

Yael Arbel, Ph.D., CCC-SLP

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EDUCATION

Post-doctoral Research Fellowship, University of South Florida, Department of Psychology, Cognitive Psychophysiology Laboratory - 2006-2009
Cognitive Neuroscience, Mentor: Emanuel Donchin.
Ph.D., University of Texas at Dallas, School of Behavioral and Brain Sciences - 2005
Human Development and Communication Sciences, Minor: *Cognition and Neuroscience*.
M.S., University of Texas at Dallas, School of Behavioral and Brain Sciences - 2002
Communication Sciences and Disorders.
B.A., Tel-Aviv University, School of Medicine, Department of Communication Disorders – 1997
Speech-Language Pathology and Audiology.

POSITIONS AND EMPLOYMENT

2022-present	Research Associate, Harvard Medical School
2021-present	Professor, MGH-IHP, Department of <i>Communication Sciences and Disorders</i>
2015-2021	Associate Professor, MGH-IHP, Department of <i>Communication Sciences and Disorders</i>
2015-present	Co-Director, <i>Cognitive Neuroscience Group</i> (CNG), MGH-IHP
Fall 2013 – 2015	Assistant Professor, MGH-IHP, Department of <i>Communication Sciences and Disorders</i>
Fall 2012 – 2013	Visiting Assistant Professor, Northeastern University, Department of <i>Speech-Language Pathology and Audiology</i>
2009 - 2012	Assistant Professor, University of South Florida, Department of <i>Communication Sciences and Disorders</i> .
2006 - 2009	Postdoctoral Fellow, University of South Florida, Department of Psychology, <i>Cognitive Psychophysiology Laboratory</i> (CPL) directed by Dr. Emanuel Donchin.
2006-2008	Speech Language Pathologist - <i>Clinical Fellow</i> , Kid-Pro Therapy Services, Tampa, FL.
2003 – 2006	Research Assistant - University of South Florida, Department of Psychology, <i>Cognitive Psychophysiology Laboratory</i> .
2000 – 2002	Research Assistant - University of Texas at Dallas, School of Behavioral and Brain Sciences, <i>Child Language lab</i> directed by Dr. Sandy Friel-Patti.
1997-2000	Speech Language Pathologist, Child Developmental Center, Israel.

RESEARCH SUPPORT

National Institutes of Health (NIH-NIDCD)	R01 (DC018295-01A1)	Arbel (PI)	7/20-6/25
Feedback-based learning in children with language impairments,			

Total award: \$1.8M

National Institutes of Health (NIH-NIDCD) Dissociating verbal mediation and executive function in children with developmental language disorder	F32 (F32DC020095) PI: Baron	Arbel (Mentor)	6/22-6/24
National Institutes of Health (NIH-NIDCD) Feedback-based learning in children with language impairments, Total award: \$477, 908	R15 (R15 DC016438)	Arbel (PI)	6/18-5/21
American Speech-Language Hearing Foundation. A Neurophysiological Examination of Feedback-Based Learning in Severe Traumatic Brain Injury	PI: Zipse	Arbel (Co-I)	1/18-12/19
National Science Foundation (NSF) A neurophysiological examination of developmental changes and individual differences in feedback processing in children Total award: \$564,500		Arbel (PI)	7/17-6/21
MGH Institute of Health Professions 2014 Faculty Research Fellowship A neurophysiological examination of individual differences in the efficiency of feedback processing		Arbel (PI)	7/14-6/15
University of South Florida College of Behavioral & Community Sciences internal grant. The Brain Computer Interface (BCI) as a binary switch		Arbel (PI)	11/09-11/10
American Speech-Language-Hearing Foundation, 2006 Research Grant Competition for New Investigators. Evaluating the impaired error processing of children with Specific Language Impairment.		Arbel (PI)	11/06-11/07

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

1. Gul, A., Baron, L., & **Arbel, Y.** (under review). The contribution of theta and delta to feedback processing in children with developmental language disorder.
2. Gul, A., Baron, L., & **Arbel, Y.** (2022). Feedback processing during probabilistic learning in children with developmental language disorder: an ERP study. *Journal of Speech Language and Hearing Research*. https://doi.org/10.1044/2022_JSLHR-21-00612
3. Baron, L., & **Arbel, Y.** (ePub ahead of issue). Inner speech and executive function in children with language impairments: Implications for assessment and intervention. *Perspectives of the ASHA Special Interest Groups. SIG 1 Language Learning and Education*. https://doi.org/10.1044/2022_PERSP-22-00042
4. Baron, L., & **Arbel, Y.** (2022). An implicit-explicit framework for review of intervention methods in developmental language disorder. *American Journal of Speech Language Pathology*, 1-17. https://doi.org.treadwell.idm.oclc.org/10.1044/2022_AJSLP-21-00172

