CURRICULUM VITAE The Johns Hopkins University School of Medicine

June 1st, 2020 Kyrana Tsapkini, PhD

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

2020- present **Associate Professor**, Department of Neurology (primary appointment), Johns Hopkins University

School of Medicine, Baltimore, MD

Associate Professor, Department of Cognitive Science (joint appointment), Johns Hopkins 2020- present

University, Baltimore, MD

Personal Data

Department of Neurology

Johns Hopkins Medical Institutions

Phipps 488

600 North Wolfe Street Baltimore, MD 21287, USA Phone: (+) 1-410-614-2646 E-mail: tsapkini@jhmi.edu

Education and Training

Undergraduate

1992 **BA** in Psychology, Education and Philosophy with Major in Psychology, Faculty of Philosophy,

University of Thessaloniki, Greece

Graduate

1995-2001 MA in Psychology, Dartmouth College, Hanover, NH, USA

> PhD in Neuropsychology, Biomedical Sciences Program, Faculty of Medicine, Université de Montréal, Canada, directed by Prof. Gonia Jarema; Honors, highest distinction: upper 5% of the

Université de Montréal

Post-Doctoral

2001-2002 Postdoctoral fellow, Linguistics Department, Université du Québec à Montréal, UQAM, Canada,

under Prof. Anne-Marie DiSciullo, (Asymmetry Project Valorisation Recherche Québec)

Postdoctoral fellow, Montreal Neurological Institute, McGill University, Canada, under Prof. Alain 2002-2003

Ptito and Denise Klein, fMRI training for language research (Fonds de la Recherche en Sante Quebec,

FRSO)

Professional Experience

	1
1996-2001	Research Assistant, Université de Montréal, Canada. Responsibilities included neuropsychological
	testing of aphasic populations in Montreal, Canada, and in Thessaloniki, Greece, to fulfill the
	requirements of my PhD dissertation in standard neuropsychological and neurolinguistic batteries.
	Research was a component of the MCRI (Major Collaborative Research Initiative) Project (Social
	Sciences and Humanities Research Council of Canada Grant #412-95-0006 awarded to Gonia Jarema,
	Université de Montréal, Eva Kehayia, McGill University, and Gary Libben, University of Alberta).
2002 2000	Tankana in Name and damped and a first of December 1 and A sixt of Little and a first of The control of The con

Lecturer in Neuropsychology, Department of Psychology, Aristotle University of Thessaloniki, 2003-2009

Greece

	Greece
2005-2009	Assistant Research Scientist, Department of Cognitive Science, Johns Hopkins University
2009-2013	Research Associate, Department of Neurology, Johns Hopkins University School of Medicine
2013-2015	Instructor Department of Neurology Johns Hopkins University School of Medicine

Instructor, Department of Neurology, Johns Hopkins University School of Medicine 2013-2015

Assistant Professor of Neurology, Johns Hopkins University School of Medicine (primary) 2015-2020

Assistant Professor of Cognitive Science, Johns Hopkins University (joint) 2018-2020

Associate Professor of Neurology, Johns Hopkins University School of Medicine (primary) 2020-present

2020-present **Associate Professor** of Cognitive Science, Johns Hopkins University (joint)

PUBLICATIONS

Peer-Reviewed Original Research [OR] (mentees are underlined)

