

CHARALAMBOS (HARIS) THEMISTOCLEOUS

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—Speech Phonetics, Computational Linguistics, Neurolinguistics, Machine Learning—

EDUCATION

- 2018–Present **Postdoctoral Research Fellow**
Department of Neurology, Johns Hopkins University, Baltimore MD, USA.
- 2015–2017 **Postdoctoral Research Fellow in Computational Linguistics**
The Centre for Linguistic Theory and Studies in Probability (CLASP); Department of Philosophy, Linguistics and Theory of Science (FLOV), University of Gothenburg, Gothenburg, Sweden.
- 2015 **Visiting Research Scholar**
The Seeger Center at Princeton University, Princeton University, Princeton NJ, USA.
- 2007–2011 **PhD in Linguistics**
National and Kapodistrian University of Athens. Thesis Title: “Prosody and Information Structure in Greek”. Grade: Summa cum laude.
- 2007–2008 **MS in Computational Linguistics**
University of Skövde, Skövde, Sweden
- 2005–2007 **MA in Applied Linguistics**
National and Kapodistrian University of Athens, Athens Greece
Grade: *summa cum laude*
- 2000–2004 **BA in Classics/Linguistics**
National and Kapodistrian University of Athens, Athens, Greece.
Grade: *Summa cum laude* & Valedictorian of the school of Philosophy.

EXPERTISE

1. **MRI Imaging-Functional Connectivity:** April 29 – May 3, 2019 (Mon-Fri) “Learning the CONN Toolbox” workshop at The Athinoula A. Martinos Center for Biomedical Imaging at “Massachusetts General Hospital – Harvard Medical School”; CONN is an SPM-based toolbox for functional connectivity analyses in the resting state and during task.
2. **MRICloud training** – March 5–7 2019 “Johns Hopkins University”. MRICloud is cloud platform designed for automated image analysis. It has unique features focusing on anatomical segmentation and integration of multiple MRI results. The tutorial is a three-day session including image analysis for T1-based morphology, DTI analysis, rs-fMRI analysis, ASL analysis and application of R to MRICloud results.

Jan.–2006 Erasmus Program – Computational Linguistics, University of Skövde, Skövde, Sweden

ACADEMIC POSITIONS

04/01/2018–Present **Johns Hopkins University – Department of Neurology**

Postdoctoral Research Fellow

I study the speech and language of individuals with Primary Progressive Aphasia and Alzheimer's Disease to identify objective measures that can enable their diagnosis early, provide prognosis of their condition, and ultimately improve therapy. I employ natural language processing, acoustic analysis, and machine learning models (deep neural networks, SVMs, etc.). This research is part of the research project titled "Effects of transcranial direct current stimulation (tDCS) in primary progressive aphasia (PPA)". Number: NA_00071337. PI: Dr. Kyrana Tsapkini.

2018–2019 **University of Gothenburg – Department of Swedish**

Researcher

I identify objective markers from speech and language to provide early diagnosis of individuals with Mild Cognitive Impairment, the research is part of the project: "Linguistic and extra-linguistic parameters for early detection of cognitive impairment". Grant from the "Riksbankens Jubileumsfond" – The Swedish Foundation for Humanities and Social Sciences, grant agreement no: NHS 14–1761:1, 2016–2019. Principal Investigator: Dr. Dimitrios Kokkinakis.

2015–2017 **University of Gothenburg – Centre for Linguistic Theory and Studies in Probability (CLASP)**

Post-doctoral fellow

My research aim was to determine the cognitive foundations of language by developing efficient language technology. CLASP director: Professor, Shalom Lappin.

2015 **Princeton University – The Seeger Center at Princeton University**

Visiting research scholar

I conducted research on prosodic variation and change in Greek. It refers to the use of speech melody for linguistic purposes. To study prosody I developed an innovative approach that combines evidence from prosodic typology, experimental research on Modern Greek and other languages, and evidence from ancient grammarians (as a PI).

2014 **Cyprus Ministry of Education and Culture**

Researcher

Project Title: *Recording, preserving and reviving Cypriot Maronite Arabic*. PI: Dr. Marilena Karyolemou.

2015 **University of Cyprus - Department of English Studies**

Researcher

Project Title: *Statistics & Methods*, Project Supervisor: Dr. Kleanthes Grohmann.

2009–2011 **University of Cyprus - Department of Classics**

Researcher

Project Title: *Language and Style in the Speeches of Thucydides*, Project Supervisor: Dr. Antonis Tsakmakis. Project funded by Anastasios G. Leventis Foundation

2011–2014 **University of Cyprus**

Temporary Lecturer

Department of English Studies

2013 **Open University of Cyprus**

Adjunct Lecturer

Department of Byzantine and Modern Greek Studies

2008 **University of Athens**

"Kapodistrias 2007" and "Kapodistrias 2008"

Funded by the Greek Government

2006 **The Academy of Athens**
Part time researcher
PI: Dr Christophoros Charalampakis
Project Title: *Utilitarian Dictionary of Modern Greek*
Project funded by the Academy of Athens

GRANTS AND AWARDS

current **Member of the research group**

Title: Morphosyntactic Production in Stroke-induced Agrammatic Aphasia: A Cross-linguistic Machine Learning Approach, 48-month Project#287745 – FRIPRO (FRIHUMSAM) grant awarded by the Research Council of Norway (PI: Dr. Valantis Fyndanis, 2019 – 2023)

2015 **Personal Investigator**

Title: “Prosodic Variation and Prosodic Change: Evidence from Greek”
The Seeger Center for Hellenic Studies. **Princeton University** (2015)

2010 **Scholarship – PhD research:** Alexander S. Onassis Foundation

2010 **Scholarship – MA studies:** Cyprus State Scholarships Foundation

2007 **Grant – ERASMUS program:** European Union

2007 **Scholarship – MA studies:** Alexander S. Onassis Foundation

2007 **Scholarship MA studies:** Cyprus State Scholarships Foundation

2004 **The 2004 class valedictorian:** University of Athens

2004 **Scholarship – Undergraduate studies:** Cyprus State Scholarships Foundation

SUPERVISION

PhD Thesis Supervision

2018 Georgios Georgiou, PhD dissertation (co-supervisor with Dr. Mary Koutselini); University of Cyprus, titled “Perception and Production of Greek vowels by Arabic Speakers of Greek as a second language”, 2014–2018.