5. *Urquhart, J., Gul, A., Fox, A., Parikh, A., & **Arbel, Y.** (2022). Artificial Grammar Learning in children with Developmental Language Disorder. *Journal of Speech Language and Hearing Research*. https://doi.org/10.1044/2021_JSLHR-21-00050
6. *Tilton-Bolowsky, V., Vallila Rohter, S, & **Arbel, Y.** (2021). Strategy development and feedback processing during complex category learning. *Frontiers Psychology, Cognition*. 12:672330. doi: 10.3389/fpsyg.2021.672330
7. **Arbel, Y.**, Fitzpatrick, I., & He, X. (2021). Learning with and without Feedback in Children with Developmental Language Disorder. *Journal of Speech Language and Hearing Research*, 64, 5, 1696-1711.
8. **Arbel, Y.**, & Fox, A. (2021). Electrophysiological examination of feedback-based learning in 8-11-year-old children. *Frontiers Psychology, Cognition*, 12, 640270. doi:10.3389/fpsyg.2021.640270
9. **Arbel, Y.**, *Feeley, J. E., & He, X. (2020). The effect of feedback on attention allocation in category learning: an eye-tracking study, *Frontiers Psychology, Cognition*, 11, 559334.
10. **Arbel, Y.** (2020). The effect of task difficulty on feedback related ERPs in children. *International Journal of Psychophysiology*, 153, 1-7.
11. *Chandregowda, A., **Arbel, Y.**, & Donchin, E. (2020). Seeking Neurophysiological Manifestations of Speech Production: An ERP study. *International Journal of Psychophysiology*, 147, 137-146.
12. *Kim, S., & **Arbel, Y.** (2019). Immediate and delayed auditory feedback in declarative learning: An examination of the feedback related Event Related Potentials. *Neuropsychologia*, 129, 255-262.
13. **Arbel, Y.**, McCarty, K. N., Goldman, M., Donchin, E., & Brumback, T. (2018). Developmental changes in the feedback related negativity from 8 to 14 years. Special Issue, *International Journal of Psychophysiology*.
14. **Arbel, Y.**, *Hong, L., Baker, T. E., & Holroyd, C. B. (2017). It's all about timing: An electrophysiological examination of feedback-based learning with immediate and delayed feedback. *Neuropsychologia*, 99, 179-186,
15. **Arbel, Y.**, & Wu, H. (2016). A Neurophysiological examination of quality of learning in a feedback-based learning task. *Neuropsychologia*, 93(A), 13-20. <http://dx.doi.org/10.1016/j.neuropsychologia.2016.10.001>
16. **Arbel, Y.**, *Murphy, A., & Donchin, E. (2014). On the utility of positive and negative feedback in a paired-associate learning task. *Journal of Cognitive Neuroscience*. 26(7), 1445-1453.
17. **Arbel, Y.**, & Donchin, E. (2014). Error and feedback processing by children with Specific Language Impairment—an ERP study. *Biological Psychology*, 99, 83-91.
18. **Arbel, Y.**, *Goforth, K., & Donchin, E. (2013). The Good, the Bad, or the Useful? The examination of the relationship between the Feedback Related Negativity (FRN) and long-term learning outcomes. *Journal of Cognitive Neuroscience*, 25(8), 1249-1260.
19. **Arbel, Y.** (2013). Harnessing Brain Signals for Communication. *The American Speech-Language Hearing Association (ASHA) Leader*, January 01, 2013.
20. *Brumback, T., **Arbel, Y.**, Goldman, M. S., & Donchin, E. (2012). Efficiency of responding to unexpected information varies with sex, age, and pubertal development in early adolescence. *Psychophysiology*, 49(10), 1330-1339.
21. *Li, K., Sankar, R., **Arbel, Y.**, & Donchin, E. (2012). A New Single Trial P300 Classification Method. *International Journal of E-Health and Medical Communications*, 3(4), 31-41.
22. **Arbel, Y.**, & Donchin, E. (2011). When a child Errs: The ERN and the Pe Complex in Children. *Psychophysiology*, 48(1), 55-63. <http://www3.interscience.wiley.com/cgi-bin/fulltext/123478290/PDFSTART>.

