

Claudio A. Toro-Serey

claudio.toro.serey@gmail.com

RESEARCH/RELEVANT WORK EXPERIENCE

- 2023 - Present Senior Data Scientist
Linus Health
Boston, MA
- 2022 - 2023 Data Scientist
Linus Health
Boston, MA
- 2013 – 2016 Clinical Research Coordinator III
Pediatric Neuroimaging Research Consortium & Reading and Literacy Discovery Center
Cincinnati Children's Hospital

EDUCATION AND TRAINING

- 2021 – 2022 Research Fellow in Psychiatry
Haber Neuroanatomy Lab
McLean Hospital, Harvard Medical School
- 2016 – 2021 Ph.D. in Psychology
Cognition & Decision Lab
Boston University
Brain, Behavior and Cognition Program
- 2016 – 2019 Master of Arts in Psychology
Boston University
- 2008 – 2013 Bachelor of Science
Northern Kentucky University
Major: Psychology
Minors: Neuroscience, Honors, & Philosophy
Honors: Magna Cum Laude, University Honors Scholar

PUBLICATIONS AND CONFERENCE PAPERS

1. Jannati, A., **Toro-Serey, C.**, Gomes-Osman, J. *et al.* (2024) Digital Clock and Recall is superior to the Mini-Mental State Examination for the detection of mild cognitive impairment and mild dementia. *Alz Res Therapy* **16**, 2 (2024). <https://doi.org/10.1186/s13195-023-01367-7>
2. **Toro-Serey, C.**, Kane, G., & McGuire, J.T. (2021). Choices favoring cognitive effort in a foraging environment decrease when multiple forms of effort and delay are interleaved. *Cognitive, Affective, and Behavioral Neuroscience*. <https://doi.org/10.3758/s13415-021-00972-z>
3. Botvinik-Nezer, R., Holzmeister, F., Camerer, C., Dreber, A., Huber, J., Johannesson, M., ... **Toro-Serey, C.**, ... & Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*. <https://doi.org/10.1038/s41586-020-2314-9>
4. **Toro-Serey, C.**, Tobyn, S.M., & McGuire, J.T. (2020) Spectral partitioning identifies individual heterogeneity in the functional network topography of ventral and anterior medial prefrontal cortex. *NeuroImage*, 205, <https://doi.org/10.1016/j.neuroimage.2019.116305>

5. **Toro-Serey, C.**, Bright, I.M., Wyble, B.P., & Howard, M.W. (2019). Rapid Presentation Rate Negatively Impacts the Contiguity Effect in Free Recall. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society*.
6. Barnes-Davis, M.E., Merhar, S.L., Laue, C., **Toro Serey, C.**, Holland, S.K., & Kadis, D.S. (2017). Extremely preterm children exhibit increased interhemispheric language connectivity in fMRI and MEG. *Paper presented at the Annual meeting of the Organization for Human Brain Mapping (OHBM)*, Vancouver, Canada.
7. Kadis, D., Dimitrijevic, A., **Toro Serey, C.**, Holland, S.K. (2016). Characterizing information flux within the distributed pediatric expressive language network – a core region mapped through fMRI-constrained MEG effective connectivity analyses. *Brain Connectivity*, 6(1)
8. Horowitz-Kraus, T., **Toro Serey, C.**, & Di Francesco, M. (2015). Increased resting-state functional connectivity in the cingulo-opercular cognitive-control network after intervention in children with reading difficulties. *PLoS ONE*, 10(7)