MA Thesis Supervision

2018 Jesica Wang, MA thesis, University of Gothenburg; research topic “Determining Linguistic Predictors for the classification of Mild Cognitive Impairment and Alzheimer’s Disease using Machine Learning: Evidence from speech and texts”, (2020).

Liina Tumma, MA thesis, University of Gothenburg; research topic “Extracting linguistic and emotional information from speech”, (2018).

TEACHING MERITS

TEACHING

University of Gothenburg

2017 *Statistical Methods for Natural Language Processing (NLP)*. Master’s Programme in Language Technology; teaching and course organizing.

- 2016 *Introduction to Formal Linguistics*, University of Gothenburg. Master's Programme in language technology. Co-teaching with Stergios Chatzikyriakides. (2016–2017)

University of Cyprus

- 2014 *Principles of Linguistic Analysis (MA Programme in Linguistics)*
Theoretical Phonology
Suprasegmental Phonology
Sociolinguistics
- 2013 *Sociolinguistics*
Phonetics and Phonology (3rd & 4th year elective)
Research Design and Statistics for Linguists (3rd & 4th year elective)
Sociolinguistics
- 2012 *Undergraduate Course: Phonetics and Phonology: Advanced Level (3rd & 4th year elective)*
Phonetics and Phonology
Speech Melody and Conversation (3rd & 4th year elective)
Sociolinguistics
Phonetics & Phonology
Information Structure and Prosody (3rd & 4th year elective).
- 2011 *Tutorials: Introduction to Greek Language*

Open University of Cyprus

- 2013 *Linguistics and Literature*. Postgraduate module in Linguistics and Literature (Phonetics, Phonology, Morphology, Syntax, Semantics, and Pragmatics)

University of Athens

- 2007–2011 *Tutorials: Phonetics, Phonology, and Statistics (Phonetics Lab)*

TEACHING MATERIALS

As a course organizer at the university of Cyprus and at the University of Gothenburg, I have developed PowerPoint Presentations, Course Notes, Exams, and other materials required for courses. Also, I have authored a book to introduce students to *Experimental Design and Statistics in Linguistics, using R* and the following teaching materials:

1. **Themistocleous Charalambos**. (2016). Introduction to R. Unpublished manuscript. Gothenburg. <http://charalambosthemistocleous.com/assets/RIntroCover.pdf>
2. **Themistocleous, Charalambos**. (2016). Introduction to Python. Unpublished manuscript. Gothenburg.
3. **Themistocleous, Charalambos**. (2012). Research Methodology and Linguistics [in Greek]. Unpublished manuscript. Nicosia. (pp. 300)
4. **Themistocleous, Charalambos**. (2011). Introduction to Phonetics and Phonology [in Greek]. Nicosia: Open University of Cyprus. (pp. 100)
5. **Themistocleous, Charalambos**. (2008). PRAAT Software for acoustic analysis. An introductory manual [in Greek]. University of Athens: Athens. DOI: 10.13140/RG.2.1.4233. 2003
6. **Themistocleous, Charalambos**. (2006). A Grammar of SMG. Greek Verbs [in Greek]. Athens University of Athens. (pp. 400).
7. **Themistocleous, Charalambos** (2006). Discourse Markers. Athens: University of Athens.

PEDAGOGICAL TRAINING

2001 Introduction to Developmental Psychology II

2002 Introduction to Pedagogy I

2003 Introduction to Developmental Psychology I

2003 Team dynamics

2004 General and Special Teaching

2004 Pedagogical Psychology

PUBLICATIONS

MONOGRAPHS AND EDITED VOLUMES

1. **Themistocleous, Charalambos** (2015). *Experimental Design and Statistics in Linguistics. Using R (In Greek)*. Athens: Ion. ISBN: 978–960–508–187–4. <http://www.iwn.gr/product.asp?catid=17589>
2. Fragaki Georgia, Georgakopoulos Athanasios, **Themistocleous Charalambos** (Eds) (2012). *Current Trends in Greek Linguistics*. Newcastle upon Tyne: Cambridge Scholars Publishing. ISBN-10: 1443840254, ISBN-13: 978–1443840255. <https://www.cambridgescholars.com/current-trends-in-greek-linguistics-16>

JOURNAL ARTICLES

1. **Themistocleous Charalambos**, Webster Kimberly, Alexandros Afthinos, and Tsapkini Kyrana (in press). Morphological markers in speech production distinguish individuals with different primary progressive aphasia variants: A natural language processing and machine learning approach. *American Journal of Speech-Language Pathology*.
2. Georgiou George and **Themistocleous Charalambos** (in press). Vowel learning in diglossic settings: evidence from Arabic Greek late bilinguals. *International Journal of Bilingualism*.
3. **Themistocleous Charalambos**, Eckerström, Marie, Kokkinakis Dimitrios (2020). The acoustic profile of individuals with MCI. *PLOS one* 15(7), e0236009. <https://doi.org/10.1371/journal.pone.0236009>
4. **Themistocleous Charalambos**, Bronte Ficek, Kimberly Webster, Dirk-Bart den Ouden, Argye E. Hillis, Kyrana Tsapkini (2020). Automatic subtyping of individuals with Primary Progressive Aphasia. *bioRxiv* 2020.04.04.025593; doi: <https://doi.org/10.1101/2020.04.04.025593>
5. Stark Brielle C., Dutta Manaswita, Murray Laura, Bryant Lucy, Fromm Davida; MacWhinney Brian, Ramage Amy, Simmons-Mackie Nina, Roberts Angela, Fergadiotis Gerasimos, den Ouden Dirk, Brock Kris, McKinney-Bock Katy, Jin Paek Eun, Harmon Tyson, **Themistocleous Charalambos**, Yoo Hyunsoo, On Yoon Si, Sharma Saryu, Aveni Katharine, Gutierrez Stephanie, Doppelbauer Lea, Dawn Bunker Lisa (2020). Standardizing assessment of spoken discourse in aphasia: A working group with deliverables. *American Journal of Speech-Language Pathology*. 1–12 https://doi.org/10.1044/2020_AJSLP--19--00093 (a preprint version exists in PsyArXiv. October 3. doi:10.31234/osf.io/e6r3x.)
6. **Themistocleous Charalambos** (2019). Dialect classification from a single sonorant sound using Deep Neural Networks. *Frontiers in Communication*. <https://doi.org/10.3389/fcomm.2019.00064>.
7. Fyndanis Valantis and **Themistocleous Charalambos** (2019). Are there prototypical associations between time frames and aspectual values? Evidence from Greek aphasia and healthy ageing, *Clinical Linguistics and Phonetics*, DOI: 10.1080/02699206.2018.1480657.
8. **Themistocleous Charalambos**, Eckerström Marie, and Dimitrios Kokkinakis (2018). Identification of Mild Cognitive Impairment from Speech in Swedish using Deep Sequential Neural Networks. *Frontiers in Neurology* 9, 975. URL: <https://www.frontiersin.org/article/10.3389/fneur.2018.00975>.
9. **Themistocleous, Charalambos** (2017). Effects of two linguistically proximal varieties on the spectral and coarticulatory properties of fricatives: Evidence from Athenian Greek and Cypriot Greek. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2017.01945
10. **Themistocleous, Charalambos** (2017). Dialect classification using vowel acoustic parameters. *Speech Communication* 94, 13 – 22. DOI: 10.1016/j.specom.2017.05.003.
11. Grohmann Kleanthes, Papadopoulou Elena and **Themistocleous Charalambos** (2017). Acquiring Clitic Placement in Bilectal Settings: Interactions between Social Factors. *Frontiers in Communication* 2:5. doi: 10.3389/fcomm.2017.00005.