- 1. Jarema G, Busson C, Nikolova R, **Tsapkini K,** Libben G. Processing compounds: A cross-linguistic study. *Brain Lang.* 1999 Jun 1-15;68(1-2):362-369.
- 2. Kehayia E, Jarema G, **Tsapkini K**, Perlak D, Ralli A, Kadzielawa D. The role of morphological structure in the processing of compounds: interface between linguistics and psycholinguistics. *Brain Lang*. 1999 Jun 1-15;68(1-2):370-377.
- 3. **Tsapkini K,** Kehayia E, Jarema G. Does phonological change play a role in the recognition of derived forms across modalities? *Brain Lang.* 1999 Jun 1-15;68(1-2): 318-323.
- 4. **Tsapkini K** Jarema G, Kehayia E. Regularity revisited: Evidence from lexical access of verbs and nouns in Greek *Brain Lang.* 2002 Apr-Jun;81:103-119.
- 5. **Tsapkini K,** Jarema G, Kehayia E. Regularity re-revisited: Modality matters. *Brain Lang.* 2004 Jun;89;611-6
- 6. **Tsapkini K,** Jarema G, DiSciullo AM. The role of configurational asymmetry in the lexical access of prefixed verbs: Evidence from French. *Brain Lang.* 2004 Jul-Sep;90: 143-150.
- 7. Kosmidis ME, **Tsapkini K**, Folia V, Vlachou CH, Kiosseoglou G. Semantic and phonological processing in illiteracy. *J Internat Neuropsycholog Soc.* 2004 Oct;10:818-827.
- 8. <u>Ypsilanti A, Grouios G, Alevriadou A, **Tsapkini K**. Expressive and receptive vocabulary in children with Williams and Down syndromes. *J Intellect Disabil Res.* 2005 May;49(Pt 5):353-364.</u>
- 9. <u>Emmanuil A.</u> **Tsapkini K,** Rudolph J. Deep dyslexia in a language of shallow orthography: Evidence from Greek. *Hellenic J Psychol.* 2006;14:1-34. (*article in Greek*)
- 10. Kosmidis ME, **Tsapkini K**, Folia V. Lexical processing in illiteracy: Effect of literacy or education? *Cortex*. 2006 Oct;42(7):1021-1027.
- 11. **Tsapkini K**, Vivas A, Triarchou L. Does 'Broca's area exist?' Christofredo Jakob's 1906 response to Pierre Marie's holistic stance. *Brain Lang.* 2008 Jun;105(3):211-219.
- 12. <u>Andreou C, **Tsapkini K**</u>, Bozikas V, Giannakou M, Karavatos A, Nimatoudis I. Effects of sentence context on lexical ambiguity resolution in patients with schizophrenia. *Neuropsychologia*, 2009 Mar;47(4):1079-1087.
- 13. <u>Fyndanis V</u>, Varlokosta S, **Tsapkini K**. Integrating representational and processing accounts in agrammatic aphasia: Evidence from Greek verbal inflection. *J Neurolinguistics*. 2010;23:644-662.
- 14. **Tsapkini K**, Rapp B. The orthography-specific functions of the left fusiform gyrus: evidence of modality and category specificity. *Cortex.* 2010 Feb:46(2):185-205.
- 15. <u>Paraskevopoulos E</u>, **Tsapkini**, **K**, & Peretz, I. Cultural aspects of music perception: Validation of a Greek version of the Montreal Battery of Evaluation of Amusias. *J Int Neuropsychol Soc.* 2010 Jul;16(4):695-704.
- 16. **Tsapkini K**, Vlachou CH, Potagas C. Adaptation and validation of standardized aphasia tests in different languages: Lessons from the BDAE-Short Form in Greek. *Behav Neurol.* 2010;22(3-4):111-119.
- 17. Sepelyak K, Crinion J, Molitoris J, Epstein-Peterson Z, Bann M, Davis C, Newhart M, Heidler-Gary J, **Tsapkini** K, Hillis A. Patterns of breakdown in spelling in Primary Progressive Aphasia. *Cortex.* 2011 Mar;47(3):342-352.
- 18. **Tsapkini K**, Vindiola M, Rapp B. Patterns of brain reorganization subsequent to left fusiform damage: fMRI evidence form visual processing of words and pseudowords, faces and objects. *Neuroimage*, 2011 Apr 1;55:1357-1372
- 19. <u>Peristeri E</u>, **Tsapkini K**. A comparison of the BAT and the BDAE-SF batteries in determining the linguistic ability of Greek-speaking patients with Broca's aphasia. *Clin Linguist Phon.* 2011 Jun;25(6-7):464-479.
- 20. **Tsapkini K**, Frangakis C, Hillis AE. The function of the left anterior temporal lobe: evidence from acute stroke and infarct volume. *Brain*, 2011 Oct;134(Pt 10):3094-3105.
- 21. <u>Fyndanis V</u>, Varlokosta S, **Tsapkini K**. Agrammatic production: Interpretable features and selective impairment in verb inflection. *Lingua*, 2012 Aug;122(10):1134-1147.
- 22. <u>Epstein-Peterson Z</u>, Faria A, Mori S, Hillis A, **Tsapkini K**. Relatively normal repetition performance despite severe disruption of the left arcuate fasciculus. *Neurocase*, 2012;18(6):521-526.
- 23. Faria A, Crinion J, **Tsapkini K**, Newhart M, Davis C, Cooley S, Mori S, Hillis A. Patterns of dysgraphia in primary progressive aphasia compared to post-stroke aphasia. *Behav Neurol*. 2013;26(1-2):21-34.
- 24. **Tsapkini K**, Hillis AE. Spelling intervention in post-stroke aphasia and primary progressive aphasia. *Behav Neurol.* 2013;26(1):55-66.
- 25. <u>Peristeri E</u>, Tsimpli IM, **Tsapkini K**. The on-line processing of unaccusativity in Greek agrammatism. *J Appl Psycholing.*, 2013;34:233-276. (*doi: 10.1017/S0142716411000683*).
- 26. <u>Fyndanis V</u>, Varlokosta S, **Tsapkini K**. (Morpho)syntactic comprehension in agrammatic aphasia: Evidence from Greek. *Aphasiology*, 2013;27:398-419. (doi: 10.1080/02687038.2013.770817).

