George Kachergis

Research Scientist, Language & Cognition Lab
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Academic Positions

- Research Scientist, Language and Cognition Lab, Stanford University, *September 2018–present.*
- Assistant Professor, Department of Artificial Intelligence and Donders Institute for Brain, Cognition, and Behaviour, Radboud University, *September, 2016–August, 2018.*
- Postdoctoral Researcher on active sensemaking, New York University, Advisors: Todd Gureckis and Marjorie Rhodes, Varieties of Understanding Project, *January, 2015–August, 2016.*
- Postdoctoral Researcher on knowledge representation, Leiden University, Advisor: Bernhard Hommel, RoboHow Project, *January, 2013–December 2014.*
- Research Assistant, Memory and Perception Lab, Indiana University, *August, 2007–December, 2012.*
- Research Assistant, Department of Computer Science, Carleton College, *June–August, 2006.*

Education

- Ph.D. (December 15, 2012), Indiana University, Department of Psychological and Brain Sciences and Cognitive Science Program. Advisors: Richard M. Shiffrin and Chen Yu.
- Probabilistic Models of Cognition Summer School, Institute for Pure and Applied Mathematics, UCLA, 2011.
- B.A. Cognitive Studies, Carleton College, 2007. *Magna cum laude* with distinction.
- B.A. Computer Science, Carleton College, 2007. *Magna cum laude.*
- Budapest Semester in Cognitive Science, Eötvös Loránd Science University, Fall 2005.

Awards and Grants

- **Stanford Human-centered AI Seed Grant**, Learning to play: Understanding infant development with intrinsically motivated artificial agents ($75,000), *Spring 2019*
- **NVIDIA GPU Grant**, *Spring 2017*
- **Global TIES for Children Seed Award**, Testing an Adaptive Tablet Game System for Self-guided Literacy and Numeracy Education in Developing Nations ($12,000), *Fall 2016*

- **Institute of Human Development and Social Change Seed Award**, Applying Computer Science Models of Self-Directed Learning to New Measures of Young Children's Academically-Oriented Soft Skills ($9,280), *Fall 2015*
- **Irving J. Saltzman Award for Outstanding Graduate Achievement**, Indiana University Psychology Department, *2015*
- **Robert J. Glushko Dissertation Prize** for outstanding interdisciplinary work ($10,000), *2013*
- **Best Paper: Experiment Combined with Computational Model, International Conference on Development and Learning-EpiRob**, *2012*
- **Marr Prize for Best Student Paper, Cognitive Science Society**, *2012*
- **National Science Foundation East Asia & Pacific Summer Institute / Japan Society for the Promotion of Science** (OISE-1209475; JAIST, (∼$10,000), *2012*
- **Robert J. Glushko and Pamela Samuelson Foundation Student Travel Grant**, Cognitive Science Society, *2012*
- **William K. Estes Summer Research Award**, Indiana University Psychology Department, *2011*
- **European Neural Network Society Student Travel Award**, *2011*
- **Society for Mathematical Psychology Student Travel Award**, *2009, 2010, 2011*
- **Indiana University Cognitive Science Supplemental Research Fellowship**, *2009, 2011*

Publications

Journal Articles

1. **Kachergis, G.** and Frank, M. C. (in preparation). *Towards a "Standard Model" of Early Language Learning.*
2. **Kachergis, G.**, Grimmick, C., and Gureckis, T. M. (in preparation). *Modeling error-driven cross-situational word learning.*
3. Long, B., **Kachergis, G.**, Agrawal, K., and Frank, M. C. (in preparation). *Detecting social information in a dense database of infants' natural visual experience.* Preprint: https://psyarxiv.com/z7tdg/
4. **Kachergis, G.**, Hembacher, E., Cristiano, V., Zhang, H. V., Frank, M. C. (submitted). *Understanding the impacts of video-guided activities on parent-child interaction.* Preprint: https://psyarxiv.com/dmeza/
5. de Kleijn, R., Sen, D., and **Kachergis, G.**. (submitted). *Deep reinforcement learning of sequential action results in human-like optimization in a robotic arm controller.* Topics in Cognitive Science.

6. Blokpoel, M., Dingemanse, M., **Kachergis, G.**, Bögels, S., Toni, I., van Rooij, I., and the CABB team. (in revision). *Pragmatic communicators can overcome asymmetry by exploiting ambiguity.* Cognitive Science.