12. **Themistocleous, Charalambos** (2017). The Nature of Phonetic Gradience across a Dialect Continuum: Evidence from Modern Greek Vowels. *Phonetica* 74, 157–172. PMID: 28268213, DOI: 10.1159/000450554.
13. **Themistocleous, Charalambos** (2016). Seeking an anchorage: Evidence from the tonal alignment of the Cypriot Greek prenuclear pitch accent. *Language and Speech*, 59(4):433–461, DOI: 10.1177/0023830915614602.
14. **Themistocleous, Charalambos** (2016). The bursts of stops can convey dialectal information. *Journal of the Acoustical Society of America* EL 140(4), EL334–EL340. <http://dx.doi.org/10.1121/1.4964818>.
15. **Themistocleous, Charalambos** (2014). Edge-Tone Effects and Prosodic Domain Effects on Final Lengthening. *Linguistic Variation* 14(1). 129–160. DOI: 10.1075/lv.14.1.06the.

BOOK CHAPTERS

1. **Themistocleous, Charalambos** (2016). Sextus Empiricus Adversus Grammaticos and the debate Ideal Language vs. Language Variation. *Stasinós* 7, 145–152.
2. Armostis, Spyros, Kyriaci Christodoulou, Marianna, Katsoyannou, and **Charalambos Themistocleous** (2014). *Addressing writing system issues in dialectal lexicography: the case of Cypriot Greek*. In Granadillo, Tania (Eds). *Dialogue on Dialect Standardization* (pp. 23 – 38). Newcastle upon Tyne: Cambridge Scholars Publishing.
3. **Themistocleous, Charalambos** (2014). Modern Greek Prosody. Speech melody in communication (Prosodia tis Neas Ellinikis. I axiopoisi tis melodias tis fonis stin epikoinonia). *Stasinós* 6. 319-344.
4. Tsakmakis, Antonis and **Themistocleous, Charalambos** (2013). *Textual Structure and Modality in Thucydides' Military Exhortations*. In A. Tsakmakis and M. Tamiolaki (Eds). *Thucydides Between History and Literature* (pp. 391 – 408). Berlin, Walter de Gruyter.
5. Melissaropoulou, Dimitra, **Themistocleous, Charalambos**, Tsiplakou, Stavroula, and Tsolakidis, Symeon (2013). *The Present Perfect in Cypriot Greek revisited*. In Peter Auer, J. C. Reina & G. Kaufmann (Eds.), *Language Variation - European Perspectives IV: Selected papers from the Sixth International Conference on Language Variation in Europe (ICLaVE 6)*, Freiburg, June 2011 (pp. 159 – 172). Amsterdam: John Benjamins.
6. **Themistocleous, Charalambos** (2012). *Meaning and Form in the Tonal Representation*. In Fragaki, Georgia, Georgakopoulos, Athanasios, **Themistocleous, Charalambos** (Eds). *Current Trends in Greek Linguistics* (pp. 271 – 289). Cambridge: Cambridge Scholars Publishing.
7. **Themistocleous, Charalambos** (2012). *Cypriot Greek Nuclear Pitch Accents (Ta pirinika tonika ipsi tis kypriakis ellinikis)*. In Z. Gavriilidou, A. Efthymiou, E. Thomadaki & P. Kambakis-Vougiouklis (eds), 2012, *Selected papers of the 10th ICGL*, pp. 796 – 805. Komotini/Greece: Democritus University of Thrace.

CONFERENCE PAPERS

1. **Themistocleous Charalambos**, Webster Kimberly T., Ficek Bronte, Tsapkini Kyrana (2020). Effects of tDCS on apraxia of speech in non-fluent variant of Primary Progressive Aphasia. Philadelphia (Presented On-line due to COVID19 pandemic).
2. Neophytou Kyriaki, **Themistocleous Charalambos**, Brenda Rapp, Tsapkini Kyrana (2020). A tool for automatic scoring of spelling. Academy of Aphasia 2020. Philadelphia (Presented On-line due to COVID19 pandemic).
3. **Themistocleous Charalambos**, Eckerström Marie, Lundholm Fors Kristina, and Kokkinakis Dimitris (2020). Improving the Diagnosis of Mild Cognitive Impairment in elderly individuals using a multifactorial automatic analysis of voice quality and prosody. 30th Alzheimer Europe Conference “Building bridges”. 20-22 October 2020.

