

Dr. Tess Allegra Forest

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Academic Appointments

Post Doc. Columbia University, Department of Psychology
2022- F32 NRSA Postdoctoral Research Fellow, Advisor: Dr. Dima Amso

Education

Ph.D. University of Toronto, Department of Psychology
2022 Thesis: *Statistical learning throughout childhood*
Advisors: Dr. Amy Finn, Dr. Meg Schlichting

B.A. Cognitive Systems and Linguistics, University of British Columbia
2016 Thesis: *Planning to Speak in L1 and L2 (completed at the Max Plank Institute for Psycholinguistics, Nijmegen, Netherlands)*
Advisors: Dr. Agnieszka Konopka, Dr. Antje Meyer

Peer Reviewed Publications

* These authors contributed equally, ° Mentee author

- 2025 **Forest, TA.**, Bradford, L., Ginnell, L., Berger, M.°, Herr, D., Mbale, E., Dalawella, K.°, Jacobs, CA., Mchazima, C., D'Amato, C.°, Madi, Z., Mkaka, PC, Espinoza-Heredia, C., Mhlakwaphalwa, T., Ngoma, V., Ren, J.°, Miles, M., Mlandu, N., Samuels, R., Zieff, M., Gladstone, M., Donald, K. & Amso, D. 2025. Caregiver unpredictability directs moment-to-moment shifts in infant attention. *Child Development*. [PDF](#)
- 2024 **Forest, TA.**, McCormick, SA., Davel, L., Mlandu, N., Zieff, MR., Khula South Africa Data Collection Team, Amso, D., Donald, KA., & Gabard-Durnam, LJ. 2024. Early caregiver predictability shapes neural indices of statistical learning later in infancy. *Developmental Science*. [PDF](#)
- 2023 **Forest, TA.** & Amso, D. 2023. Neurodevelopment of Attention, Learning, and Memory Systems in Infancy. *Annual Review of Developmental Psychology*. [PDF](#)
- Forest, TA.**, Schlichting, ML., Duncan, K., & Finn, AS. 2023. Changes in statistical learning across development. *Nature Reviews Psychology*. [PDF](#)
- Liu, H.°, **Forest, TA.***, Duncan, K., & Finn, AS. 2023. What sticks after statistical learning: The persistence of implicit versus explicit memory traces. *Cognition*. [PDF](#)
- Forest, TA.**, Abolghasem, Z.°, Finn, AS., & Schlichting, M. 2023. Memories of structured input become increasingly distorted across development. *Child Development*. [PDF](#)

- Jung, Y., **Forest, TA.**, Bernhardt-Walther, D., & Finn, AS. 2023. Top-down modulation of visual cortex in the developing human brain. *Journal of Neuroscience*. [PDF](#)
- 2022 **Forest, TA.**, Siegelman, N.*, & Finn, AS*. 2022. Attention to different statistical structures changes with experience. *Psychological Science*. [PDF](#)
- 2021 **Forest, TA.**, Finn, AS., & Schlichting, M. 2021. General precedes specific in memory representations for structured experience. *Journal of Experimental Psychology: General*. [PDF](#)
- 2020 **Forest, TA.**, Finn, AS., & Schlichting, ML. 2020. What is represented in memory after statistical learning? *Proceedings of the Cognitive Science Society*. [PDF](#)
- 2019 **Forest, TA.***, Lichtenfeld, A.*, Alvarez, B., & Finn, AS. 2019. Superior Learning in Synesthetes: Consistent Grapheme-Color Associations Facilitate Statistical Learning. *Cognition*. 186(72-81). [PDF](#)
- 2018 **Forest, TA.** & Finn, AS. 2018. Attention Selectively Boosts Learning of Statistical Structure. *Proceedings of the Cognitive Science Society*. [PDF](#)
- Konopka, AE., Meyer, A., & **Forest, TA.** 2018. Planning to Speak in L1 and L2. *Cognitive Psychology*. [PDF](#)
- Under review Wang, Z., Bravo Sanchez, LM., Weng, Z., Ren, J. °, **Forest, TA.**, D’Amato, C. °, Knipe, C., Herr, D., Goolam Nabi, Z., Zieff, M., Donald, K., Hasenfratz, L., Amso, D., & Yeung-Levy, S. Automating Maternal Entropy Calculation in Parent-Child Interactions Using Computer Vision. (Under Review, *Scientific Reports*)
- Forest, TA.**, Schlichting, ML., & Finn, AS. Neural correlates of learning rate reveal developmental differences in memory representations. (Under Review, *Developmental Cognitive Neuroscience*)
- Dalawella, K.°, Deliwala, P.°, **Forest, TA.**, D’Amato, C., Khula South Africa Data Collection Team, Khula Malawi Data Collection Team, Mbale, E., Gladstone, M., Donald, K.A., & Amso, D. Computationally-Derived Evidence for Bottom-Up Auditory Attention in Infancy: The Auditory Salience of Caregiver Speech relates to infant visual orienting during dyadic interaction. (Submitted, Special Issue, *Infant Behavior and Development*)
- In. prep **Forest, TA.**, Thomson, K., & Finn, AS. Statistical learning proceeds one structure at a time for most learners.
- Forest, TA.**, Schlichting, ML., & Finn, AS. Distinct Neural Contributions to statistical learning in children and adults.