23. **Arbel, Y.**, Donchin, E. (2011). How large the sin? A study of the Event Related Potentials elicited by errors of varying magnitude. *Psychophysiology*, 48(12), 1611-1620
<http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8986.2011.01264.x/full>.
24. **Arbel, Y.**, Spencer, K. & Donchin, E. (2011). The N400 and the P300 are not all that independent. *Psychophysiology*, 48(6), 861-875.
<http://onlinelibrary.wiley.com/doi/10.1111/j.1469-8986.2010.01151.x/full>
25. Mak, J. N., ‡**Arbel, Y.**, Minett, J. W., McCane, L. M., Yuksel, B., Ryan, D., Thompson, D., Bianchi, L., & Erdogmus, D. (2011). Optimizing the P300-based BCI: current status, limitations and future directions. *Journal of Neural Engineering*, 8(2), 1-7. (‡ equal contribution).
26. **Arbel, Y.**, & Donchin, E. (2009). Parsing the Componential Structure of Post Error ERPs: A Principal Component Analysis of ERPs following errors. *Psychophysiology*, 46(6), 1288-1298.

OTHER PUBLICATIONS & BOOK CHAPTERS

1. Sellers, E. W., **Arbel, Y.**, & Donchin, E. (2012). P300 Event-Related Potentials and Related Activity in the EEG. In Wolpaw, J. R. & Wolpaw, E. W. *Brain-Computer Interfaces: Principles and Practice*. Oxford University Press. Oxford, New York.
2. *Li, K., Raju, V. N., Sankar, R., **Arbel, Y.**, & Donchin, E. (2011). Advances and challenges in signal analysis for single-trial P300-BCI. In *Foundations of Augmented Cognition*. Directing the Future of Adaptive Systems (pp. 87-94). Springer Berlin Heidelberg.
3. *Li, K., Sankar, R., **Arbel, Y.**, & Donchin, E. (2009). P300 Based Single Trial Independent Component Analysis on EEG Signal. *Foundations of Augmented Cognition. Neuroergonomics and Operational Neuroscience Lecture Notes in Computer Science*, 2009, 5638/2009, 404-41.
4. Donchin, E., & **Arbel, Y.** (2009). P300 Based Brain-Computer Interfaces: A Progress Report. *Foundations of Augmented Cognition. Neuroergonomics and Operational Neuroscience Lecture Notes in Computer Science*, 5638/2009, 724-731.

PEER-REVIEWED PRESENTATIONS

1. Gul, A., Baron, L., Fitzpatrick, I., Parikh, A., Rushi, G., & **Arbel, Y.** (2022). Feedback processing in children with developmental language disorder (DLD) – a comparison between declarative and non-declarative learning. *The 2022 Symposium on Research in Child Language Disorders (SRCLD)*, Madison, WI.
2. *Rishi, P., Nunn, K., Vallila-Rohter, S., **Arbel, Y.**, & Pittmann, R. (2021). Identifying Individual Learning Profiles for Errorful and Errorless Aphasia Therapy
3. *Fitzpatrick, I., Gul, A., & **Arbel, Y.** (2021). The effect of feedback timing on learning in children with atypical language development. Annual meeting of the *Society of Neuroscience*, 2021, Chicago, IL (virtual).
4. *Parikh, A., Gul, A., Fox, A., & **Arbel, Y.** (2021). Developmental changes in the relationship between self-monitoring and external feedback processing – An ERP study. The 2021 Annual meeting of the *Society for Psychophysiological Research (SPR)*.
5. *Rishi, P., Nunn, K., **Arbel, Y.**, Pittmann, R., & Vallila-Rohter, S. (2021). Examining Cognitive-Linguistic and Learning Abilities in PWA Utilizing Language Retrieval and Novel Object Pairing Tasks. The 2021 *ASHA Convention*.
6. Baron, L. S., Fitzpatrick, I., & **Arbel, Y.** (2021). Category learning with and without feedback in children with developmental language disorder. The 2021 *Virtual Symposium on Research in Child Language Disorders (SRCLD)*.