4. **Themistocleous Charalambos**, Eckerström Marie, and Kokkinakis Dimitris (2020). Automatic analysis of voice quality and prosody in patients with Mild Cognitive Impairment. The Society for the Neurobiology of Language Symposium (SNL 2020).
5. **Themistocleous Charalambos**, Webster Kimberly T., Ficek Bronte, Tsapkini Kyrana (2019). Morphosyntactic measures of PPA variants using computational grammars. 49th Clinical Aphasiology Conference 2019 (CAC 2019) Whitefish, Montana, Tuesday, May 28, 2019 – Saturday, June 1, 2019.
6. **Themistocleous Charalambos** and Dimitrios Kokkinakis (2019). Speech Analysis and Mild Cognitive Impairment Detection. *Proceedings of the 9th Tutorial & Research Workshop on Experimental Linguistics (ExLing2019)*, September 25-27, 2019 Lisbon, Portugal, 113–116.
7. Kokkinakis, Dimitrios, Lundholm Fors, Kristina, Fraser, Katie, Eckerström, Marie, Horn, Greta, and **Themistocleous, Charalambos** (2019). A multifaceted corpus for the study of cognitive decline in a swedish population. In CLARe4 : Corpora for Language and Aging Research, 27 February – 1 March 2019, Helsinki, Finland.
8. **Themistocleous Charalambos**, Ficek Bronte, Theresa Webster Kimberly, Wendt Haley, Elizabeth Hillis Argye, Den Ouden Dirk Bart, and Tsapkini Kyrana (2018). Acoustic markers of PPA variants using machine learning. *Academy of Aphasia 56th Annual Meeting*, October 21-23, 2018 Montreal, Canada. *Frontiers in Neuroscience*. doi: 10.3389/conf.fnhum.2018.228.00092.
9. Fyndanis Valantis and **Themistocleous Charalambos** (2018). Morphosyntactic production in agrammatic aphasia: A cross-linguistic machine learning approach. *Academy of Aphasia 56th Annual Meeting*, October 21-23, 2018 Montreal, Canada. *Frontiers in Neuroscience*. doi: 10.3389/conf.fnhum.2018.228.00075.
10. Neophytou Kyriaki, **Themistocleous Charalambos**, Wiley Robert, Tsapkini Kyrana and Rapp Brenta (2018). Understanding and classifying the different variants of Primary Progressive Aphasia based on spelling performance. *Frontiers Hum. Neurosci. Conference Abstract: Academy of Aphasia 56th Annual Meeting*. doi: 10.3389/conf.fnhum.2018.228.00001
11. **Themistocleous Charalambos**, Ficek Bronte, Webster Kimberly, Wendt Haley, Hillis Argye E., den Ouden Dirk-Bart, and Tsapkini Kyrana (2018). A classification study of the variants of Primary Progressive Aphasia using Machine Learning. *Clinical Aphasiology Conference, CAC 2018*, Austin, Texas USA.
12. **Themistocleous Charalambos**, Kokkinakis Dimitrios, Marie Eckerström, Kathleen Fraser, and Kristina Lundholm Fors (2018). Effects of Cognitive Impairment on vowel duration. *Proceedings of the 9th Tutorial & Research Workshop on Experimental Linguistics (ExLing2018) 28-30 August 2018 Paris, France*, 113–116.
13. **Themistocleous Charalambos** and Kokkinakis Dimitrios (2018). THEMIS-SV: Automatic classification of language disorders from speech signals. *ESOC 2018: European Stroke Organisation Conference, Gothenburg*.
14. den Ouden Dirk B., Hutchinson Angelica, Tsapkini Kyrana, and **Themistocleous Charalambos** (2018). Comparison of Automated Methods for Vowel Segmentation and Extraction of Acoustic Variables. *Clinical Aphasiology Conference, CAC 2018*, Austin, Texas USA.
15. Fraser Kathleen C., Lundholm Fors Kristina, Eckerström Marie, **Themistocleous Charalambos**, and Kokkinakis Dimitrios (2018). Improving the Sensitivity and Specificity of MCI Screening with Linguistic Information. *Language Resources and Evaluation Conference, (LREC)*. May 2018, Miyazaki (Japan).
16. Lundholm Fors Kristina, Fraser Kathleen C., **Themistocleous Charalambos**, and Kokkinakis Dimitrios (2018). Prosodic Features As Potential Markers of Linguistic and Cognitive Deterioration in Mild Cognitive Impairment. The Alzheimer's Association International Conference 2018. Chicago, USA. *Alzheimer's & Dementia*, 14-7: P1195-P1196. ISSN 1552-5260
<https://doi.org/10.1016/j.jalz.2018.06.1658>.
<http://www.sciencedirect.com/science/article/pii/S1552526018318302>.