Grants and Funded Awards

- 2024 **Ruth L. Kirshstein National Service Award (F32 Postdoctoral Fellowship)**
Discovering how emerging oscillatory dynamics interact with attention to shape memory representations in infancy. (NIH, NICHD)
- 2021 **Ann Lang Service Award**, for exceptional service by a PhD student

2021	Doctoral Completion Award , University of Toronto
2019	Psychology Travel Award , University of Toronto
2019	Friends of Patrick Award , to support developmental fMRI research in Toronto
2018	SGS Conference Grant , University of Toronto
2017	SGS Conference Grant , University of Toronto
2016-2020	International PhD Fellowship , University of Toronto
2013	Trek Excellence Scholarship , University of British Columbia
2013	International Community Achievement Award , University of British Columbia
2012	Outstanding International Student Award , University of British Columbia

Invited Talks

2024	Donders Institute , Nijmegen, Netherlands, BabyBRAIN Lab University of Maryland , Riggins Lab
2023	City University of New York , Cognitive and Comparative Psychology Colloquium Stanford University , Ellis Lab
2022	Yale University , Turk-Browne Lab MIT , Saxe Lab Temple University , Memory Group Meeting Columbia University , Amso & Davachi Labs University of Pennsylvania , Schapiro Lab
2021	Vrije Universiteit , Amsterdam, Netherlands, Theeuwus Lab Northeastern University , Davidow Lab
2019	Haskins Laboratories , Brown Bag Talk Series

Intramural Talks

2020	Developmental Interest Group, University of Toronto Graduate Led Academic Speaker Series, University of Toronto
2018	Ebbinghaus Empire Series, University of Toronto Toronto Neuroimaging Centre, University of Toronto Developmental Interest Group, University of Toronto

Conference Talks

2025	Forest, TA. , ... Donald, K., Gabard-Durnam, LJ., & Amso, D. <i>Moment-to-moment fluctuations in caregiver entropy shape the temporal dynamics of infant attention and statistical learning later in infancy</i> . Society for Research in Child Development, Minneapolis, MN.
2024	Forest, TA. , ... Donald, K., Gabard-Durnam, LJ., & Amso, D. <i>Characterizing the emergence of Phase-Amplitude Coupling in the first year of life to understand attention in the infant brain</i> . Flux Congress for Developmental Cognitive Neuroscience, Baltimore, MD.