7. Gul, A., Fitzpatrick, I., & **Arbel, Y.** (2021). Feedback processing in children with developmental language disorder, a time-frequency analysis. The 2021 *Virtual Symposium on Research in Child Language Disorders* (SRCLD).
8. *Tilton-Bolowsky, V., Vallila Rohter, S., Borders, J., Hong, L., & **Arbel, Y.** (2020). Strategy Implementation and Feedback Processing During a Probabilistic Category Learning Task. The 2020 *CNS Annual meeting* in Boston, MA.
9. *Nunn, K., Creighton, R., Tilton-Bolowsky, V., **Arbel, Y.**, Vallila-Rohter, S. (2020). Using event related potentials to understand the effect of feedback timing on learning systems. *CNS Annual meeting* in Boston, MA.
10. *Nunn, K., Creighton, R., Tilton-Bolowsky, V., **Arbel, Y.**, Vallila-Rohter, S. (2020). Age matters: Understanding feedback processing in older adults and implications for aphasia treatment. *58th Annual Academy of Aphasia Meeting*, October 18th-20th, 2020.
11. *Fitzpatrick, I., He, X., Surani, Z., & **Arbel, Y.** (2020). The Relationship Between Feedback Processing and Working Memory in declarative learning of Children with Typical and Atypical Language Development. The 2020 *CNS Annual meeting* in Boston, MA.
12. *Karthikeyan, S., Larson, C., & **Arbel, Y.** (2020). Feedback processing in declarative learning – an ERP study. The 2020 *CNS Annual meeting* in Boston, MA.
13. *Alam, S., & **Arbel, Y.**, (2020). The P600 as a measure of Implicit Knowledge in Artificial Grammar Learning. The 2020 *CNS Annual meeting* in Boston, MA.
14. *He, X, & **Arbel, Y.** (2020). The effect of feedback validity on learning and its relation to self-efficacy in children: an ERP study. The 2020 *CNS Annual meeting* in Boston, MA.
15. *Urquhart, J., & **Arbel, Y.** (2019). Artificial Grammar Learning in Two Modalities: How do children with DLD perform? The annual meeting of the *American Speech Language Hearing Association (ASHA)*, Orlando, FL.
16. *Meredith, G., Kenworthy, J., **Arbel, Y.**, & Zipse, L. (2019). Working Memory & Learning Potentials in Individuals with Traumatic Brain Injury: An Electrophysiological Study. The annual meeting of the *American Speech Language Hearing Association (ASHA)*, Orlando, FL.
17. *Moore, I., Larson, C., Fox, A., & **Arbel, Y.** (2019). Feedback-Related ERPs Predict Learning Speed. *Cognitive Neuroscience Society*. CA.
18. *Larson, C., Fox, A. & **Arbel, Y.** (2019). The effect of feedback validity on learning in children and adults: an electrophysiological study. *Cognitive Neuroscience Society*. CA.
19. *Kim, S., & **Arbel, Y.** (2018). An electrophysiological examination of feedback-based learning in monolinguals and bilinguals with auditory feedback. *2018 ASHA convention*, Boston, MA.
20. *Kim, S., & **Arbel, Y.** (2018). An electrophysiological examination of feedback-based declarative learning with immediate & delayed auditory feedback. *2018 ASHA convention*, Boston, MA.
21. Chandregowda, A., **Arbel, Y.** & Donchin, E. (2018). Neurophysiological correlates of speech motor control. *Society for Neural Control of Movement (NCM)*, in Santa Fe, New Mexico.
22. *Hong, L., & **Arbel, Y.** (2016). Learning & Feedback Timing: Comparing Immediate & Delayed Feedback in Healthy Adults. *2016 ASHA convention*, Philadelphia, PA.
23. *Borders, J., & **Arbel, Y.** (2016). Feedback Processing in Paired Associate Declarative Learning of Linguistic and Nonlinguistic Paradigms. The 2016 *CNS Annual meeting* in New York, NY.
24. Zipse, L., & **Arbel, Y.** (2016). Electrophysiological Evidence for Learning Differences in Traumatic Brain Injury. The 2016 *CNS Annual meeting* in New York, NY.
25. Chandregowda, A., **Arbel, Y.**, & Donchin, E. (2016). Hand Motor Task: Lateralized readiness potentials and hemispheric asymmetry. Poster presented at the Society for Psychophysiological Research (SPR) 56th annual meeting, Minneapolis, Minnesota. Published abstract. *Psychophysiology*, 53, Issue Supplement S1, S52, Poster 2-61.
26. Riotte, M, Arbel, Y, & Maxwell, L. (2015). Measuring First-Year Graduate Students Clinical Confidence: Does it Improve? Poster presentation. *ASHA convention*, November 2015.