- 27. Race DS, **Tsapkini K**, Crinion J, Newhart M, Davis C, Gomez Y, Hillis AE, Faria AV. An area essential for linking word meanings to word forms: Evidence from Primary Progressive Aphasia. *Brain Lang.* 2013 Nov;127(2):167-176.
- 28. Jarso S, Li M, Faria AV, Davis C, Leigh R, Sebastian R, **Tsapkini K,** Mori S, Hillis AE. Distinct mechanisms and timing of language recovery after stroke. *Cogn Neuropsychol*, 2013;30(7-8):454-475.
- 29. **Tsapkini K,** Peristeri E, Tsimpli IM, Jarema G. Morphological decomposition in Broca's aphasia. *Aphasiology*, 2014; 34:233-276.
- 30. **Tsapkini K,** Frangakis C, Gomez Y, Davis C, Hillis AE. Augmentation of spelling therapy with transcranial direct current stimulation in primary progressive aphasia: Preliminary results and challenges. *Aphasiology*. 2014;28(8-9):1112-1130.
- 31. Sebastian R, Saxena S, **Tsapkini K**, Faria A, Long C, Wright A, Davis C, Tippett D, Mourdoukoutas A, Bikson M, Celnik P, Hillis AE. Cereberal tDCS: A novel approach to augment language treatment post-stroke. *Front Hum Neurosci.* 2017 Jan 12;10:695.
- 32. <u>Peristeri E.</u> Tsimpli IM, Sorace A, **Tsapkini K**. Language interference and inhibition in early and late successive bilingualism. *Lang Cogn.* 2017;10: 1-26. doi:10.1017/S1366728917000372.
- 33. Oeltzschner G, Snoussi K, Puts NA, Mikkelsen M, Harris AD, Pradhan S, **Tsapkini K**, Schär M, Barker PB, Edden RAE. Effects of eddy currents on selective spectral editing experiments at 3T. *J Magnc Reson Imaging*. 2018 Mar;47(3):673-681.
- 34. <u>Ficek B, Wang Z, Zhao Y, Webster K</u>, Desmond J, Hillis A, Frangakis C, Faria A, Caffo B, **Tsapkini K.** The effect of tDCS in functional connectivity in primary progressive aphasia. *NeuroImage: Clin.* 2018 May 21;19:703-715.
- 35. <u>Rofes A</u>, Mandonnet E, <u>de Aguiar V</u>, **Tsapkini K**, Rapp B, Miceli G. Language processing from the perspective of electrical stimulation mapping. *Cogn Neuropsychol.* 2018 Jul 12:1-23.
- 36. **Tsapkini K**, <u>Webster KT</u>, <u>Ficek</u> BN, Desmond J, Onyike CU, Rapp B, Frangakis CE, Hillis AE. Electrical brainstimulation in different variants of Primary Progressive Aphasia: A randomized clinical trial. *Alzheimers Dement. TRCI*. 2018 Sep 5;4:461-472.
- 37. <u>Riello M</u>, Faria A, <u>Ficek B</u>, <u>Webster K</u>, Onyike CU, Desmond J, Frangakis CE, **Tsapkini K**. The role of language severity and education in explaining performance on object and action naming in primary progressive aphasia. *Front Aging Neurosci.* 2018 Oct 30;10:346.
- 38. <u>Fenner AS</u>, Webster KT, Ficek BN, Frangakis CE, **Trapkini K**. Written Verb Naming Improves After tDCS Over the Left IFG in Primary Progressive Aphasia. *Front Psychol.* 2019 Jun 12;10:1396.
- 39. <u>Rofes A, de Aguiar V,</u> Ficek B, Wendt H., Webster K, **Tsapkini K.** The role of word properties in performance on fluency tasks in people with Primary Progressive Aphasia. *J Alzheimers Dis.* 2019;68(4):1521-1534.
- 40. Harris A, Wang Z, Ficek BN, Webster KT, Edden RAE, **Tsapkini K**. Reductions in GABA following a tDCS-Language Intervention for Primary Progressive Aphasia *Neurobiol Aging*. 2019 Jul;79:75-82.
- 41. <u>Peristeri</u>, E, Tsimpli, IM, & **Tsapkini**, **K**. (2019). Effects of executive attention on sentence processing in aphasia. *Aphasiology*. https://doi.org/10.1080/02687038.2019.1622647
- 42. Neofytou, K, Wiley, R, Rapp, B, & Tsapkini, K. (2019). The use of spelling for variant classification in primary progressive aphasia: Theoretical and practical implications. *Neuropsychologia*, *133*, 107157. https://doi.org/10.1016/j.neuropsychologia.2019.107157
- 43. de Aguiar, V, Zhao, Y, Faria, A, Ficek, B, Webster, K, Wendt, H, Wang, Z, Hillis, AE, Onyike CU, Frangakis, CE, Caffo, B, & **Tsapkini, K**. (2020). Brain volumes as predictors of tDCS effects in primary progressive aphasia. *Brain and Language*, 200, 104707. https://doi.org/10.1016/j.bandl.2019.104707
- 44. de Aguiar, V, Zhao, Y, Ficek, B, Webster, K, Wendt, H, Rapp, B, Hillis, A, Frangakis, CE, & **Tsapkini, K**. (2020). Cognitive and language performance predicts effects of spelling intervention and tDCS in Primary Progressive Aphasia. *Cortex*, 124, 66–84.https://doi.org/10.1016/j.cortex.2019.11.001
- 45. <u>Unal, G, Ficek, B, Webster, K, Syed, S, Truong, DQ, Hampstead, B, Bikson, M, **Tsapkini, K**. (2020). Impact of brain atrophy on tDCS and HD-tDCS current flow: A modeling study in three variants of primary progressive aphasia. *Neurological Sciences*. https://doi.org/10.1007/s10072-019-04229-z</u>
- 46. Faroqi-Shah, Y., <u>Vander Woude, A.</u>, Ratner, N. B., <u>Ficek, B.</u>, <u>Webster, K. T.</u>, & **Tsapkini, K**. Using narratives in differential diagnosis of neurodegenerative syndromes. *Journal of Communication Disorders, in press*.
- 47. Meier, EL., Breining, BL, Sheppard, SM, Goldberg, MS, Tippett, DC, **Tsapkini, K**, Faria, AV & Hillis, AE. White matter hyperintensities contribute to language deficits in primary progressive aphasia. *Cognitive and Behavioral Neurology, in press*.

48. Themistocleous, C, Ficek, B, Webster, KT, Afthinos, A, & **Tsapkini, K**. Parts-of-speech production in patients with Primary Progressive Aphasisa: An analysis based on natural language processing. *American Journal of Speech-Language Pathology, in press*.

Review Articles [RA]

- 1. Vivas A, **Tsapkini K**, Triarchou L. 'Anatomo-biological considerations on the centers of language': An Argentinian contribution to the 1906 Paris debate on aphasia. *Brain Dev.* 2007 Sep;29(8), 455-461.
- 2. Tippett D, Hillis AE, **Tsapkini K**. Treatment of Primary Progressive Aphasia. *Curr Treat Options Neurol*. 2015 Aug;17(8):362.
- 3. Sebastian R, **Tsapkini K**, Tippett D. Transcranial direct current stimulation in post-stroke aphasia and primary progressive aphasia: Current knowledge and future clinical applications. *NeuroRehabilitationl.* 2016 Jun 13;39(1):141-152.