17. Angelopoulou Georgia, Swathi Kiran, Kasselimis Dimitrios, Varkanitsa Maria, Erin Meier, Yue Pan, Tsolakopoulos Dimitrios, **Themistocleous Charalambos**, Vassilopoulou Sofia, Korompoki Eleni, Tountopoulou Argyro, Papageorgiou Georgios, Goutsos Dionysis, Evdokimidis Ioannis, and Potagas Constantin (2018). Pause patterns and speech errors in stroke patients with aphasia: cross-linguistic evidence from narrative speech. *Clinical Aphasiology Conference, CAC 2018*, Austin, Texas USA.
18. Fyndanis Valantis, Cameron Sarah, Caplan David, Davril Christina, Hagen Kaldhol Nina, Knoph Monica, Gram Simonsen Hanne, Theimann Ane, **Themistocleous Charalambos**, and Thomas Bak. (2018). The impact of successive bi-/multilingualism on the cognitive abilities of healthy older speakers: Evidence from Norwegian academics. *10th Annual Meeting of the Society for the Neurobiology of Language*. Toronto Canada.
19. Angelopoulou Georgia, Kiran Swathi, Kasselimis Dimitrios, Varkanitsa Maria, Meier Erin L., Pan Yue, Tsolakopoulos Dimitrios, **Themistocleous Charalambos**, Vassilopoulou Sofia, Korompoki Eleni, Tountopoulou Argyro, Papageorgiou Georgios, Roussos Petros, Goutsos Dionysis, Evdokimidis Ioannis, and Potagas Constantin (2018). Unsuccessful word retrieval in stroke patients with aphasia: cross-linguistic evidence from connected speech. *European Stroke Conference - ESC*, 2018. Athens, Greece.
20. Kokkinakis Dimitrios, Kristina Lundholm Fors, Eckerström Marie, and **Themistocleous, Charalambos**. (2018). Kan textforskning bidra till tidigare och säkrare demensdiagnostik? Forum för textforskning (FoT) 13. Lund, Sweden (in Swedish)
21. Fyndanis Valantis, **Themistocleous Charalambos**, and Christidou Paraskevi (2017). Time reference and aspect in agrammatic aphasia: Evidence from Greek. *Academy of Aphasia. 55th Annual Meeting November 5-7th, 2017 Baltimore, Maryland, USA. Frontiers in Human Neuroscience*. doi:10.3389/conf.fnhum.2017.223.00080.
22. Bernardy, Jean-Philippe, and **Themistocleous Charalambos** (2017). Modelling prosodic structure using Artificial Neural Networks. *Experimental Linguistics 2017*. 17-20. <https://arxiv.org/abs/1706.03952>.
23. Fyndanis, Valantis, **Themistocleous Charalambos**, and Christidou Paraskevi (2017). Time reference and aspect in agrammatic aphasia: Evidence from Greek. *Academy of Aphasia. 55th Annual Meeting November 5-7th, 2017 Baltimore, Maryland, USA. (Conference Presentation)*.
24. Georgia Angelopoulou, Kasselimis Dimitrios, Varkanitsa Maria, Fotiadis Panagiotis, **Themistocleous Charalambos**, Tsolakopoulos Dimitrios, Grillou Christally, Christidi Foteini, Karavasilis Efstratios, Argiropoulos George, Velonakis George, Karanassou Sofia, Nikitopoulou Zoi, Roussos Petros, Goutsos Dionysios, Kelekis Nikolaos, Evdokimidis Ioannis, and Potagas Constantin (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. *Society for the Neurobiology of Language 2017. November 8-10 in Baltimore, Maryland. (Conference Presentation)*.
25. Anastasi Eva, Logotheti Ageliki, Panayiotou Stavri, Serafim Marilena, and **Themistocleous Charalambos** (2017). *A sociophonetic study of Standard Modern Greek and Cypriot Greek Stop Consonants*. 12th International Conference on Greek Linguistics (ICGL12), 16 – 19 September 2015. Freie Universität Berlin, Germany.
26. **Themistocleous, Charalambos**, Angelandria Savva, and Andrie Aristodemou (2016). Effects of stress on fricatives: Evidence from Standard Modern Greek, 1026-1029. *Interspeech 2016*. <http://dx.doi.org/10.21437/Interspeech.2016-1057>.
27. **Themistocleous, Charalambos** & Angeliki Logotheti (2016). Standard Modern Greek and Cypriot Greek vowels: a sociophonetic study. *Modern Greek Dialects and Linguistics Theory* 6 (1), 178-184. <http://ejupunescochair.lis.upatras.gr/index.php/mgdl/article/view/2684>.
28. **Themistocleous, Charalambos** and Müller, Daniela (2015). The intonation of Albanian polar questions and statements: Prefocal Peaks. *6th International Conference of Experimental Linguistics. ExLing 2015. 26-27 June 2015. Athens, Greece*.

29. Aristodemou, Andrie, Savva, Angelandria, **Themistocleous, Charalambos** (2015). The Acoustics of Cypriot Greek Fricatives. *6th International Conference of Experimental Linguistics. ExLing 2015. 26-27 June 2015. Athens, Greece.*
30. **Themistocleous, Charalambos** and Papadopoulou Lena (2014). *Prenuclear pitch accents alignment: evidence from typical vs. atypical pre-school children.* 5th International Conference on Language Disorders in Greek (LDG5) Limassol, Cyprus, on the 30th and the 31st of May 2014 (Conference Presentation).
31. **Themistocleous, Charalambos** and Angeliki Logotheti (2014). *Standard Modern Greek and Cypriot Greek vowels: A sociophonetic study.* 6th International Conference on Modern Greek Dialects and Linguistic Theory (MGDLT6), September 25 – 28, 2014, Conference and Cultural Centre of the University of Patras (Conference Presentation).
32. **Themistocleous, Charalambos** and Tsiplakou, Stavroula (2013). High Rising Terminals in Cypriot Greek: Charting 'Urban' Intonation. 5th International Conference on Modern Greek Ghent. *Proceedings of the international on Modern Greek Dialects and Linguistic Theory*, 5 (1):445-462. <http://pwpl.lis.upatras.gr/index.php/mgdl/article/view/2609/2846>
33. **Themistocleous, Charalambos** (2012). *You sound Nicosian: Speech melody as an urban identity marker.* Paper presented at the Sociolinguistics Symposium 19, Freie Universität (Berlin, August 21 – 24, 2012) (Conference Presentation).
34. **Themistocleous, Charalambos**, Marianna Katsoyannou, Spyros Armosti, and Kyriaci Christodoulou (2012). *Cypriot Greek Lexicography: A Reverse Dictionary of Cypriot Greek.* 15th European Association for Lexicography (EURALEX) Conference, Oslo, Norway, 7 – 11 August 2012. <http://euralex.org/publications/cypriot-greek-lexicography-a-reverse-dictionary-of-cypriot-greek/>
35. **Themistocleous, Charalambos**, Marianna Katsoyannou, Spyros Armosti, and Kyriaci Christodoulou (2012). *Cypriot Greek Lexicography: An online lexical database.* 15th European Association for Lexicography (EURALEX) Conference, Oslo, Norway, 7 – 11 August 2012. <http://euralex.org/publications/cypriot-greek-lexicography-an-online-lexical-database/>
36. Christodoulou, Kyriaki, Marianna Katsoyannou, Spyros Armosti, and **Themistocleous, Charalambos** 2012. *Orthographic trends for a non-standardised dialect: the representation of the CiV sequence in Cypriot Greek.* 7th Congress of Dialectology and Geolinguistics (Vienna, Austria, 23 – 28 July 2012).
37. **Themistocleous, Charalambos** (2011b). *Computational Greek Phonology: IPAGreek.* The 10th International Conference of Greek Linguistics. Komotini, Greece (poster presentation).
38. **Themistocleous, Charalambos** (2011c). *The alignment of the Cypriot Greek prenuclear accent.* 20th International Symposium on Theoretical and Applied Linguistics. Thessaloniki, Greece (Conference Presentation).
39. Tsiplakou Stavroula, Arvaniti Amalia, Baltazani Mary, Adamou Evi, Gryllia Stella, Terkourafi Marina, **Themistocleous Charalambos**, Vergis Nikos and Spyros Armosti. 2011. Intonational variation in polar and wh-questions across seven varieties of Greek. Paper presented at the 6th International Conference on Language Variation in Europe, Freiburg, Germany.
40. Armosti Spyros, Katsoyannou Marianna, Christodoulou Kyriaci, and **Themistocleous, Charalambos** (2011). *Greek Cypriots writing Cypriot Greek: tendencies in the written representation of postalveolar consonants (In Greek).* The 10th International Conference of Greek Linguistics. Komotini, Greece.
41. Tsakmakis, Antonis and **Themistocleous, Charalambos** (2011). Keimeniki organosi kai tropikotita stis stratiotikes parakeleuseis tou Thucydidi ('Textual structure and modality in Thucydides 'military exhortations'). *Proceedings of the 4th International Symposium on Thucydides.* Athens Greece.
42. **Themistocleous, Charalambos** and Kyriacou, Stelios. (2010). Focus prominence and tonal alignment in Athenian and Cypriot Greek. *ExLing 2010*, 25 – 27 August, Athens, Greece, Athens.

