinery (ACM) Conference on PErvasive Technologies Related to Assistive Environments (PETRA '20)*, June 30-July 3, 2020, Corfu, Greece. 9 pp.
- **Varkanitsa, M.** & Caplan, D. (2017). New patterns of eye fixations in sentence comprehension in aphasia. Academy of Aphasia – 55th Annual Meeting, November 5-7 2017, Baltimore MD, USA. Available in *Frontiers in Psychology*, doi: 10.3389/conf.fnhum.2017.223.00017
- Angelopoulou, G., **Varkanitsa, M.**, Kasselimis, D., Makrydakis, G., Tsolakopoulos, D., Roussos, P., Goutsos, D., Evdokimidis, I., Potagas, C. (2017). Let silence speak about aphasia: possible associations between pause and language related cognitive processes. Academy of Aphasia – 55th Annual Meeting, November 5-7 2017, Baltimore MD, USA. Available in *Frontiers in Psychology*, doi: 10.3389/conf.fnhum.2017.223.00127
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2014). Phonological Working Memory limitations and agrammatism: Is there a causal relationship between the two?

Academy of Aphasia – 52nd Annual Meeting, October 5-7, 2014, Miami, FL, USA. Available in *Frontiers in Psychology*, doi: 10.3389/conf.fpsyg.2014.64.00081.

- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2013). Processing of Contrastive Focus in Agrammatism: The role of predictability. Academy of Aphasia – 51st Annual Meeting, October 20-22, 2013, Lucerne, Switzerland. Available in *Procedia – Social and Behavioral Sciences*, 16, 177-178.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Evdokimidis, I., Druks, J. & Van de Koot, H. (2012). Processing of covert scope inversion in Broca’s aphasia. Academy of Aphasia – 50th Annual Meeting, October 28-30, 2012, San Francisco, CA, USA. Available in *Procedia – Social and Behavioral Sciences*, 18, 277 – 278.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Evdokimidis, I., Van de Koot, H. & Druks, J. (2012). Is covert A’-movement available in agrammatic Broca’s aphasia? Evidence from scope ambiguity. 13th Science of Aphasia International Conference, September 7-12, 2012, University of Groningen, Groningen, The Netherlands. Available in *Stem- Spraak- en Taalpathologie*, 18, 124 – 127.
- Druks, J., **Varkanitsa, M.**, Kasselimis, D., Potagas, C. & Evdokimidis, I. (2011). Quantitative analysis of connected speech in aphasia: Insights from Greek-speaking patients with fluent and non-fluent types of aphasia. Academy of Aphasia – 49th Annual Meeting, October 16-18, 2011, Montreal, Canada. Available in *Procedia – Social and Behavioral Sciences*, 23, 125 – 126.
- Goutsos, D., Potagas, C., Kasselimis, D., **Varkanitsa, M.** & Evdokimidis, I. (2011). The corpus of Greek Aphasic Speech: Design and compilation. In Pastor, M.L.C. & Mora, M.A.C. (eds.), *Actas del III congreso internacional de lingüística de corpus* (pp 77-86). AELINCO, Valencia.
- **Varkanitsa, M.** (2009). Negotiation of meaning and vocabulary acquisition in L1: A case study. 5th Athens Postgraduate Conference, May 29-31, 2009, Athens. Available in *Proceedings of the 5th Athens Postgraduate Conference of the Faculty of Philology*, National and Kapodistrian University of Athens. (in Greek)

## **Conference Presentations**

- Peñaloza, C., **Varkanitsa, M.**, Charidimou, A., Dacosta-Aguayo, R., Erickson, K.I., & Mataró, M. (2024). Enlarged Perivascular Spaces: A Neural Biomarker Moderating the Association Between Cardiorespiratory Fitness and Cognition in Neurotypical Older Adults. *International Neuropsychological Society Meeting*, July 3-5, Porto, Portugal.
- **Varkanitsa, M.**, Penaloza, C., Falconer, I., Charidimou, A., & Kiran, S. (2023). Brain health and aphasia recovery: The role of cerebral small vessel disease and integrity of functional networks. *61st Annual Meeting of the Academy of Aphasia*, October 21-23, Reading, England.
- **Varkanitsa, M.**, Falconer, I. & Kiran, S. (2022). Pre-treatment resting-state functional connectivity in non-language specific brain networks predict naming therapy outcomes in chronic aphasia. *51st Clinical Aphasiology Conference*, 17-21 May, Wrightsville Beach, North Carolina.
- **Varkanitsa, M.**, Peñaloza, C., Charidimou, A., Caplan, D. & Kiran, S. (2021). Cerebral small vessel disease burden: A biomarker for post-stroke aphasia recovery. *59th Annual Meeting of the Academy of Aphasia*, October 24-26, Virtual.
- Falconer, I., **Varkanitsa, M.** & Kiran, S. (2021). Pre-treatment graph measures of resting-state functional connectivity predict language treatment outcome in aphasia. *13th Annual Meeting of the Society for the Neurobiology of Language*, October 5-8, Virtual.
- Billot A., Lai S., **Varkanitsa M.**, Braun E. J., Gu Y., Bahrani M., Bighetto J., Rapp B., Parrish T. B., Caplan D., Thompson C. K., Ishwar P., Betke M. & Kiran S (2020). Predicting post-stroke aphasia