Case Reports (CR)

- 1. **Tsapkini K,** Jarema G, Kehayia E. Manifestations of morphological impairments in Greek aphasia: A case study. *J Neurolinguistics*. 2001;14:281-296.
- 2. **Tsapkini K,** Jarema, G, Kehayia E. A morphological processing deficit in verbs but not in nouns: A case study in a highly inflected language. *J Neurolinguistics*. 2002;15:265-288.

Book Chapters in Peer-Reviewed Books [BC] 1st author on 5 of 7 chapters

- 1. Funnell M, Metcalfe J,**Tsapkini K**. In the mind but not on the tongue: Feeling of Knowing in an anomic patient`. *In* Reder LM (ed). *Implicit Memory and Metacognition*. Hillsdale NJ: LEA. 1996;171-193.
- 2. **Tsapkini K**, Kehayia E, Jarema G. Phonological change in derivation: From theoretical construct to psycholinguistic performance. In Libben G (ed). *CLASNET Working Papers*, *Proceedings of the 1st Internat Meeting of Mental Lexicon Research Group*. 1998. Montreal QC.
- 3. **Tsapkini K**, Jarema G, Kehayia E. Manifestations of morphological impairments in Greek aphasia: A case study. *In* Paradis M (ed). *Manifestations of Aphasic Symptoms in Different Languages*. Amsterdam: Elsevier Science, Pergamon Press. 2001;197-212.
- 4. **Tsapkini K,** Jarema G, Kehayia E. The role of verbal morphology in aphasia during lexical access: Evidence from Greek. *In* Fava E (ed). *Clinical Linguistics: Theory and Applications in Speech Pathology and Therapy*. (Current issues in linguistic theory series), Amsterdam; Philadelphia: John Benjamins. 2002; 315-336.
- 5. Koniari D, Proios H, **Tsapkini K**, Triarhou LC. Singing but not speaking: A retrospect on music-language interrelationships in the human brain since Otto Marburg's Zur Frage der Amusie (1919). *In* Columbus AM (ed). *Advances in Psychology Research (Vol. 87)*. Hauppauge NY: Nova Science Publ. 2011;239-248.
- 6. **Tsapkini K,** Hillis, AE. The cognitive neuroscience of written language: The neural substrates of reading and writing. *In* Ochner KN, Kosslyn S (eds). *The Oxford Handbook of Cognitive Neuroscience (Vol 1: Core topics)*. New York: Oxford Univ Press. 2014;491-506.
- 7. **Tsapkini K,** Hillis, AE. Neuroanatomical aspects of reading. *In Hillis AE. (ed). The Handbook of Adult Language Disorders*. New York NY: Psychology press. 2015;24-37.

Under review

- 1. Zhao, Y, Ficek, B, Webster, K, Wang, Z, Desmond, JE, Frangakis, CE, Caffo, B, Hillis, AE, Faria, A, & **Tsapkini, K.** Moderating effect of brain structural connectivity on transcranial direct current stimulation (tDCS) in primary progressive aphasia. *Neurorehabilitation and Neural Repair*.
- 2. Themistocleous, H, Ficek, B, Webster, K, Wendt, H, Den Ouden, D, Hillis, AE, & **Tsapkini, K**. Automatic subtyping of individuals with Primary Progressive Aphasia. *Journal of Alzheimer's Disease, under review*. bioRxiv 2020.04.04.025593; doi: https://doi.org/10.1101/2020.04.04.025593
- 3. Wang, Z., Ficek, B, Webster, KT, Onyike, CU, Frangakis, CE, Hillis, AE, Frangakis, CE, Caffo, B & Tsapkini, K. Effects of tDCS over the left IFG on semantic verbal fluency: Evidence from primary progressive aphasia. *Elife, under review.*
- 4. Themistocleous, C, Neofytou, K, Rapp, B, & **Tsapkini**, **K**. A tool for automatic scoring of spelling performance: Evidence from primary progressive aphasia. *Journal of Speech, Language, and Hearing Research, under review*.

- 5. Riello, M, Frangakis, CE, Ficek, B, Webster, KT, Faria, AV, Desmond, J, Hillis, AE & **Tsapkini, K.** Neural correlates of letter and semantic fluency in primary progressive aphasia independent from language and cognitive severity. *Journal of the International Neuropsychological Society, under review.*
- 6. Peristeri, E, Wang, Z, Frangakis, CE, Caffo, B, & **Tsapkini, K**. Far-transfer effects of tDCS over the left IFG in ssentence comprehension. *Brain Stimulation, under review*.
- 7. Tao, Y, Ficek, B, Rapp, B & **Tsapkini, K**. Different patterns of functional network re-organization across the variants of primary progressive aphasia: A graph-theoretic analysis. *Neurobiology of Aging, under review.*

FUNDING

EXTRAMURAL Funding

Current:

4/1/15-3/31/21

"Effects of transcranial direct current stimulation (tDCS) in oral and written production in primary progressive aphasia (PPA)"

R01 DC014475 NIH/NIDCD \$2,343,509

Role: PI (effort 100%); In this project we will investigate the behavioral and neuromodulatory effects of tDCS during a combination of spoken and written word production therapy in PPA participants over time. A better understanding of the behavioral, as well as functional connectivity, changes due to tDCS will offer insights into ways of impeding neurodegeneration that may improve quality of life for individuals with PPA and other dementias.

7/1/16-7/1/20

"Words in the World' – Social Sciences Health Research Council (SSHRC)

Partnered Research Training Initiative

Social Sciences and Humanities Research Council of Canada

\$

PI: Garv Libben

Role: Official International Collaborator for Johns Hopkins Medicine (effort: 0%); The grant is about exchange of knowledge, expertise, ideas, people and ways to take neurolinguistic and psycholinguistic findings outside the lab, and test their ecological validity and their impact in people's lives.