43. **Themistocleous, Charalambos** and Kyriacou Stelios (2010). Effects of tonal environment on the alignment of boundary tone in Cypriot Greek (epidraseis tou tonikou perivallontos stin efthigrammisi tou tonou oriou stin Kypriaki Elliniki). *5th Athens Postgraduate Conference of the Department of Philology of the National and Kapodistrian University of Athens, 29 – 31 May 2009*. Athens: University of Athens.
44. Efsthathopoulou, Niki and **Themistocleous, Charalambos** (2010). A comparative study between Greek and English voiceless stop VOTs produced by Cypriot Greeks. *5th Athens Postgraduate Conference of the Department of Philology of the National and Kapodistrian University of Athens, 29 – 31 May 2009*. Athens: University of Athens.
45. **Themistocleous, Charalambos** (2008). Focus Effects on Syllable Duration in Cypriot Greek. *ExLing 2008*. Athens, Greece. 241 – 244.
46. Botinis, Antonis Bakakou Aikaterini and **Themistocleous, Charalambos** (2007a). A multifactorial Analysis of Greek Discourse. *16th International Congress of Phonetic Sciences (ICPhs 2007)*, 1341 – 1344.
47. Botinis, Antonis, Bakakou Aikaterini and **Themistocleous, Charalambos** (2007b). Linguistic Factors and Discourse Turn in Greek (Glossologikoi paragontes kai Synomiliaki Seira sta Ellinika). *Proceedings of the 8th International Conference of Greek Linguistics*. Ioannina, Greece.
48. Gkini, Anna, **Themistocleous, Charalambos**, Iosifelli, Ioanna, Xefteri, Maria, Christopoulou, Amaryllis, Nikolaenkova, Olga, and Papageorgiou, Giorgos (2005). *Lexikogrammatikes ptyches tis glossas ton neon: meleti vasismeni se ilektronika somata keimenon* (Lexical and grammatical aspects of youth language: a corpus based study). *Praktika Diethnous Synedriou "I glossa se enan kosmo pou allazei"*, Didaskaleio Xenon Glosson tou Panepistimiou Athinon, Filosofiki Scholi, 9-11/12/2005.
49. Botinis, Antonis, Kostopoulos, Yiannis, and Nikolaenkova, Olga, **Themistocleous, Charalambos** (2005). Syntactic and tonal correlates of focus in Greek and Russian. *Proceedings Fonetik 2005, the XVIIth Swedish Phonetics Conference*. Goteborg, Sweden.
50. Botinis, Antonis, Alexandri Christina, and **Themistocleous, Charalambos** (2005). Production of focus in Greek and Russian. *7th International Conference of Greek Linguistics*. York, UK (oral presentation).
51. Botinis, Antonis, **Themistocleous, Charalambos** and Nikolaenkova, Olga (2005). Perception of focus in Greek and Russian. *7th International Conference of Greek Linguistics*. York, UK (oral presentation).
52. Botinis, Antonis, Christofi, Marios, **Themistocleous, Charalambos** and Kyprianou, Angeliki (2004). Duration correlates of stop consonants in Cypriot Greek. *Proceedings of Fonetik 2004, the XVIIth Swedish Phonetics Conference*. Stockholm, Sweden.

CONFERENCE PROCEEDINGS

1. Kokkinakis, Dimitris, Lundholm Fors Kristina, **Themistocleous, Charalambos**, Antonsson, Marie, & Eckerström, Marie. (2020). *Proceedings of LREC 2020 Language Resources and Evaluation Conference 11-16 May 2020: 3rd RaPID Workshop, Resources and Processing of Linguistic, Paralinguistic and Extra-linguistic Data from People with Various Forms of Cognitive / Psychiatric / Developmental Impairments*. Marseille, France.
2. (Two Volumes): Demopoulos Charalambos, Kontaksis Kassiani, Kostala Paraskevi, Mylona Katerina, Nastos Vasilis, Savvidou Vivi, and **Themistocleous, Charalambos** (2012). *Proceedings of the 6th Athens Postgraduate Conference of the Faculty of Philology National and Kapodistrian University of Athens 13 – 15 May 2011* (Volume A and Volume B). Athens: University of Athens. ISSN: 2241-3030 VOLUME 1: ISBN: 978-960-466-109-1, VOLUME 2: ISBN: 978-960-466-109-2.
3. Vrynioti Eleni, Georgakopoulos Athanasios, **Themistocleous, Charalambos**, Kontonikolis Christophoros, Kousoulini Vasiliki, Papadopoulou Angeliki, Stamatelopoulos Nikitas, Fragaki Georgia, and Fragouli Nandia (Eds) (2010). *Proceedings of the 5th Athens Postgraduate Conference of the Faculty of*

BOOK REVIEWS

Themistocleous, Charalambos (2015). Book Review of Caspers, Johanna, Chen, Yiya, Heeren, Willemijn, Pacilly, Jos, Schiller, Niels, and van Santen, Ellen. (2014). *Above and beyond the segments : experimental linguistics and phonetics*. Amsterdam; Philadelphia: John Benjamins Publishing Company. *LinguistList* 26.5107, 2015.