7. Tsui, A. S. M., Carstensen, A., **Kachergis, G.**, ..., Frank, M. C. (stage 1 registered report in revision). *Exploring variation in infants' preference for infant-directed speech: Evidence from a multi-site study in Africa.* Developmental Science.

8. Hidaka, S., Torii, T., and **Kachergis, G.**. (in revision). *Active learners can learn what simple samplers cannot: A Zipf-distributed vocabulary from limited data.* Cognitive Science.

9. Long, B., Frank, M. C., Lai, E., Chan, P., Wong, P., and **Kachergis, G.** (accepted pending data collection). *Consistency and variability between cultures during toddlers' naturalistic play.* Infancy. Preprint: https://psyarxiv.com/jqwr5/

10. Mahowald, K., **Kachergis, G.**, and Frank, M. C. (2020). *What counts as an exemplar model, anyway? A commentary on Ambridge (2020).* First Language. doi: 10.1177/0142723720905920.

11. de Kleijn, R., van Es, L., **Kachergis, G.**, and Hommel, B. (2018). *Anthropomorphization of artificial agents leads to fair and strategic, but not altruistic behavior.* International Journal of Human-Computer Studies.

12. **Kachergis, G.** (2018). *Word learning: Associations or hypothesis testing?* Current Biology. *28*(9), R555-R557. doi: 10.1016/j.cub.2018.02.077.

13. de Kleijn, R., **Kachergis, G.**, and Hommel, B. (2018). *Predictive movements and human reinforcement learning of sequential action.* Cognitive Science. doi: 10.1111/cogs.12599.

14. **Kachergis, G.**, Rhodes, M., and Gureckis, T. (2017). *Desirable difficulties in the development of active inquiry skills.* Cognition. *166*, 407–417. doi: 10.1016/j.cognition.2017.05.021.

15. **Kachergis, G.** and Yu, C. (2017). *Observing and modeling developing knowledge and uncertainty during cross-situational word learning.* IEEE Transactions on Cognitive and Developmental Systems. *10(2)*, 227–236. doi: 10.1109/TCDS.2017.2735540.

16. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2016). *A bootstrapping model of frequency and contextual diversity effects in word learning.* Cognitive Science. *41(3)*, 590–622. doi: 10.1111/cogs.12353.

17. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2014). *Cross-situational word learning is both implicit and strategic.* Frontiers in Cognitive Science. doi: 10.3389/fpsyg.2014.00588

18. **Kachergis, G.**, Wyatte, D., O'Reilly R. C., de Kleijn, R., and Hommel, B. (2014). *A continuous time neural model for sequential action.* Philosophical Transactions of the Royal Society B, 369: 20130623.

19. de Kleijn, R., **Kachergis, G.**, and Hommel, B. (2014). *Everyday robotic action: Lessons from human action control.* Frontiers in Neurorobotics. doi: 10.3389/fnbot.2014.00013

20. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2013). *Actively learning object names across ambiguous situations.* Topics in Cognitive Science, *5*(1), 200–213.

21. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2012). *An Associative Model of Adaptive Inference for Learning Word-Referent Mappings.* Psychonomic Bulletin & Review, *19*(2), 317–324.

22. Cox, G., **Kachergis, G.**, Recchia, G., and Jones, M. N. (2011). *Towards a scalable holographic word-form Representation.* Behavior Research Methods, *43*(3), 602–615.

Refereed Conference Papers and Book Chapters

23. **Kachergis, G.** and Frank, M. C. (submitted). A large-scale comparison of cross-situational word learning models.

24. **Kachergis, G.**, Radwan, S., Long, B., Fan, J. E., Bear, D., Yamins, D. and Frank, M. C. (submitted). Predicting children's and adults' preferences in physical interactions via physics simulation.

25. Long, B., **Kachergis, G.**, Bhatt, N., and Frank, M. C. (submitted). Characterizing the object categories two children see and interact with in a dense dataset of naturalistic visual experience.

26. Zettersten, M., Bergey, C. A., .. **Kachergis, G.**, Lewis, M., .. and Frank, M. C. (submitted). Peekbank: Exploring children's word recognition through an open, large-scale repository for developmental eye-tracking data.