CONFERENCE AND INVITED TALKS

1. April, 2023. *75th meeting of the American Academy of Neurology*. Automated Drawing Process Metrics for Evaluating Cognitive Impairment from Human Drawing Behavior.
2. April, 2022. *Michael S. Goodman '74 Memorial Seminar Series in Cognition Speaker*, Brown University. Evaluating the neural juxtaposition of value-related and introspective cognitive functions in individuals.
3. July, 2020. *Invited to give a talk to the Daw lab*, Princeton University. Adaptive preferences for cognitive versus physical effort in foraging environments.
4. April, 2020. *Invited to give a talk to the Shenhav lab*, Brown University. Adaptive preferences for cognitive versus physical effort in foraging environments.
5. July, 2019. Paper talk. *41st Annual Meeting of the Cognitive Science Society*. Rapid Presentation Rate Negatively Impacts the Contiguity Effect in Free Recall.
6. April, 2019. *Invited to give a talk to the Gabrieli lab*, MIT. Individual heterogeneity in the functional topography of the default network in medial prefrontal cortex.
7. October, 2018. Poster Spotlight. *Annual Meeting of the Society for Neuroeconomics (SNE)*, Philadelphia, USA. Parsing medial prefrontal cortex: A joint meta-analytic and graph-theoretic approach.
8. June, 2018. Data Blitz talk. *New England Research on Decision Making (NERD)*, Harvard University. Parsing medial prefrontal cortex: A joint meta-analytic and graph-theoretic approach.
9. May, 2017. *New England Research on Decision Making (NERD)*, Brown University. Neural Networks of Effort and Time as a Measure of Cost.

POSTER PRESENTATIONS

1. **Toro Serey, C.**, Tang, W., Trambaiolli, L., Dayan, P., & Haber, S (2021) ACC-striatal Projections are Uniquely Positioned to Interact with an Unusually Functionally Diverse Set of Cortical Areas. *Annual Meeting of the American College of Neuropsychopharmacology (ACNP)*, Puerto Rico.
2. **Toro Serey, C.**, & McGuire, J.T. (2019). Apparent preferences for cognitive effort fade when multiple forms of effort and delay are interleaved in a foraging environment. *Annual Meeting of the Society for Neuroeconomics (SNE)*, Dublin, Ireland.
3. **Toro Serey, C.**, Tobyne, S.M., & McGuire, J.T. (2019). Individual heterogeneity in the functional topography of the DMN in medial prefrontal cortex. *Annual meeting of the Organization for Human Brain Mapping (OHBM)*, Rome, Italy.

4. **Toro Serey, C.**, Tobyne, S.M., & McGuire, J.T. (2019). Unsupervised Topographical Clustering of Resting Brain Activity using Spectral Network Partitioning. *Boston University Data Science day*, Boston, MA.
5. **Toro Serey, C.**, & McGuire, J.T. (2018). Parsing medial prefrontal cortex: A joint meta-analytic and graph-theoretic approach. *Annual Meeting of the Society for Neuroeconomics (SNE)*, Philadelphia, PA.
6. **Toro Serey, C.**, & McGuire, J.T. (2017). Effort and Delay Discounting in a Foraging Environment. *Annual Meeting of the Society for Neuroeconomics (SNE)*, Toronto, CA.
7. Tenney, J., Kadis, D., Agler, W., **Toro Serey, C.**, Vannest, J., & Glauser, T. (2016). Defining epileptic network pathways: A combined MEG and fMRI approach. *Annual Meeting of the American Epilepsy Society (AES)*, Houston, TX.
8. Tenney, J., Agler, W., **Toro Serey, C.**, & Kadis, D. (2016). Defining epileptic network pathways – A combined MEG and fMRI approach. *International Conference on Biomagnetism (BIOMAG)*, Seoul, South Korea.
9. Barnes-Davis, M.E., Merhar, S.L., **Toro Serey, C.**, Holland, S.K., & Kadis, D.S. (2016). School-aged children born extremely preterm have altered patterns of activation in language regions during a functional MRI stories listening task compared to term counterparts. *Joint Irish Paediatric Association (IPA) & American Pediatric Society Meeting*, Stillorgan, Dublin.
10. **Toro Serey, C.**, & Kadis, D. (2016). Connectivity changes suggest children and adolescents use different strategies for verb generation. *Annual meeting of the Organization for Human Brain Mapping (OHBM)*, Geneva, Switzerland.
11. Horowitz-Kraus, T., & **Toro Serey, C.** (2015). Reading-related neural-circuits disruption in children with dyslexia at a familial-risk for dyslexia. *Annual meeting of the Organization for Human Brain Mapping (OHBM)*, Honolulu, Hawaii.
12. Horowitz-Kraus, T., **Toro Serey, C.**, & Holland, S. K. (2015). Decreased rsfMRI in the fronto-parietal network in children with emotional disorders. *Annual meeting of the Organization of Human Brain Mapping (OHBM)*, Honolulu, Hawaii.
13. Horowitz-Kraus, T., DiFrancesco, M., **Toro Serey, C.**, & Holland, S.K. (2015, March). Increased functional connectivity in the cingulo-opercular network during rest in children with dyslexia following intervention. *Annual Meeting of the Cognitive Neuroscience Society (CNS)*, San Francisco, CA.
14. Kraus, D., Arya, R., Tenney, J., Greiner, H., Leach, J., Toro-Serey, C., Vannest, J., & Horowitz-Kraus, T. (2014). Reading and language lateralization in pediatric temporal lobe epilepsy: and fMRI study. *Annual Meeting of the American Epilepsy Society (AES)*, Seattle, WA.
15. Kadis, D. S., Dimitrijevic, A., **Toro Serey, C.**, & Holland, S. K. (2014, June). Pediatric Expressive Language Network Connectivity – Findings from fMRI-Constrained MEG. *Annual Meeting of the Organization for Human Brain Mapping (OHBM)*, Hamburg, Germany.
16. **Toro Serey, C.**, Stevens, R., and Gannon, M. (Faculty Sponsor Mark E. Bardgett) (2013). The Effects of Zolpidem on Regional Neuronal Activity and Behavior. *Celebration of Student Research and Creativity*, Northern Kentucky University, Highland Heights, KY.
17. **Toro Serey, C.**, Stevens, R., Gannon, M., and Bardgett, M. (2013). Effects of zolpidem on regional neuronal activity. *Annual Meeting of the Midwestern Psychological Association*, Chicago, IL.
18. **Toro Serey, C.**, Stevens, R., and Gannon, M. (Faculty Sponsor Mark E. Bardgett) (2012). Effects of zolpidem on regional neuronal activity and behavior. *Celebration of Student Research and Creativity*, Northern Kentucky University, Highland Heights, KY.