27. *Chandregowda, A., **Arbel, Y.**, Lucchio, S., Manasterski, C., & Donchin, E. (2015). Detecting errors in others' speech: an ERP investigation. Poster presented at the Society for Psychophysiological Research (SPR) 55th annual meeting, Seattle, Washington. Published abstract. *Psychophysiology*, 52, Issue Supplement S1, S36, Poster 4-90.
28. Lynn, K. S., **Arbel, Y.**, & Barrett, L. F. (2015). Neurophysiological correlates of feedback sensitivity in an emotion perception decision. Annual Conference of the *Social and Affective Neuroscience Society*, 23-25 April 2015, Boston.
29. *Chandregowda, A., **Arbel, Y.** & Donchin, E. (2014). *Electrophysiological Activity Related to Speech: Seeking Manifestations of Motor Preparation, the 2014 ASHA convention, Orlando FL.*
30. *Chandregowda, A., **Arbel, Y.** & Donchin, E. (2013). Effects of monaural versus binaural stimulus presentation on the Novelty P3. Annual meeting of the *Cognitive Neuroscience Society (CNS)*, 2013.
31. *Murphy, A., **Arbel, Y.**, & Donchin, E. (2012). Evaluative feedback vs. informative feedback: what difference does it make? *Psychophysiology*, 49, S1.
32. *Chandregowda, A., **Arbel, Y.** & Donchin, E. (2012). When the bizarre is task relevant - An examination of the Novelty P3. *Psychophysiology*, 49, S1.
33. *Chandregowda, A., **Arbel, Y.**, & Donchin, E. (2012). Watching an error is not quite the same as committing an error: At least according to the ERN. *Psychophysiology*, 49, S1.
34. *Chandregowda, A., **Arbel, Y.**, & Donchin, E. (2012). Is there a benefit to having two ears when evaluating novelty? *Psychophysiology*, 49, S1.
35. *Murphy, A. R., **Arbel, Y.**, Brumback, T., & Donchin, E. (2011). The Flankers effect is about curves and angles – not arrows. *Psychophysiology*, 48, S1, S80.
36. *Brumback, T., **Arbel, Y.**, Konca, K., Goldman, M. S., & Donchin, E. (2011). Distinguishing developmental differences in P300 elicited by an oddball task. *Psychophysiology*, 48, S1, S80.
37. *Goforth, K. L., **Arbel, Y.**, & Donchin, E. (2011). It is (possibly unpleasant but) very useful to know when you err. *Psychophysiology*, 48, S1, S80.
38. *Chandregowda, A., **Arbel, Y.**, & Donchin, E. (2011). Odd even though no ball! The fixed stimulus Oddball paradigm. *Psychophysiology*, 48, S1, S80.
39. *Clay, S. N., **Arbel, Y.**, & Donchin, E. (2011). What's new? A study of the stability of the Novelty P3. *Psychophysiology*, 48, S1, S79.
40. *Brumback, T., **Arbel, Y.**, Diaz, M., Goldman, S. M., & Donchin, E. (2011). Can the feedback ERN distinguish between strong and weak learners? *Psychophysiology*, 48, S1, S79.
41. **Arbel, Y.**, De Laurentis, K., Alqasemi, R., Dubey, R., & Donchin, E. (2010). The P300 brain-computer interface as a controller of a wheelchair-mounted robotic-arm system. *Fourth International Brain-Computer Interface Meeting*, Monterey, CA.
42. *Goforth, K., **Arbel, Y.**, Clay, S., Paulson, R., & Donchin, E. (2010). How large is your error? An examination of the ERPs elicited by errors of varying degree. *Psychophysiology*, 47, S1, S45.
43. **Arbel, Y.**, & Donchin, E. (2010). The processing of redundant feedback by children –An analysis of the error related ERP components. *Psychophysiology*, 47, S1, S46.
44. *Kamp, S. I., Brumback, T., **Arbel, Y.**, & Donchin, E. (2009). Does Target Letter Position Affect ERP Amplitudes and Classification Accuracy in the P300 Based BCI? Implications of a Principal Component Analysis. *Psychophysiology*, 46, S1.
45. **Arbel, Y.**, & Donchin, E. (2008). Speed accuracy tradeoff of the P300 BCI speller measured in real time. *Psychophysiology*, 45, S1, S107.
46. *Brumback, T., **Arbel, Y.**, Goldman, M. S., & Donchin, E. (2008). Using alcohol expectancies to compare ERPs to semantically incongruent & subjectively incongruent sentences. *Psychophysiology*, 45, S1, S62.
47. De Laurentis, K., **Arbel, Y.**, Donchin, E., and Dubey, R. (2008). Implementation of a P300 Brain Computer Interface for the control of a wheelchair mounted robotic arm system. *ASME 2008 Summer Bioengineering Conference*, FL.