27. Carstensen, A., **Kachergis, G.**, Hermalin, N., and Regier, T. (2019). *"Natural concepts" revisited in the spatial-topological domain: Universal tendencies in focal spatial relations.* Proceedings of the 41st Annual Conference of the Cognitive Science Society.

28. Grimmick, C., Gureckis, T. M., and **Kachergis, G.** (2019). *Evidence of error-driven cross-situational word learning.* Proceedings of the 41st Annual Conference of the Cognitive Science Society.

29. **Kachergis, G.**, Gureckis, T. M., and Rhodes, M. (2019). *Exploring informal science interventions to promote children's understanding of natural categories.* Proceedings of the 41st Annual Conference of the Cognitive Science Society.

30. Oudeyer, P.-Y., **Kachergis, G.**, and Schueller, W. (2019). *Computational and robotic models of early language development: A review.* In Handbook on Language Development, ed. Horst, J. and von Koss Torkildsen, J. Routledge.

31. **Kachergis, G.** (2018). *Leveraging adaptive games to learn how to help children learn effectively.* IEEE Cognitive and Developmental Systems (CDS) Newsletter, *15*(1).

32. **Kachergis, G.**, Kielstra, J., Bokkers, L., Persad, B., and Molenaar, I. (2018). *Detecting reading strategies during task-oriented reading: Building an automated classifier.* In Workshop on Personalization Approaches in Learning Environments at AIED 2018.

33. Kottke, D., Calma, A., Huseljic, D., Sandrock, C., **Kachergis, G.**, and Sick, B. (2018). *The other human in the loop: A pilot study to find selection strategies for active learning. 2018 International Joint Conference on Neural Networks (IJCNN).*

34. de Kleijn, R., **Kachergis, G.**, and Hommel, B. (2018). *IQ and working memory predict plan-based sequential action learning. Proceedings of the 40th Annual Conference of the Cognitive Science Society.*

35. de Kleijn, R., **Kachergis, G.**, and Hommel, B. (2018). *Optimized behavior in a robot model of sequential action. Proceedings of the 40th Annual Conference of the Cognitive Science Society.*

36. Adams, K. and **Kachergis, G.** (2017). *Executive function and attention predicts preschoolers' active category learning in 1D and 2D Spaces. Proceedings of the 39th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

37. *Adams, K., ***Kachergis, G.**, and Markant, D. (2017). *Children's familiarity preference in self-directed study improves recognition memory. Proceedings of the 39th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society. *Equal contribution.

38. Hidaka, S., Torii, T., and **Kachergis, G.** (2017). *Leveraging mutual exclusivity for faster cross-situational word learning: A theoretical analysis. Proceedings of the 39th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

39. Hidaka, S., Torii, T., and **Kachergis, G.** (2017). *Quantifying the impact of active choice in word learning. Proceedings of the 39th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

40. **Kachergis, G.**, Rhodes, M., and Gureckis, T. (2016). Desirable difficulties in the development of active inquiry skills. *Proceedings of the 38th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

41. **Kachergis, G.**, de Kleijn, R., and Hommel, B. (2016). A Dream Model: Reactivation and re-encoding mechanisms for sleep-dependent memory consolidation. *Proceedings of the 38th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

42. **Kachergis, G.**, Berends, F., de Kleijn, R., and Hommel, B. (2016). Human reinforcement learning of sequential action. *Proceedings of the 38th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

43. de Kleijn, R., **Kachergis, G.**, and Hommel, B. (2015). Robotic action control: On the crossroads of cognitive psychology and robotics. In H. Samani (Ed.), Cognitive Robotics. Taylor & Francis.

44. **Kachergis, G.** and Yu, C. (2014). Continuous measure of word learning supports associative model. *IEEE Conference on Development and Learning-EpiRob 2014.*

45. **Kachergis, G.**, Berends, F., de Kleijn, R. and Hommel, B. (2014). Reward effects on sequential action learning in a trajectory serial reaction time task. *IEEE Conference on Development and Learning-EpiRob 2014.*

46. **Kachergis, G.**, Berends, F., de Kleijn, R. and Hommel, B. (2014). Trajectory effects in a novel serial reaction time task. *Proceedings of the 36th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

47. **Kachergis, G.**, Yu, C. and Shiffrin, R. M. (2014). Developing semantic knowledge through cross-situational learning. *Proceedings of the 36th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