8/1/18-3/31/21

"Unraveling the effects of verbal short-term memory on learning and language abilities in AD," Administrative Supplement for R01 DC014475

NIH/NIDCD

\$249,521

Role: PI; In the present Administrative Supplement we address the question of how the linguistic and verbal short-term memory deficits contribute to the language abilities in PPA and AD. Improving our understanding of interactions between the systems of memory and language will allow us to develop better cognitive and language treatments in PPA and AD and will inform our tDCS efforts in this population.

1/1/20-1/1/23

"Language and Executive Function Intervention Strategies in Language Disorders, LEFIELD" Hellenic Foundation for Research & Innovation

\$220,000, (PI: S. Varlokosta)

Role: Consultant; In this research project for the support of faculty members and researchers working in the Greek Universities and Research Centers and the procurement of strategic research equipment we will investigate the role of language and cognitive abilities in rehabilitation.

7/1/20-6/31/25

"Transcranial direct current stimulation (tDCS) in typical and atypical Alzheimer's Disease (AD)"

R01 To be funded (11% percentile)

NIH/NIA \$2,498,354

Role: PI; In this project we will investigate the behavioral and neuromodulatory effects of tDCS during a combination of spoken and written word production therapy in mild AD participants over time. A better understanding of the behavioral, as well as functional connectivity, changes due to tDCS will offer insights into ways of impeding neurodegeneration that may improve quality of life for individuals with mild AD.

Pending (to be submitted in June 2020):

4/1/21-3/31/25

"Targeting the dorsal and ventral language pathways in neurodegeneration: Deficit-specific tDCS interventions in Primary Progressive Aphasia".

R01 NIH/NIA \$2,669,950

Role: PI; In this grant we will evaluate the effectiveness and brain mechanisms of tDCS over the dorsal or the ventral pathways of the left hemisphere, combined with Language+verbal short-term memory (vSTM) treatment, or lexical retrieval treatment, respectively, depending on the main deficit in each PPA participant. We will measure near-transfer and far-transfer effects to other language and cognitive functions, and compare with those seen in the previous award cycle to determine treatment effectiveness.

Previous:

2002-2003

"Neural correlates of homonymous nouns and verbs"

Centre de Recherche Interdisciplinaire en Réadaptation du Montréal métropolitain, Montreal, Canada (CRIR)

One-year post-doctoral fellowship at MNI, McGill University, QC, Canada

Role: PI (Effort: 100%). The goal of this project was to conduct an fMRI study to gather preliminary data for a bigger study on grammatical and lexical processing of verbs and nouns in the brain.

6/1/12-6/1/16

"Levels of impairment in Greek aphasia: Relationship with processing deficits, brain region and therapeutic implications"

THALES project. European Union (PI: S. Varlokosta)

Role: Consultant; The objectives of the project are: a) In-depth investigation of the different linguistic levels in aphasia and their interrelations; b) Study of the relationship between other neuropsychological disorders and aphasic disorders; (c) Evaluation of aphasic disorders, their symptoms and level of severity, in relation to the location and extent of left-hemisphere damage.

6/1/13-6/1/15

"Effects of tDCS in primary progressive aphasia"

Science of Learning Institute, Johns Hopkins University

\$120,000 over 2 years

Role: PI, (Effort: 15%); The goal of this grant is to evaluate changes in language performance of patients with PPA due to tDCS interventions, and correlate them with changes at the levels of certain neuropeptides in the brain (GABA, Glx), using magnetic resonance spectroscopy (MRS).

CLINICAL ACTIVITIES

Certification

2003-present Licensed Neuropsychologist in Greece (Hellenic Republic: #24/2639/28/1/2005)

EDUCATIONAL ACTIVITIES

Educational focus: My expertise is in the domain of language—especially from an interdisciplinary approach — which combines cognitive science, psychology, and neural sciences. I have taught introductory, core curriculum, and advanced hands-on language courses. During my first faculty appointment, in the Department of Psychology of the Aristotle University of Thessaloniki in Greece, I taught full time for five years, a rigorous experience which strengthened, deepened, and added confidence to, my teaching skills. I have taught undergraduate (Core Curriculum: Biological Psychology, Neuropsychology, Psycholinguistics; Electives Cognitive Neuropsychology, Experimental Exercises in Neurolinguistics and Psycholinguistics, Psychology of Aging, Psychology of Reading) and graduate courses (Cognitive Neuropsychology of Language, Neurolinguistics). My current educational responsibilities at the Department of Neurology at Johns Hopkins University, (and at the Department of Cognitive Science where I have a joint appointment), are as mentor and advisor to graduate students, postdoctoral fellows and other faculty. I am passionate about mentoring and consider it one of the most valuable and rewarding contributions in my academic life. The relationship between student and mentor at any educational level—but especially in tertiary education—is one of the most profound and life-changing experiences that shapes academic interests, and instills a love for learning and helping at the societal level. I have extensive and diverse experience in advising learners at all levels of academic training, and will be very glad to offer my expertise to the clinically oriented students and fellows.

Teaching

Classroom Instruction

2003-2009

Lecturer, Department of Psychology, Aristotle University of Thessaloniki, Greece

- Undergraduate courses: Core curriculum: Biological Psychology, Neuropsychology, Psycholinguistics
- Electives: Cognitive Neuropsychology, Experimental Exercises in Neurolinguistics and Psycholinguistics, Psychology of Aging, Psychology of Reading
- Graduate courses: Cognitive Neuropsychology of Language, Neurolinguistics

4/24/16

Invited lecturer, Department of Mental Health, Johns Hopkins School of Public Health. Topic: primary progressive aphasia and treatment options, for graduate course 'Neuropsychological aspects of aging'

Clinical instruction

4/03-6/09

Clinical supervisor and consultant, Department of Psychology, Aristotle University of Thessaloniki. Provided weekly instruction for 1st and 2nd year graduate students in Cognitive Psychology/ Neuropsychology training program. Consultation involved the neuropsychological and neurolinguistic assessment of neurologically impaired patients on a case-by-case basis, with emphasis on aphasia and related disorders.