48. *Brumback, T., **Arbel, Y.**, & Donchin, E. (2008). The effect of feedback type on error-related Event-Related Potential components. *The 2008 Association for Psychological Science (APS) Annual Convention*, Chicago.
49. *Palankar, M., **Arbel, Y.**, De Laurentis, K., Alqasemi, R., Dubey, R., & Donchin, E. (2008). Control of a 9-DoF Wheelchair-Mounted Robotic Arm System using a P300 Brain Computer Interface for Activities of Daily Living. *Proceedings of the 2008 IEEE International Conference on Robotics and Biomimetics (ROBIO 2008)*, 348 – 353.
50. **Arbel, Y.**, Alqasemi, R., Dubey, R. & Donchin, E. (2007). Adapting the P300-Brain Computer Interface (BCI) for the control of a wheelchair-mounted robotic arm system. *Psychophysiology*, 44, S1, S82-83.
51. **Arbel, Y.** & Donchin, E. (2006). Principal Component Analysis clarifies the component structure of ERPs following errors. Presented at the annual meeting of the SPR (2006). *Psychophysiology*, 43, S1, S20.
52. **Arbel, Y.** & Donchin, E. (2006). Errors do not elicit ERN in children with SLI. Presented at the annual meeting of the SPR (2006). Published abstract. *Psychophysiology*, 43, S1, S21.
53. **Arbel, Y.** (2007). Brain Computer Interface – Transforming electrical brain activity into communication. Invited article. *The ASHA Leader*, 12(12), 14-15.
54. **Arbel, Y.**, Spencer, K. & Donchin, E. (2004). Event related potentials to semantically incongruent and physically deviant words in sentences. Presented at the annual meeting of the Society for Psychophysiological Research (SPR) 2004. Published abstract. *Psychophysiology* 41, S1, S59.

*Student or research assistant at the time of presentation

INVITED PRESENTATIONS

- Arbel, Y.** (2022). Learning in children with developmental language disorder (DLD): How theory-based examinations inform practice. *UMass Amherst 2022 Professional Development Conference*, Amherst, MA.
- Arbel, Y.** (2019). ERP correlates of feedback-based learning in children with typical and atypical language development. *Annual meeting of the Society for Psychophysiological Research (SPR)*, Washington, DC.
- Green, J., **Arbel, Y.**, Barkmeier-Kraemer, Berry, Mefferd. (2015). Thinking About a PhD? Information Session for Prospective Doctoral Students. Panel presentation. ASHA Convention, November 2015.
- Arbel, Y.**, Del Rossi, G., & Donchin, E. (2012). Football player as Phineas Gage emulator – ERP assessment of executive control after head blows. *American Psychological Association (APA), 2012 Annual Conference*, Orlando, FL.
- Arbel, Y.** (2010). Single-trial independent component analysis of the P300 BCI system. *Fourth International Brain-Computer Interface Meeting*, Monterey, CA.
- Arbel, Y.** (2010). The P300 Brain-Computer Interface – An Event-Related Potential as a communication channel for the locked-in. Invited lecture as part of the *CSD department seminar (0.1 CEU)*, USF, Tampa, FL.
- Arbel, Y.** & Donchin, E. (2010). Can the Homonculus Beauracticus tolerate blows to the head? Invited talk *CNS brownbag*, USF, Tampa, FL.
- Donchin, E., & **Arbel, Y.** (2009). P300 Based Brain-Computer Interfaces: A Progress Report. In *Proceedings of HCI (16)*, 724-731
- Arbel, Y.** (2009). The P300 Brain-Computer Interface (BCI) – The Brain as a finger. *IEEE, Engineering in Medicine and Biology Society - Florida West Coast Section*. Tampa, FL.
- Arbel, Y.** (2006). Error processing by children with SLI. Invited talk. Department of Communication Sciences and Disorders, University of South Florida, Tampa, FL.