HONORS AND AWARDS

Hariri Center for Computing at BU “Brilliant Bud Award” (2019)
Student Travel Award from the Society for Neuroeconomics (2018)
Dean’s Scholarship (2012)
Selected to participate as a senior mentor for PSY 100 classes (Fall 2012)
Sheldon B. and Fern H. Storer Endowed Scholarship (2010)
President’s Honor List (Spring 2009, Fall 2010, Fall 2011, Spring 2012, Fall 2012, Spring 2013)
Dean’s List (Fall 2009)

TEACHING EXPERIENCE

Fall 2016 – Spring 2018
Teaching Fellow
Boston University, department of Psychological and Brain Sciences
Courses: Introduction to Psychology (PS101), Introduction to Cognitive Psychology (PS336), Experiments in Psychology: Memory & Cognition (PS328), Laboratory in Perception (PS327).

Fall 2012
Senior Mentor
Northern Kentucky University
Supervisor: Perilou Goddard, Ph.D.

SKILLS AND PROFESSIONAL DEVELOPMENT

Accepted to a two-week open science neuroimaging workshop (Neurohackademy, Seattle, WA, 2018)
Programming (R, Python, Bash shell, Matlab)
fMRI data processing (AFNI, FSL, FreeSurfer, HCP, Python packages)
Administration and scoring of standardized psychological tests
CONN toolbox (attended a three-day workshop in Cincinnati organized by CCHMC and MIT, July 2015)

ASSOCIATION MEMBERSHIPS

Organization for Human Brain Mapping (2019)
Society for Neuroeconomics (2017 – Present)
Honors in Psychology (Fall 2012, Spring 2013)
Alpha Chi International Honors Society, (inducted Spring 2012)
Psi Chi: The National Honor Society in Psychology (inducted Fall 2011)
NKU Psychology Club (Fall 2010-Spring 2013)
NKU Honors Program (Fall 2008-Spring 2013)
NKU Presidential Ambassadors (Fall 2008- Spring 2013)