recovery from multimodal neuroimaging data. *11th World Congress for Neurorehabilitation*, October 7-11, Virtual Conference.

- **Varkanitsa, M.**, Meier, E., Pan, Y., Caplan, D. & Kiran, S. (2018). Neural correlates of automatic semantic priming revealed by an event-related fMRI. *10th Annual Meeting of the Society for the Neurobiology of Language*, August 16-18, 2018, Québec City, Canada.
- Angelopoulou G., Kiran, S., Kasselimis, D., **Varkanitsa, M.**, Meier, E. Pan, Y., Tsolakopoulos, D., Themistocleous, C., ... Potagas, C. (2018). Pause patterns and speech errors in stroke patients with aphasia: cross-linguistic evidence from narrative speech. *48th Clinical Aphasiology Conference*, May 22-26, 2018, Texas, USA.
- **Varkanitsa, M.** & Caplan, D. (2017). Similarity-based interference effects in reflexive binding: Empirical evidence from aphasia. *9th Annual Meeting of the Society for the Neurobiology of Language*, November 8-10 2017, Baltimore MD, USA.
- Angelopoulou, G., Kasselimis, D., **Varkanitsa, M.**, Fotiadis, P., Themistocleous, C., Tsolakopoulos, D., Grillou, C., Christidi, F., Karavasilis, E., Argiropoulos, G., Velonakis, G., Karanassou, S., Nikitopoulou, Z., Roussos, P., Goutsos, D., Kelekis, N., Evdokimidis, I. & Potagas, C. (2017). Effects of cortical thickness on pause duration in neurotypical adults' speech: Evidence for the role of the left middle temporal gyrus in lexical retrieval. *9th Annual Meeting of the Society for the Neurobiology of Language*, November 8-10 2017, Baltimore MD, USA.
- **Varkanitsa, M.**, Staub, A., Michaud, J. & Caplan, D. (2017). Relation of eye movement patterns and cognitive capacity to sentence comprehension. *30th Annual CUNY Conference on Human Sentence Processing*, March 30 – April 1 2017, MIT, Cambridge MA, USA
- Caplan, D., Staub, A., **Varkanitsa, M.**, Michaud, J. & Eddine, S. (2016). Relation of reading and eye fixation duration to sentence comprehension accuracy. *Psychonomics Society's 57th Annual Meeting*, November 17-20 2016, Boston, MA, USA
- **Varkanitsa, M.** (2016). On the association between memory capacity and sentence comprehension: Insights from a systematic review and meta-analysis of the aphasia literature. *8th Annual Meeting of the Society for the Neurobiology of Language*, August 17-20 2016, University College London, London, UK
- Angelopoulou G., Kasselimis D., Makrydakis G., **Varkanitsa, M.**, Roussos P., Goutsos D., Evdokimidis I., Potagas C. (2016). Pauses in Aphasia: A new approach of quantifying impaired speech output. *5th International Congress on Psychiatry and Neuroscience*, October 6-8, 2016, Athens, Greece.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2014). Scope preferences revisited. *Linguistic Association of Great Britain – Annual Meeting*, The Queen's College, University of Oxford, 1-5 September 2014, Oxford, UK.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2013). Working Memory and syntactic dependency resolution in Broca's aphasia. *Working Memory Resources in Language Processing and Acquisition Workshop*, September 27, 2013, Salerno, Italy.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2013). Syntactic dependency resolution in Broca's aphasia. *Linguistic Association of Great Britain – Annual Meeting*, August 28-31, SOAS, University of London, London, UK.
- **Varkanitsa, M.**, Kasselimis, D., Potagas, C., Druks, J. & Van de Koot, H. (2013). Memory deficits and 'asyntactic' comprehension in aphasia. *31st European Workshop on Cognitive Neuropsychology*, January 20-25, 2013, Bressanone, Italy.