TEACHING

CH 745: Event Related Potential (ERP) research methodology
SPA 7931: Event Related Potentials
SPA 6805: Research Procedures in Communication Sciences and Disorders
SPA 6401-901: Pediatric Language Disorders
SPA 5552.001: Diagnostic Principles and Practices
SPA 3004: Introduction to Language Development and Disorders
SLPA 6306-11934: Speech-Language Disorders in Children

STUDENTS

PH.D. STUDENTS:

- **Jasmine Urquhart**, Ph.D. in Rehabilitation Sciences, MGH-IHP. Dissertation title: *The interaction between implicit and explicit learning in children with developmental language disorder—evaluation and clinical implications*. Role: Mentor, 2018-2021
- **Crystal Alonzo**, Ph.D. in Rehabilitation Sciences, MGH-IHP. Dissertation title: *Prediction of Literacy Difficulties in Young Children with Developmental Language Disorder*. Role: Committee member.
- **Adithya Chandregowda**, Ph.D. in Communication Sciences and Disorders. Title: *Seeking Neurophysiological Manifestations of Speech Production: An ERP study*. Role: Mentor, 2016.
- **Fabian Farelo**, Ph.D. in Biomedical Engineering (chaired by Rajiv Dubey). Role: Committee member.
- **Siri Kamp**, Ph.D. in Cognitive Neuroscience. Department of Psychology, USF. Title: *The Psychophysiology of Novelty Processing: Do Brain Responses to Deviance Predict Recall, Recognition, and Response Time?* Role: Committee member, 2013.
- **Rachel Goff**, Ph.D. in Communication Sciences and Disorders, USF. Title: *Examining the Effectiveness of Intensive Language Action Treatment on Functional Communication in Individuals with Nonfluent Aphasia*. Role: Committee Member, 2013.
- **Stephanie Karidas**, Ph.D. in Communication Sciences and Disorders. Title: *Does the use of personally relevant stimuli in semantic complexity training facilitate improved functional communication performance compared to non-relevant stimulus items among adults with chronic Aphasia?* Role: Committee member, 2013
- **Mayur Palankar**, Ph.D. in Computer Science, USF. Role: Committee member, 2013
- **Kun Li**, Doctoral dissertation in Electrical Engineering (chaired by Ravi Sankar). Role: Committee member, 2010.

GRADUATE STUDENTS (THESIS):

- **Kristina Giandomenico** (2022), Thesis student, Communication Sciences and Disorders, MGH IHP. Thesis title: *The Wisconsin Card Sorting Test in Children with Developmental Language Disorder: Examination of Behavioral and ERP Patterns of Set-Shifting Performance and Feedback Processing*. Role: Thesis Advisor.
- **Ziyi (Cathy) Cao** (2022), Thesis student, Communication Sciences and Disorders, MGH IHP. Thesis title: *Artificial Grammar Learning in School-age Children with and without Developmental Language Disorder*. Role: Thesis Advisor.
- **Meixian Li** (2022), Thesis student, Communication Sciences and Disorders, MGH IHP. Thesis title: *The effect of feedback timing on feedback-based probabilistic learning in children with developmental language disorder*. Role: Thesis Advisor.
- **Zhaoyu (Nico) Lu** (2020) Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *The Processing of Redundant Feedback in Children – an ERP study*. Role: Thesis Advisor.
- **Jocelyn Chokkattu** (2020), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *Artificial Grammar Learning and Executive Functions in Monolinguals and Bilinguals – An Eye Tracking Study*. Role: Thesis Advisor