THESES

1. **Themistocleous Charalambos** (2011). Prosodia kai plirophoriaki domi stin Ellinici (Prosody and Information Structure in Greek). *PhD Thesis*. University of Athens Greece.
2. **Themistocleous Charalambos** (2008). Lengthening Effects of Prosodic Constituents in Athenian Greek and Cypriot Greek. *MA Thesis*. University of Skövde.
3. **Themistocleous Charalambos** (2007). Structuring discourse turn in conversations (In Greek). *MA Thesis*. University of Athens.

INVITED TALKS

2020 *tDCS effects on apraxia of speech in individuals with the non-fluent variant of Primary Progressive Aphasia*. Seminar Talk at Johns Hopkins Cognitive Science - Professor Brenda Rapp.

Speech in individuals with Primary Progressive Aphasia. Cyprus Acquisition Team - Natalia Pavlou University of Cyprus. Nicosia, Cyprus.

2019 *Speech profile of individuals with Primary Progressive Aphasia*. Baltimore Brain Series (selection committee members: National Institute on Drug Abuse (NIDA) – Andrew Wright, Sarah Aronson, and Kauê Kosta; Johns Hopkins University – Kurt Fraser, Aparna Shah, and Alexei Bygrave; University of Maryland, Baltimore: UMB Home – Lace Riggs and Megan Fox.)

2018 *Clinical Markers from Speech Signals and Natural Language Processing: A preliminary study from picture description data*. (Stroke Cognitive Outcomes and REcovery Lab, Dr. Argye E. Hillis). Johns Hopkins University, April 17, 2018

Linguistic predictors of MCI and AD. School of Philosophy. 'National and Kapodistrian University of Athens. Athens, Greece, February 27, 2018.

2017 *Eliciting variant and invariant properties from speech dynamics*. Faculty of Linguistics, Philology and Phonetics, Centre for Linguistics and Philology, Oxford University; Wednesday, September 6, 2017.

Language variation and change: evidence from speech acoustics. *Applied Linguistics*. University of Warwick, March 8, 2017.

Acoustic predictors from prosody and segmental structure of atypical speech productions. Department of Swedish Unit: the Swedish Language Bank (meeting organizer Dr. Dimitris Kokkinakis), December 4, 2017.

Deciphering the speech signal: speakers and communities of speakers. <http://www.clt.gu.se/event/2017-11-30/clt-workshop-2017>, November 30, 2017.

2016 *Eliciting information from speech signals: Linguistics, signal processing, and machine learning*. October 13, 2016 Chalmers University of Technology. Sweden.

- Melodic patterns in speech communication: Interactions and heterogeneity.* University of Gothenburg. Sweden, March 1, 2016.
- Greek vowels and the nature of acoustic gradience.* Gothenburg. Research seminars. University of Gothenburg. Sweden, February 18, 2016.
- Workshop: Charalampos Themistokleous, *Language Variation and Change: Evidence from Modern Greek Vowels.* Seeger Center for Hellenic Studies. Princeton University. USA, November 20th 2015.
- 2015 *Learning Linguistic Categories from Acoustic Structure: Towards a Speech Time Frequency Model.* Centre for Linguistic Theory and Studies in Probability (CLASP). Inauguration Workshop. Institutionen för filosofi, lingvistik och vetenskapsteori. Humanistiska fakulteten. Göteborgs universitet. Sweden, August 27th 2015.
- Timing in Speech Melody.* MAMPF: Moderne Ansätze und Methoden der Phonetischen Forschung (NOSH: New Observations in Speech and Hearing) talk series. Ludwig Maximilian University Munich. Germany, June 17th 2015.
- 2014 *Seeking an Anchorage. Stability and Variability in Tonal Alignment of Rising Prenuclear Pitch Accents.* University of Central Lancashire (UCLAN). Cyprus, March 31th 2014.
- 2013 *Biolinguistic Foundations of Tonal Patterns: Evidence from Speech Perception.* “CAT within CAT” presentations organized by the Cyprus Acquisition Team. Cyprus, November 1st 2013.
- 2012 *Prosodic Structure: Experimental Evidence from Segmental Anchoring and the Syllabification of Geminates.* Cyprus Linguistics Association (CyLing) at the University of Cyprus. Cyprus, October 24th 2012.
- The phonology of Ancient Greek.* Open University of Cyprus, (co-ordinator: Dr. Maria Pavlou, Open University of Cyprus, Programme “Greek Civilization”). Cyprus, October 14th 2012.
- Computational Linguistics.* Lecture Series: Invited Local Linguist; co-ordinator: Dimitra Karoulla-Vrikki. European University, Cyprus. Cyprus, March 15th 2012.
- 2011 *Information structure and prosody. Evidence from the nuclear pitch accents.* Cyprus Linguistics Association (CyLing). Cyprus, October 26th 2011.
- Information Structure and Prosody in Athenian and Cypriot Greek.* University of Athens. Greece, May 20th 2011.

OUTREACH ACTIVITIES

- 2017 Talk to the general public: “How do shibboleths sound?” the talk was open for the general public and for invited students from upper secondary schools (mainly from Gothenburg). The talk was part of the “Open House Day” (ÖPPET HUS) organized by the Department of Philosophy, Linguistics and Theory of Science (FLOV) March 30 at 16:00 -19:00 (https://www.gu.se/english/about_the_university/news-calendar/Calendar/Event_Detail/?eventId=70125679705).
- 2012 Presentation and Panel Discussion “The Linguistic Landscape of Cyprus” authored by Dr. Andreas Papapavlou (http://www.lapithos.org.cy/uploadfiles/newspaper_dec_2012_english.pdf).

OTHER TRAINING

- **Apr. 2018** California Specific Title IX and Harassment Prevention Training, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Conflict of Interest and Commitment, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Electronic Information Security and Data Management Training, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Health Insurance Portability and Accountability Act (HIPAA) for Research, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Patient Privacy for Workforce Members, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Preparing for an Active Shooter in the Clinical and Non-clinical Environment, Johns Hopkins University, Baltimore MD, USA.
- **Apr. 2018** Title IX and Harassment Prevention Training, Johns Hopkins University, Baltimore MD, USA.