- McCormick, S., **Forest, TA.**, Davel, L., Zieff, M., Khula South Africa Data Collection Team, Donald, K. & Gabard-Durnam LJ. *Neural indices of auditory statistical learning in infancy associated with concurrent language skills at 24-months of age in a sample of South African infants*. Fetal and Toddler Neuroimaging Conference (FIT'NG), Baltimore, MD.
- 2023 **Forest, TA.**, McCormick, S., Gabard-Durnam LJ, & Amso, D. *How are infant cortical sensory systems shaped by maternal predictability?* New Methods for Modeling Child-Caregiver Interactions, Princeton, NJ.
- Forest, TA.**, McCormick, S., Amso, D., & Gabard-Durnam LJ. *Is the engagement of cortical learning and memory systems in early infancy shaped by maternal predictability during dyadic interaction?* Association for Psychological Science (APS), Washington, D.C.
- Forest, TA.**, Schlichting, M., & Finn, AS. *The developing brain represents specific and group level regularities differently*. Cognitive Neuroscience Society (CNS), San Francisco, CA. (presented by AS. Finn)
- 2022 **Forest, TA.**, Siegelman, N., & Finn, AS. *Learning from multiple statistical sources over time*. Psychonomics, Boston, MA.
- 2021 Jung, Y., **Forest, TA.**, Walther, D.B., & Finn, A.S. *Top-down modulation of visual cortex in the developing human brain*. Society for Research in Child Development (SRCD), virtual
- 2020 **Forest, TA.**, Siegelman, N., & Finn, AS. *Attention to different statistical structures changes over the course of learning*. Vision Sciences Society (VSS), virtual
- Jung, Y., **Forest, TA.**, Walther, D.B., & Finn, A.S. *Top-down modulation of visual cortex in the developing human brain*. Vision Sciences Society (VSS), virtual
- 2019 **Forest, TA.**, Finn, AS., & Schlichting, M. *What is represented in memory after statistical learning: Evidence from adults and children*. Interdisciplinary Advances in Statistical Learning, San Sebastian, Spain.
- Forest, TA.**, Finn, AS., & Schlichting, M. *What is represented in memory after statistical learning: Evidence from adults and children*. Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS), Waterloo, ON.
- Forest, TA.**, Siegelman, N., & Finn, AS. *Attention to different statistical structures changes over the course of learning*. Toronto Area Memory Group (TaMEG), Toronto, ON.
- 2016 > Konopka, A. & **Forest, TA.** 2016. *Planning sentences in L1 and L2*. Annual CUNY Conference on Sentence Processing.
- Konopka, A. & **Forest, TA.** 2015. *Planning sentences in L1 and L2*. Symposium for Psycholinguistics, Valencia, Spain.

Conference Posters

° Mentee author

- 2024 **Forest, TA., ...** Donald, K. & Amso, D. *Caregiver unpredictability directs moment-to-moment shifts in infant attention.* International Congress of Infant Studies (ICIS), Glasgow, Scotland.
- 2023 Gilmore, M.°, Ren, J. °, Dalawella, K. °, Berger, M. °, **Forest, TA., ...** & Amso, D. *Environmental affordances influence the entropy of maternal sensory signals.* Association for Psychological Science (APS), Washington, D.C
- 2022 **Forest, TA.,** Schlichting, M., & Finn, AS. *Adults and children rely on different brain regions to support specific and general statistical learning.* Society for Neuroscience (SfN), San Diego, CA.
- Forest, TA.,** Schlichting, M., & Finn, AS. *Statistical learning in the child brain.* Flux Congress for Developmental Cognitive Neuroscience, Paris, France.
- 2021 **Forest, TA.,** Abolghasem, Z.°, Finn, AS., & Schlichting, M. *Children form highly specific memory representations for statistical structure.* Flux Congress for Developmental Cognitive Neuroscience, virtual
- Forest, TA.,** Shen, C., & Finn, AS. *Do children extract more from their environments than adults?* Society for Research in Child Development (SRCD), virtual
- 2020 **Forest, TA.,** Finn, AS., & Schlichting, M. *What is represented in memory after statistical learning?* Cognitive Science Society, virtual
- 2019 **Forest, TA.,** Siegelman, N., & Finn, AS. *Attention to different statistical structures changes over the course of learning.* Interdisciplinary Advances in Statistical Learning, San Sebastian, Spain.
- 2018 **Forest, TA.** & Finn, AS. *Children do not benefit from instruction: How attention impacts statistical learning differently across ages.* Cognitive Science Society, Madison, WI.
- Forest, TA.,** Lichtenfeld, A., Alvarez, B., & Finn, AS. *Synesthesia and Statistical Learning: Redundant Cues Improve Segmentation.* Cognitive Neuroscience Society (CNS), Boston, MA.
- 2017 > **Forest, TA.,** Lee, T., Kiyomarsi, A., & Finn, AS. (March, 2017). *The impact of attention on learning two statistical patterns simultaneously.* Cognitive Neuroscience Society (CNS), San Francisco, CA.