- **Stephanie Gaglini** (2020) Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *The Feasibility of Using a Telepractice Model to Deliver Speech and Language Services in a Graduate School Clinic*. Role: Co-Thesis Advisor.
- **Emily Feeley** (2019), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *Roles and relationships of attentional allocation and feedback processing in category learning*. Role: Thesis Advisor.
- **Gwendolyn Meredith** (2019), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *Working Memory and Feedback Processing in Individuals With TBI*. Role: Committee member
- **Shalom (Shaz) Kim** (2018), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *“Immediate and delayed auditory feedback in declarative learning.”* Role: Thesis Advisor.
- **Annette Mitko** (2017), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *The Role of Feedback Processing in Probabilistic and Rule-Based Category Learning in Children with SLI, 2017*. Role: Thesis Advisor
- **Lucia Hong** (2016), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *comparing immediate versus delayed feedback processing in healthy adults*. Role: Thesis Advisor
- **James Borders** (2016), Graduate student, Communication Sciences and Disorders, MGH IHP. Thesis title: *a developmental examination of feedback processing during declarative learning*. Role: Thesis Advisor.

SUMMER RESEARCH INTERNS:

Rachel McLaughlin, Dartmouth (2019-2020); **Zoya Surani**, Harvard College (2019), **Sneha Karthik**, UC Berkley (2019), **Angelica Castillo**, Boston University (2018, 2019); **Jared Sullivan**, Harvard College (2018); **Ashwin Panda**, Carnegie melon, (2018); **Anamika Dutta**, College of the Holy Cross (2018); **Alexa Puleio**, Union College (2018); **Ivy M. Mwangi**, Williams College (2017, 2018); **Anderson Gomez Murcia**, Boston University (2016)

UNDERGRADUATE THESIS PROJECTS:

Kristen Gilyard, Undergraduate student, Harvard College. Thesis title: *The Implicit Learning Processes in Young Adults during Artificial Grammar Learning Tasks*. Role: thesis director, 2019-2021
Sarah Alam, Undergraduate student, Harvard College. Thesis Title: *Investigating the relationship between implicit and explicit knowledge in Artificial Grammar Learning: An ERP Study*. Role: thesis director, 2019-2020
Megan Evans, Undergraduate student, Honors College. Role: thesis director, 2011
Summer Clay, Undergraduate student, Honors College. Role: thesis director, 2011
Sri Kopuri, Co-chair, Undergraduate Honors thesis. *“The Relationship between specific Event-Related Brain Potentials in response to semantic word deviations”*, 2008
Gus Halwani. Co-chair, Undergraduate Honors thesis. *“Brain Computer Interface”*, 2008
Maryam Rostami. Co-chair, Undergraduate Honors thesis. *“When Did I Make an Error? A Psychophysiological Analysis of Error Detection”*, 2008

Other Experience and Professional Memberships

2002-present	American Speech Language Hearing Association
2003-present	Society for Psychophysiological Research
2017-present	Massachusetts Speech Hearing Association

Certifications

- Certificate of Clinical Competence (CCC) in Speech Language Pathology
- License in Speech-Language Pathology license, MA

NATIONAL/INTERNATIONAL SERVICE

- NIDCD LCOM study section, 2021, 2022
- **Consulting Editor**, *Biological Psychology*.

- Grant Review and Reviewer Training, the American Speech-Language-Hearing Foundation and the American Speech-Language-Hearing Association, 2018
- *Graduate Research Fellowship Program (GRFP) – NSF*, 2010-2012
- **Reviewer:** *Cerebral Cortex; Journal of Experimental Psychology: Learning, Memory, & Cognition; International Journal of Psychophysiology; Transaction on Biomedical Engineering; Journal of Cognitive Neuroscience; Psychophysiology; Journal of Neural Engineering; Social Neuroscience; The Journal of Neuroscience; Journal of Speech-Language and Hearing Research; Frontiers in Neuroprosthetics; Transactions on Neural Systems & Rehabilitation Engineering; Cognitive, Affective, and Behavioral Neuroscience*

ADVANCED TRAINING

- Grant Review and Reviewer Training, conducted by the American Speech-Language-Hearing Foundation and the American Speech-Language-Hearing Association, 2018
- Training in Grantsmanship for Rehabilitation Research (TIGRR), 2017.
- Lessons for Success, American Speech-Hearing-Language Association (ASHA), 2012.
- Brain dissection and neuroscience: applications to disorders of language and speech functions. Marquette University, 2010.

HONORS

- Excellence in Research Award (2021). MGH Institute of Health Professions
- New Investigator Award (2018). MGH Institute of Health Professions
- Braniff Clipped B's Scholarship awarded by the Texas Speech-Language-Hearing Foundation (TSHF) during the annual TSHA convention in Houston.