NATURAL LANGUAGE PROCESSING AND MACHINE LEARNING APPLICATIONS

(see www.charalambosthemistocleous.com and published articles for details on published projects)

1. i. *THEMIS*, a computer application and website that aims
 - to provide researchers and clinicians the tools to transcribe speech automatically,
 - segment acoustic productions into vowels and consonants, and
 - analyze linguistically (phonology, morphology, syntax, and semantics) language productions in user friendly manner using a web-interface.
2. ii. *Pptools*, a python library for the acoustic analysis of speech productions (currently under development).
3. *NLP Editor*. NLP Editor is a simple text editor that facilitates the linguistic analysis of texts (Mac, Linux, and Windows). It converts text to the International Phonetic Alphabet. *Phonetics IPA* was an older version for Windows systems.
4. *Software for speech pathology*: Word Repetition App, Word Repetition Span App.
5. *Keyboard Layouts*. Dialectal Greek Keyboard Layout; Dialectal Greek Polytonic Keyboard Layout; International Phonetic Alphabet Keyboard Layout.
6. *Web Design*. <http://lexcy.library.ucy.ac.cy/Lexicon.aspx>. The 'Syndychies' Website, this is a Dictionary Website that includes IPA transcription for Cypriot Greek (an application of IPA converter algorithm) and text-to-speech feature (the latest version will be online at the 15th of November) Several web-working activities in academia: (e.g. MedEastern, Webmaster for Cyprus Linguistics Society (Cyling)).

COMPUTER SKILLS

Machine Learning and Artificial Intelligence: Theano and Tensorflow (= Google's AI platform) * *Phonetics:* PRAAT, Audacity, Wavesurfer, and Adobe Audition * *Statistics:* R and Python Statistical Libraries * *Project Management:* Org Mode * *Programming Languages:* MATLAB, R, Julia, C#, Python * *Typesetting and Markup:* L^AT_EX; org mode (emacs), XML, HTML, Markdown * *Text Editors:* Emacs (Aquamacs), Atom * *Web design* * *Databases* Sql, and MySQL.

REVIEW OF MY WORK

Review of Tsakmakis, Antonis and **Themistocleous, Charalambos** (2013). *Textual Structure and Modality in Thucydides' Military Exhortations*. In A. Tsakmakis and M. Tamiolaki (Eds). *Thucydides Between History and Literature* (pp. 391 – 408). Berlin, Walter de Gruyter, in Pavel Nývlt (2014). Review of "Antonios Tsakmakis – Melina Tamiolaki (eds.), *Thucydides between History and Literature*. Berlin – Boston, Walter de Gruyter (Trends in Classics – Supplementary Volume, 17) 2013, xv, 531 pp. ISBN 978-3-11-029768-3". *Eirene. Studia Graeca et Latina I-II*. 348–353.

ACADEMIC SOCIETIES AND ASSOCIATIONS

1. Regular Member of the Academy of Aphasia (elected, active).
2. Society for the Neurobiology of Language (member)
3. International Society of Experimental Linguistics (ExLing) (active member and member of its advisory board)
4. Linguistic Society of America (LSA) (active member 2019-2020)
5. International Phonetic Association (IPA) (member 2014-2016)
6. International Speech Communication Association (ISCA) (member 2014-2017).
7. International Exchange Alumnus, US Government.
8. Cyprus Linguistic Society (CyLing) and between 2011–2015 member of the board.
9. Cyprus (Language) Acquisition Team (CAT).

PROFESSIONAL ADVISORY BOARD MEMBERSHIPS

Member of the Advisory Board of the International Society of Experimental Linguistics

ACADEMIC SERVICE

Reviewer Journals

2020

- *Journal of the International Neuropsychological Society*

- *PLOS One*

2019 *PLOS One* (2 reviews)

Computer Speech and Language

Human Brain Mapping

Brain and Language

Frontiers in Communication (2 reviews)

Clinical Linguistics & Phonetics

Journal of Biolinguistics (2 reviews)

2018 *Clinical Linguistics & Phonetics*

Frontiers in Neurology

Speech Communication

2017 *Frontiers in Psychology*

Journal of Logic and Computation

Journal of Biolinguistics

2016 *Phonetica*

Journal of the International Phonetic Association (JIPA)

Lingua

Journal of Biolinguistics

2015 *Journal of the Acoustical Society of America*

Journal of Biolinguistics

Reviewer Conferences

Experimental Linguistics Workshop (ExLing2019) (2019) (4 papers); Special Session Neurodegeneration and Language (Neural) (2019) (4 papers); *Conference on Logic and Machine Learning in Natural Language (LaML)*.

2015 *Reviewer National Language Curricula*

Ministry of Education and Culture, Cyprus.

Organizing Committee: International Conferences and Workshops

2020 International Advisory Committee of the “Experimental Linguistics 2019 (Exling 2020)”

2019 Organizing Committee of the special session on language disorders Neurodegeneration and Language (NEURAL 2019) which took place in the context of Experimental Linguistics 2019 (ExLing 2019) in Lisbon, Portugal, 27 September 2019, under the auspices of Centro de Linguística da Universidade de Lisboa.”

2019 International Advisory Committee of the “Experimental Linguistics 2019 (Exling 2019)”.

2011–2018 “Experimental Linguistics (ExLing)” Member of the organizing committee of ExLing 2011 (Paris, France), ExLing 2012 (Athens, Greece), ExLing 2015 (Athens, Greece), and ExLing 2018 (Paris, France).

2018 Organizing Committee of the “resources and processing of linguistic, para-linguistic and extra-linguistic data from people with various forms of cognitive/psychiatric impairments (RaPID-2)”, Tuesday, 8th of May 2018, Miyazaki, Japan). Workshop as part of the Language Resources and Evaluation Conference (LREC), 7-12 May 2018, Miyazaki, Japan.

2017 Organizing committee of the “Conference on Logic and Machine Learning in Natural Language (LaML).” Conference dates: June 12-14, 2017. University of Gothenburg.

2009 “5th Athens Postgraduate Conference of the Department of Philology, National and Kapodistrian University of Athens, 29-31 May 2009”

2011 “6th Athens Postgraduate Conference of the Department of Philology, National and Kapodistrian University of Athens, 13-15 May 2011.”

Managerial

2014 – current *Journal of Biolinguistics* Task Team

Institutional Responsibilities:

2017 Postdoctoral Representative, CLASP

LANGUAGES

Greek (native), English (fluent), Swedish (basic), French (writing, reading), Italian (writing, reading), Classical Greek, and Latin.

Updated July 18, 2020