48. **Kachergis, G.**, Cox, G. E., and Shiffrin, R. M. (2013). The Effects of Repeated Sequential Context on Recognition Memory. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

49. **Kachergis, G.** and Yu, C. (2013). More Naturalistic Cross-situational Word Learning. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

50. Cox, G. E., **Kachergis, G.**, and Shiffrin, R. M. (2013). Similarity and Strategic Effects in Recognition Memory. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

51. Kievit-Kylar, B., Kachergis, G., and Jones, M. N. (2013). Naturalistic Word-Concept Pair Learning With Semantic Spaces. In M. Knauff, M. Pauen, N. Sebanz, & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society.* Austin, TX: Cognitive Science Society.

52. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2012). Cross-situational Word Learning is Better Modeled by Associations than Hypotheses. *IEEE Conference on Development and Learning-EpiRob 2012.* **Best Experiment Combined with Computational Model** .

53. **Kachergis, G.** (2012). *Learning Words with Domain-General Associative Learning Mechanisms.* In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 533-538). Austin, TX: Cognitive Science Society.

54. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2012). Actively Learning Nouns Across Ambiguous Situations. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 527-532). Austin, TX: Cognitive Science Society. **Marr Prize Winner**

55. Hendrickson, A. T. **Kachergis, G.**, Fausey, C., and Goldstone, R. L. (2012). Re-learning labeled categories reveals structured representations. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 1668-1673). Austin, TX: Cognitive Science Society.

56. Cox, G. E., **Kachergis, G.**, and Shiffrin, R. M. (2012). Gaussian Process Regression for Trajectory Analysis. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society* (pp. 1440-1445). Austin, TX: Cognitive Science Society.

57. **Kachergis, G.**, Recchia, G., and Shiffrin, R. M. (2011). Adaptive Magnitude and Valence Biases in a Dynamic Memory Task. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 819-824). Austin, TX: Cognitive Science Society.

58. **Kachergis, G.**, Cox, G. E., and Jones, M. N. (2011). OrBEAGLE: Integrating Orthography into a Holographic Model of the Lexicon. *21st Annual International Conference on Artificial Neural Networks*, Espoo, Finland. *June 2011.*

59. Trueblood, J. S., **Kachergis, G.**, and Kruschke, J. K. (2011). A Cue Imputation Bayesian Model of Information Aggregation. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 1298-1303). Austin, TX: Cognitive Science Society.

60. Gangwani, T., **Kachergis, G.**, and Yu, C. (2010). Simultaneous Cross-situational Learning of Category and Object Names. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 1595-1600). Austin, TX: Cognitive Science Society.

61. Hendrickson, A. T., **Kachergis, G.**, Gureckis, T. M., and Goldstone, R. L. (2010). Is categorical perception really verbally mediated perception? In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 1216-1221). Austin, TX: Cognitive Science Society.

62. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2010). Cross-Situational Statistical Learning: Implicit or Intentional? In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 2362-2367). Austin, TX: Cognitive Science Society.

63. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2010). Adaptive Constraints and Inference in Cross-Situational Word Learning. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 2464-2469). Austin, TX: Cognitive Science Society.

64. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2009). Frequency and Contextual Diversity Effects in Cross-Situational Word Learning. In N.A. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 2220-2225). Austin, TX: Cognitive Science Society.

65. **Kachergis, G.**, Yu, C., and Shiffrin, R. M. (2009). Temporal Contiguity in Cross-Situational Statistical Learning. In N.A. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 1704-1709). Austin, TX: Cognitive Science Society.

66. Barbella, D., **Kachergis, G.**, Liben-Nowell, D., Sallstrom, A., and Sowell, B. Depth of Field and Cautious-Greedy Routing in Social Networks. *18th International Symposium on Algorithms and Computation*, Sendai, Japan. *17 December 2007.*

Thesis

67. Mechanisms for Cross-Situational Learning of Word-Referent Mappings: Empirical and Modeling Evidence. (winner of Glushko Prize). Ph.D. Advisory Committee: Richard M. Shiffrin, Michael N. Jones, John Kruschke, Robert Goldstone, Chen Yu. *December, 2012.*