Workshops/Seminars

7/02	Instructor, International graduate course 'Cognitive Neuroscience of Language' at summer institute of
	Vivian Smith Foundation held in Xylocastro, Greece.
2002-2009	Instructor, Intensive yearly 2-week graduate course on 'Statistics in Behavioral Sciences: Psycho-
	linguistics and Neurolinguistics' Department of Linguistics, Aristotle University of Thessaloniki (EU
	funded)
4/15; 4/16	Presenter, Noon conference lectures for neurology residents, Department of Neurology, Johns
	Hopkins University, Baltimore, MD
5/31/16	Invited journal club presenter, on 'tDCS treatment options in stroke rehabilitation' for cerebro-
	vascular division of Department of Neurology, Johns Hopkins University, Baltimore, MD

Mentoring (publications indicated at the end with their reference number in the publication section) Undergraduate advisees /Mentees

10/03-10/09 Department of Psychology, Aristotle University of Thessaloniki, Greece: Supervision of 17 IHonors' theses (undergraduate) on topics related to neuropsychology of language and in particular on effects of lexical, sublexical and semantic factors on reading and lexical decision.

MA theses

10/03-10/09 Department of Psychology, Aristotle University of Thessaloniki, Greece

- 1. Pure alexia after a right-hemisphere lesion: A case study (completed 10/05), Anna Samara
- 2. Deep dyslexia in Greek: A case study (completed 10/05), Anna Emanouil (#9)
- 3. Cultural aspects of music perception: Adaptation and validation of the Greek (eastern music) version of Montreal Battery of music perception (completed 10/06), Evagelos Paraskevopoulos (#15)
- 4. From pure alexia to surface dysgraphia after damage the right hemisphere: A case study (completed 10/07), Odyseas Dimos
- 5. Word learning after temporal lobe resection: A case study (completed 2/09), Maria Apostolopoulou
- 6. Reading and other cognitive abilities: Reading direction and visuo-spatial scanning in Arabs and Greeks (completed 7/09), Maria Gkini
- 7. Orthographic processing in deaf population (completed in 7/09), Koralia Paspala
- 8. Surface dyslexia and dysgraphia in a language of shallow orthography: A case study (completed 12/09), Vasiliki Siatra

5/16-12/18 Department of Neurology, JHU

- 1. Narratives in primary progressive aphasia Department of Speech and Language Services (completed 5/17), Ashlyn Vander Woude, University of Maryland at College Park, MD (publication under review, not indicated here)
- 2. tDCS Effects of tDCS on narratives in primary progressive aphasia Department of Speech and Language Services (completed 5/18), Deborah Colantuoni, University of Maryland at College Park, MD
- 3. Spelling performance in three variants of primary progressive aphasia (completed 11/18), Kyriaki Neofytou (Department of Cognitive Science, JHU) (#42)

PhD theses advisor: Department of Psychology, Aristotle University of Thessaloniki, Greece 10/06-6/07 Christina Andreou, "Semantic processing of polysemous words in schizophrenia," Department of Psychiatry, Aristotle University of Thessaloniki, (#12) 10/06-6/09 Valantis Fyndanis, 'Functional categories in Greek agrammatism,' Department of Linguistics, Aristotle University of Thessaloniki (#13, #21, #26) 10/06-7/09 Katerina Voulgari, 'Developmental dyslexia in a language of shallow orthography (Greek): A cognitive neuropsychological approach' Department of Special Education, University of Thessaly, Volos

10/06-6/13 Irene Konta, 'Psycholinguistic investigation of lexical organization in second language,' Department of Linguistics, Aristotle University of Thessaloniki

PhD theses advisor: Department of Neurology, JHU, Baltimore, MD, USA

1 IID theses advisor. Department of Neurology, 1110, Battimore, 111D, CSA	
Kyriaki Neofytou, tDCS effects on JHU dysgraphia battery in PPA, Department of Cognitive Science,	
Johns Hopkins University, Baltimore, MD. (Main advisor: Dr. Brenda Rapp). (#42)	
Zeyi Wang, Statistical Analysis of imaging in crossover designs, Department of Biostatistics, Johns	
Hopkins School of Public Health, Baltimore, MD (Main advisor: Dr. Brian Caffo). (#34, #40, #43)	
Konstantina Kordouli, on compound processing in PPA, Department of Neurology, University of	
Patras, Greece. (Main advisor: Dr. Christina Manouilidou).	

Post-doctoral advisees /Mentees

(#35, #39)

9/14-9/18	Eleni Peristeri, PhD, post-doctoral fellow of the Greek State Scholarships' Foundation at the
	University of Thessaloniki, Greece.
9/15-present	Kim Webster, MA, CCC-L, Assistant Professor, Department of Otolaryngology, Johns Hopkins SOM
_	(#36, #37 #38, #39, #40, #43, #44)
9/15-9/19	Bronte Ficek, BA, Research program coordinator, Department of Neurology, Johns Hopkins SOM
	(#34, #36, #37, #38, #39, #40, #43, #44, #45)
4/16-4/17	Marianna Riello, PhD, post-doctoral fellow, Department of Neurology, Johns Hopkins SOM (#37)
9/17-9/18	Vania de Aguiar, PhD, post-doctoral fellow, Department of Neurology, Johns Hopkins SOM (#35,
	#39, #43, #44)
9/17-9/18	Adria Rofes, PhD, post-doctoral fellow, Department of Cognitive Science, Johns Hopkins University

9/17-7/19 Yi Zhao, PhD, Department of Biostatistics, Johns Hopkins School of Public Health, (#34, #43) 4/18-present Haris Themistocleous, post-doctoral fellow, Department of Neurology, Johns Hopkins SOM Yuan Tao, PhD, Department of Cognitive Science, Johns Hopkins University.