Academic Service

- 2023-2025 **Postdoctoral Affairs Coordinator**, Columbia Department of Psychology
- 2020 **Search Committee for Psychology Chair**, Graduate Representative
- 2019-2021 **Graduate Committee in Psychology**, Academic Representative
- 2018-2019 **President** of the Psychology Graduate Student Association
- 2017-2018 **Graduate-Led Academic Speaker Series**, Coordinator
- 2016-2018 **Orientation Coordinator** for University of Toronto Psychology PhD students
- 2017-2019 **Recruitment Coordinator** for University of Toronto Psychology PhD recruitment
- 2016-2017 **MA Representative** to the Psychology Graduate Student Association

Reviewing

Nature Communications, Science Advances, Journal of Cognitive Neuroscience, Scientific Reports, Cognition, Journal of Experimental Psychology: General, Developmental Science, Child Development, Journal of Experimental Psychology: Human Perception and Performance, Psychonomic Bulletin and Review, Communications Psychology, Developmental Psychology, Cognitive Science, Quarterly Journal of Experimental Psychology, Cognitive Neuroscience, Applied Psycholinguistics, Society for Research in Child Development, BioEssays, Cognitive Science Society, National Science Foundation

Research Mentorship

2024	Isabella Lindsay, Columbia University
2023-2025	Kavindya Dalawella, Pathway to PhD Student, Columbia University
2022	Yi Lin (Elaine) Wang, NSERC Summer Research Award, University of Toronto
2021	Jialin Song, Mini Thesis Student, University of Toronto
2021	Jaehee Kim, Research Opportunity Program, University of Toronto
2020-2021	Sarah Ripley, University of Toronto
2019-2020	Bharat Nadendla, Honors Thesis, University of Toronto
2018-2019	Chuyun Shen, Honors Thesis, University of Toronto
2018-2020	Zahra Abolghasem, NSERC Summer Research Award x2,
2018	Gloria Rebello, UTEA Summer Research Award, University of Toronto

Teaching

2022	Introduction to Social Psychology (Teaching Assistant, U of T PSY220)
2021	Introduction to Developmental Psychology (Teaching Assistant, U of T PSY210)
2020	Graduate Course in Professional Psychology (Guest Lecture, U of T)
2016-2021	Psychology of Language (Teaching Assistant, U of T JLP374)
2018-2020	Introduction to Cognitive Psychology (Teaching Assistant, U of T PSY270)
2017	Learning and Plasticity (Teaching Assistant, U of T PSY230)
2017	Cognitive Development (Teaching Assistant, U of T PSY310)
2015-2016	Research Methods in Cognitive Systems (Teaching Assistant, UBC, COGS303)
2015	Bilingualism (Director, Student Directed Seminar program, UBC400X)

Media Coverage

2025	The people who 'see' foreign languages , BBC, Katherine Latham
2024	Infant brains are like sponges. Predictable caregivers can make them even spongier, new research finds , Northeastern News, Tanner Stening
2019	Colourful language: U of T psychologists discover enhanced language learning in synesthetes , University of Toronto News, Chris Sasaki

Additional Training

- 2020 **Teaching Accreditation Workshop**, taught by Dr. John Vervaeke (4 days)
- 2019 **Freesurfer Workshop**, Martinouulous Imaging Centre, Boston, MA., (3 days)
- 2018 **Certified MRI Scanner Operator**, Toronto Neuroimaging Centre
60 hours of training and practical exam.
Machine Learning Workshop, taught by Sergey Fogelson
Introduction to Science Journalism, taught by Ivan Seminiuk
- 2017 > **NiPype Hackathon**, led by Dr. Anisha Keshavan
Academic Writing Workshop, taught by Dr. Paul Silvia
Course Design Workshop, Center for Teaching and Learning, UBC (3 days)

Additional Research Experience

- 2014-2016 **Language Development Centre, University of British Columbia**
Advisor: Dr. Geoffrey Hall, Role: Lab Coordinator
- 2013-2016 **Language and Learning Lab, University of British Columbia**
Advisors: Dr. Carla Hudson Kam, Dr. Alexis Black, Role: Lab Coordinator
- 2015 **Max Plank Institute for Psycholinguistics, Nijmegen, Netherlands**
Advisors: Dr. Antje Meyer, Dr. Agnieszka Konopka, Role: Intern (Full-time)
- 2014 **Infant Learning Lab, University of Wisconsin-Madison**
Advisor: Dr. Jenny Saffran, Role: Volunteer

References

1. **Dr. Dima Amso**, Vice Provost and Professor of Psychology, Columbia University
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2. **Dr. Amy Finn**, Associate Professor of Psychology, University of Toronto
finn@psych.utoronto.ca
3. **Dr. Meg Schlichting**, Associate Professor of Psychology, University of Toronto
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