Outreach

68. Kachergis, G. Leveraging Adaptive Games to Learn How to Help Children Learn Effectively. IEEE Newsletter of the Technical Committee on Cognitive and Developmental Systems. *Fall 2018.*

69. Kachergis, G. *The Rise–and Dangers–of Personal Digital Assistants.* Chatbots Life online publication. *October 21, 2017.*

70. Kachergis, G. and van Gerven, M. *De impact van neurale netwerken op taal- en spraaktechnologie.* DIXIT magazine. *December, 2017.*

71. Kachergis, G. *Translating Cognitive Science to EdTech: Searching for Impact* . Thinking about Thinking blog. *July, 2016.*

Selected Conference Presentations

- **Kachergis, G.**, Marchman, V., Dale, P. S., Mehta, H., Mankewitz, J., and Frank, M. C. (2021). *An online computerized adaptive test of children's early vocabulary development.* Poster to be presented at the Society for Research in Child Development, Virtual (April).

- Long, B., **Kachergis, G.**, Agrawal, K., and Frank, M. C. (2020). *Detecting social information in a dense database of infants' natural visual experience.* Talk presented virtually at the 42nd Annual Conference of the Cognitive Science Society. Preprint: https://psyarxiv.com/z7tdg/

- Bang, J., Weisleder, A., **Kachergis, G.**, Marchman, V., and Fernald, A. (2020). *Investigating the features of child-directed versus overheard speech in all-day recordings of Spanish-speaking families.* Poster presented at the virtual International Congress of Infant Studies.

- **Kachergis, G.**, Long, B., Agrawal, K., and Frank, M. C. (2020). *Automatically detecting children's evolving visual access to social information.* In Symposium on Embracing new technologies to quantify early learning environments at the virtual International Congress of Infant Studies.

- **Kachergis, G.**, Fan, J., Haber, N., Long, B., Wong, P., Yamins, D., and Frank, M. C. (2019). *Investigating the development of exploratory play in infants and machines.* In Workshop on Guided Playful Learning at the 41st Annual Meeting of the Cognitive Science Society, Montreal, CA.

- Portelance, E., **Kachergis, G.**, and Frank, M.C. (2019). *Comparing memory-based and neural network models of early syntactic development.* Poster presented at the Boston University Conference on Language Development, Boston, MA.

- **Kachergis, G.**, Gureckis, T., and Rhodes, M. (2019). *Exploring informal science interventions to promote children's understanding of natural categories.* Society for Philosophy and Psychology (SPP), San Diego, CA.

- Adams, K., **Kachergis, G.**, and Goulart de Lucena, H. (2018). *A Suite of Adaptive Games for Self-directed Literacy and Numeracy Education.* Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.

- **Kachergis, G.**, Tubridy, S., and Gureckis, T. (2016). *Predictable stimulus onsets improve memory.* Poster presented at the 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA.

- **Kachergis, G.**, Rhodes, M., and Gureckis, T. (2015). Understanding developmental bottlenecks in active inquiry. Poster presented at the Annual Meeting of the Cognitive Development Society. Columbus, OH. *October 2015.*

- **Kachergis, G.**, Rhodes, M., and Gureckis, T. (2015). *Understanding Developmental Bottlenecks in Active Inquiry.* Poster presented at the 37th Annual Meeting of the Cognitive Science Society, Pasadena, CA. *July 2015.*

- **Kachergis, G.**, de Kleijn, R., and Hommel, B. (2015). Should androids dream of electric sheep? Mechanisms for sleep-dependent memory consolidation. *International Conference on Cognitive Modeling. April 2015.*

- **Kachergis, G.**, de Kleijn, R., and Hommel, B. *A Spiking Neural Model for Sequential Action Control.* 14th Annual Summer Interdisciplinary Conference, Cortina, Italy. *26 July 2013.*

- **Kachergis, G.** and Hidaka, S. *Towards a Cognitive Bayesian Model of Word Learning.* 46th Annual Meeting of the Society for Mathematical Psychology, Berlin, Germany. *August 7, 2013.*

- Cox, G. E., **Kachergis, G.** and Shiffrin, R. M. *Perceptual Similarity, Encoding Strategy, and Decision Dynamics in Recognition Memory.* 46th Annual Meeting of the Society for Mathematical Psychology, Berlin, Germany. *August 6, 2013.*