RESEARCH ACTIVITIES

Research Focus

My research examines the interactions between language and cognitive systems in post-stroke and primary progressive aphasia (PPA). Recently I have focused on and how behavioral and neuromodulatory (transcranial direct current stimulation, tDCS) interventions may improve therapy outcomes and brain function. In my research I have used several behavioral and imaging methods such as diffusion tensor imaging (DTI), resting-state fMRI (rsfMRI) and magnetic resonance spectroscopy (MRS) to assess changes in the language networks in PPA in particular.

Research Demonstration Activities to external audience, on or off campus

Website: I have launched my lab's website (Laboratory of electrical brain stimulation in neurodegenerative

language disorders) and attached it to my university webpage (www.tsapkini-lab.org).

December 16th 2009: How do we understand written language? (Science Daily)

file:///Users/ktsapkini/CV/How%20do%20we%20understand%20written%20language%3F%20--

%20ScienceDaily.htm

October 24th 2019: Why it's time to take electrified medicine seriously. (TIME magazine)

file:///Users/ktsapkini/CV/Why%20It's%20Time%20to%20Take%20Electrified%20Medicine%20Seriously%20|%20

Time.html

Clinical Trials: I am the registered PI of three approved clinical trials with their corresponding IRBs:

1. TDCS interventions in primary progressive aphasia (NCT02606422).

2. Effects of tDCS on Verbal Short-term Memory in PPA (NCT03887481).

3. Transcranial direct current stimulation in typical and atypical AD (NCT04122001)

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES – Not applicable

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

2003-2009 Co-Chair, Committee of clinical practice for Department of Psychology, University of Thessaloniki,

Greece

4/15; 4/16 Poster presentation judge for annual postdoc retreats, Johns Hopkins University, Baltimore, MD

2015-present Organizer of two writing accountability groups (WAGs) at the Department of Neurology, in

collaboration with the Office of Faculty Development, School of Medicine, Johns Hopkins

University, Baltimore, MD

Editorial Activities

Editorial Board Appointment

3/17 – present Frontiers in Neurology (open-access, peer-reviewed)

Review Editor

2015 – present Frontiers in Psychology (open-access, peer-reviewed)

Journal Peer Reviewer

2003-present Aphasiology

Archives of Physical Medicine and Rehabilitation

Behavioural Neurology Brain and Language Brain Stimulation

Brain

Cognitive Neuropsychology

Cortex

European Neurology

Experts Review in Neurotherapeutics Frontiers in Aging Neuroscience

Frontiers in Psychology Journal of Neurolinguistics

Journal of Speech Language and Hearing Research

Journal of Speech

Journal of the International Neuropsychological Society

Language and Cognitive Processes Language and Hearing Research

Neurocase

Neuroscience and Biobehavioral Reviews

Second Language Learning

Stroke

Advisory Committees, Review Groups / Study Sections

7/16 Seed-grant applications' reviewer for NYU

2/17 R01 grant applications' reviewer for NIH/NIDCD at LCOM Study Section, San Francisco, CA 4/17-12/18 Four-year grant applications' (R01 equivalent) reviewer for Medical Research Council, UK Seed-grant applications' reviewer for National Neuromodulation Center at University of South

Carolina [11/18, 3/17, 3/18, 3/19]

2/18 R01 grant applications' reviewer for NIH/NIDCD at Special Emphasis Study Section

2/18 R01 grant applications' reviewer for NIA at Special Emphasis Study Section: non-pharmacological

treatments for AD

10/18, 10/19 F32 and F31 (graduate and postdoctoral fellowships) applications' reviewer for NIH/NIDCD at

Regular Study Section.

3/19 R01 grant applications' reviewer for NIH/NIDCD at Special Emphasis Study Section

Professional Societies

2000-present Academy of Aphasia

2000-present Member

2011 – 2014 Membership Committee, Academy of Aphasia 2014 – 2017 Program Committee, Academy of Aphasia

2003-present Member, European Society of Neurosciences

2003-2009 Greek Psychological Society

2003-2009 Member,

2006 – 2008 co-chair, Division of Cognitive Psychology 2006 – 2008 co-chair, Division of Neuropsychology

2009-present Member, Society for the Neurobiology of Language

2016-present Member, American Neurological Association

2016-present Member, Society for Neurosciences

Conference Organizer, Session Chair

10/15 Organizer, symposium on "Brain correlates in aphasia rehabilitation," Academy of Aphasia, annual

meeting, Tucson AZ (10/21/15).

Session chair, "Treatment and rehabilitation in aphasia," Academy of Aphasia, annual meeting,

Tucson AZ (10/21/15).

11/17 Chair, organizing committee, Academy of Aphasia (international society) annual meeting

Organizer and Chair, Invited Symposium on "Primary progressive aphasia," Academy of Aphasia,

annual meeting, Baltimore, MD

11/17 Member, organizing committee, International Society for the Neurobiology of Language, annual

meeting, Baltimore, MD

Consultantships

2015-2019 THALES European Union Funded program to University of Athens. Role: external consultant

RECOGNITION

Awards, Honors

Honorary yearly scholarships of excellence awarded by University of Thessaloniki for academic achievement

First place in national competition for academic achievement for students from Macedonia (Greece), organized by University of Athens, Greece. (\$1,500 U.S.)