- Brown, S., **Kachergis, G.**, Donkin, C., Heathcote, A., Rae, B. *How do people make fast decisions?.* 45th Annual Meeting of the Society for Mathematical Psychology, Columbus, OH. *July 21, 2012.*

  Kachergis, G. (2012). *Learning Words with Domain-General Associative Learning Mechanisms.* 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan. *August 2012.*

  Kachergis, G., Yu, C., and Shiffrin, R. M. (2012). *Actively Learning Nouns Across Ambiguous Situations.* 34th Annual Meeting of the Cognitive Science Society, Sapporo, Japan. *August 2012.*

- **Kachergis, G.**, Cox, G. E., Shiffrin, R. M. *Dynamic Effects of Perceptual and Categorical Similarity on Recognition Memory.* Poster presented at the Context and Episodic Memory Symposium, Bloomington, IN. *May 10, 2012.*

- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *Modeling Cross-situational Word Learning: Hypotheses or Associations?.* Midwest Cognitive Science Conference, Bloomington, IN. *May 7, 2012.*

- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *Active Cross-situational Statistical Word Learning.* Poster presented at the 33rd Annual Meeting of the Cognitive Science Society, Boston, MA. *July 2011.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *An Associative Model of Inference in Statistical Word Learning.* 44th Annual Meeting of the Society for Mathematical Psychology, Boston, MA. *July 2011.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *Modeling the Acquisition of the Mental Lexicon.* 43rd Annual Meeting of the Society for Mathematical Psychology, Portland, OR. *August 2010.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *Modeling Frequency and Context Effects in Statistical Word Learning.* 42nd Annual Meeting of the Society for Mathematical Psychology, Amsterdam, the Netherlands. *August 2009.*
- Gangwani, T., **Kachergis, G.**, Yu, C. *Simultaneous Noun and Category Learning via Cross-Situational Statistics.* 31st Annual Meeting of the Cognitive Science Society, Amsterdam, the Netherlands. *July 2009.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *The Semantics of Eye Movements in Cross-Situational Statistical Word Learning.* 41st Annual Meeting of the Society for Mathematical Psychology, Washington, D.C. *27 July 2008.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *Temporal Continuity in Cross-Situational Statistical Learning.* 30th Annual Meeting of the Cognitive Science Society, Washington, D.C. *25 July 2008.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *The Automaticity of Statistical Word Learning.* 30th Annual Meeting of the Cognitive Science Society, Washington, D.C. *25 July 2008.*
- **Kachergis, G.**, Shiffrin, R. M. *The Effects of Repeated Sequential Context on Recognition.* 7th Annual Summer Interdisciplinary Conference, Madonna di Campiglio, Italy. *10 July 2008.*
- **Kachergis, G.**, Yu, C., Shiffrin, R. M. *The Automaticity of Cross-Situational Statistical Learning.* Redhawk Mental Life, Oxford, OH. *8 March 2008.*
- Ohnesorge, C., **Kachergis, G.** *Testing the Whorfian Hypothesis: Lateralized Presentation and Color Recognition.* 48th Annual Meeting of the Psychonomic Society, Long Beach, CA. *17 November 2007.*
- Ohnesorge, C., Fanta, A., **Kachergis, G.** *Color Recognition and Laterality: Does Language Affect Color Processing?* 6th Annual Summer Interdisciplinary Conference, Kalymnos, Greece. *28 June 2007.*
- **Kachergis, G.**, Olson, J. F. *Lexical Variety in Human Processing of Syntactically Ambiguous Sentences.* Minnesota Undergraduate Psychology Conference, University of St. Thomas, St. Paul, MN. *22 April 2006.*

Teaching, Supervision, and Departmental Service

- Donders Education Hackathon - helped organize, and mentored 3rd place team, *Fall 2017*