First award from Greek State Scholarship Foundation for international graduate studies for 42 months Scholarship "Christos Sirros" Senator of Laurier-Dorion, Greek Foundation of Excellence Awards (\$1,000).

Dissertation award, Faculty of Graduate Studies of the Université de Montréal (\$3,000).

2020 Niarchos Foundation: Greek Diaspora Program (Fellowship for collaboration between US and Greek

institutions by Greek natives).

Invited Talks, Panels

6/04

Baltimore, MD

JHMI/Regiona	1
10/99	Invited lecture, 'The effect of input modality in lexical access,' Centre de recherche de l'institut Universitaire de Geriatrie de Montréal, Montreal, Quebec, Canada
10/00	Invited lecture, 'AD and aging: emphasis on the needs of the Greek aging population,' Alzheimer
10/00	Society of Montreal in collaboration with the AHEPA local organization, Montreal, Quebec, Canada
3/02	Invited lecture, 'Neuronal Plasticity in Aphasia,' Psychology Department of Aristotle University of
3/02	Thessaloniki, Thessaloniki, Greece
11/03	Invited presentation, "The real-time approach in psycholinguistics," at symposium on
	"Methodological issues in psycholinguistic research" during 1 st conference of Psychological Society
	of Northern Greece, Volos, Greece
5/07	Invited presentation, 'The assessment of lexical processing in normal and brain-damaged individuals,'
	2 nd International Conference of European Association of Psychological Assessment in Thessaloniki,
	Greece
12/07	Invited lecture. 'Pure alexia: A case study after damage at the right hemisphere,' 'Aiginition
	University Hospital of Neurological and Psychiatric Disorders,' Athens, Greece
6/10	Invited lecture, 'Brain re-organization of language functions,' Department of Neurology, Johns
	Hopkins Medicine (Clinical Neuroscience Seminar), Baltimore, MD
11/13	Invited lecture, 'Effects of transcranial direct current stimulation on spelling performance in primary
	progressive aphasia: Preliminary data,' Department of Neurology, Johns Hopkins Medicine (Clinical
	Neuroscience Seminar), Baltimore, MD
12/15	Invited colloquium, 'Effects of transcranial direct current stimulation on spelling performance in
	primary progressive aphasia,' Department of Hearing and Speech-Language Pathology, University of
	Maryland at College Park, MD
3/16	TED talk, 'Why early language rehabilitation is important in neurodegenerative diseases?'
	Department of Neurology, Johns Hopkins Medicine, Baltimore, MD
12/16	Invited colloquium, 'Effects of tDCS in PPA: Whom does it help?' Department of Psychiatry and
	Behavioral Sciences, Johns Hopkins Medicine, Baltimore, MD
3/17	Invited lecture, "Current treatment options in PPA," Department of Speech and Language Pathology,"
	Department of Speech-Language-Hearing Sciences, Loyola University, Columbia, MD
4/18	Invited colloquium, "Lessons from transcranial direct current stimulation (tDCS) in primary
	progressive aphasia (PPA)," Department of Cognitive Science, Johns Hopkins University, Baltimore
National	
6/03	Invited lecture, "Processing action verbs with different semantics," Moss Rehabilitation Center,
	Philadelphia, PA

Invited lecture, 'Semantic and grammatical distinctions in the brain: Evidence from fMRI,' Cognitive Neuropsychology Laboratory of the Department of Cognitive Science, Johns Hopkins University,

6/08	Invited lecture, 'Reading and spelling substrates in a patient with orthographic processing deficits,'
	Moss Rehabilitation Research Institute in Philadelphia, PA
10/17	Invited lecture, "Lessons from studying behavioral and neural effects of transcranial direct current
	stimulation (tDCS) in primary progressive aphasia (PPA)," C-Star Lecture Series: University of South
	Carolina (broadcasted internationally), Columbia, SC
8/18	Invited speaker, "Electrical stimulation approaches in Primary Progressive Aphasia," Neuro-
	modulation/ North American Neuromodulation Society (NANS) Summer Series Conference, New
	York, NY
12/18	Invited speaker, "Brain Volumes and Functional connectivity as predictors of tDCS effects in PPA,"
	Frontotemporal Disorders Unit and Laboratory of Neuroimaging, Massachusetts General Hospital,
	Harvard University, Boston, MA
1/19	Invited speaker, "Effects of electrical stimulation in primary progressive aphasia," Eleanor Saffran
	Center for Cognitive Neuroscience, Temple University, Philadelphia, PA
3/19	Invited colloquium, "Mechanisms and predictors of tDCS effects in primary progressive aphasia,"
	Speech-Language-Hearing Sciences program at the City University of New York (CUNY) Graduate
	Center, New York, NY
3/19	Invited colloquium, "Predictors of language therapy and tDCS effects in primary progressive
	aphasia," Department of Rehabilitation Medicine, NYU, New York, NY
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International	
2/03	Invited lecture, "Computation vs. storage in the mental lexicon: Some insights from processing
	regular and irregular forms in Greek," The Montreal Neurological Institute, Montreal, Quebec,
0.40.2	Canada
9/03	Invited lecture, "Language, aphasia and rehabilitation," Department of Occupational Therapy, McGill
	University, Montreal, Quebec, Canada
4/04	Invited lecture, 'Nouns and verbs in the brain: Evidence from aphasia, real-time processing and
	fMRI,' Department of Speech and Language Pathology, University of Toronto, Canada
10/19	Invited lecture, 'Effects of tDCS in PPA', Department of Rehabilitation Medicine, Guangzhou
	Hospital, China