- Machine Learning - lectured reinforcement learning unit for AI Bachelor's course, *Spring 2018*
- Cognitive Robotics - lectured and developed labs for AI Bachelor's course (6EC), *Fall 2017*
- Cognitive Computational Modeling of Language and Web - developed and taught AI Master's course (6EC), *Spring 2017, 2018*
- Contributor to Trends in Artificial Intelligence Master's course, *Fall 2016, 2017*
- Contributor to Search, Planning, and Machine Learning AI Bachelor's course, *Spring 2018*
- Supervised Doctoral students: Roy de Kleijn *co-promoter 2013–2017*
- Supervised AI Master's theses: Floris Berends *2014*; Diede Kemper, Roos van der Donk, Chris Wolk *2016–2017*; Joshua van Kleef, Jordi Riemens *2017-2018*;
- Supervised AI Bachelor's theses:
  Spring 2017 - Abdullahi Ali, Berend van Deelen, Hester Huijsdens, Jake Overbeek, Ylja Remmits, Vivian Vriezekolk, Maran Koolen, Bob de Ruiter, Jelmer Jansen, Marlen Lorenz
  Fall 2017 - Max de Grauw, Tristan Payer, Frans van Grunsven, Jetske Adams, Wieke Harmsen, Stef Brands, Thomas Zoeter, Ruby van Rossum, Ismail Guclu, Bob de Ruiter, Michel Meijerman
  Spring 2018 - Tessa Bal, Chrisovalandis Boukouras, Ismail Guclu, Tjeerd Mooi, Juliana Montana Melgarejo, Luke Peters, Kimberly Stoutjesdijk
- Member of A.I. Master's Degree Program Committee, Radboud University, *Fall 2016–Spring 2017*
- Member of A.I. Master's Exam Board Committee, Radboud University, *Fall 2017–present*
- Coordinator of Radboud University's A.I. Master's track on Web and Language, *Fall 2016–present*
- Coordinator for Radboud University's Good AIfternoon talk series, *Fall 2016–present*
- Coordinator for NYU's Concepts and Categories (ConCats) talk series, *2015–2016*
- *Cognitive Modeling to Study Language and Improve Education*, guest lecture in Topics of AI course at Radboud University, *Fall 2016*
- *Inverting the Classroom*, Pedagogy Seminar Talk, Indiana University, *Spring 2012*
- Teaching Assistant for Human Learning and Cognition, *Spring 2012*
- *Categorization*, guest lecture in Intro. to Psychology, Instr. Hilary Kalagher, *Spring 2009*
- Coordinator for Indiana University Cognitive Lunch talk series, *Fall 2010 to Fall 2011*
- Instructor for Experimental Methods in Psychology (P211), Indiana University, *Spring 2010*
- Grader for Artificial Intelligence, Prof. David Musicant, Carleton College, *Winter 2007*
- Prefect for Data Structures, Prof. David Liben-Nowell, Carleton College, *Winter 2006*
- Supervised undergraduate research assistants: J. Booher, E. Farmer, T. Gangwani, Z. Horwitz, K. Mullen, E. Lee, P. LaFree, A. Salisbury, B. Jenkins

Invited Talks

- *Towards a "Standard" Model of Word Learning*, LangVIEW online consortium, *May 19, 2020*
- *Engineering the statistics of the environment: How people shape their experience to promote learning*, developmental brown bag at Stanford University, *November 28, 2018*
- *Engineering the statistics of the environment: How people shape their experience to promote learning*, colloquium at Tsinghua University, Beijing, *September 17, 2018*
- *Engineering the statistics of the environment: How people shape their experience to promote learning*, Radboud University, *April 29, 2018*
- *Engineering the statistics of the environment: How people shape their experience to promote learning*, UC Merced, *February 14, 2018*
- *Learning More with Less Input: Lessons from Children and Education for A.I.*, colloquium at INRIA Flowers Lab, Bordeaux, *November 17, 2017*
- *Learning More with Less Input: Lessons from Children and Education for A.I.*, TiCC colloquium at Tilburg University, *November 8, 2017*
- *Learning More with Less Input: Lessons from Children and Education for A.I.*, AI colloquium at Radboud University, *November 2, 2017*
- *From Active Learning in Humans to Adaptive Machines in Education*, Summerschool on Learning Systems / Biocomputing at Otto von Guericke University Magdeburg, *August, 2017*
- *Adaptive Educational Apps for Self-taught Literacy and Numeracy*, Annual CognAC AI Symposium, *May, 2017*
- *Adaptive Educational Apps for Self-taught Literacy and Numeracy*, AI colloquium at Radboud University, *December, 2016*
- *A Model with Memory- and Uncertainty-guided Attention to Learn Nouns–and more!*, Radboud University, *May 3, 2016*
- *How People Learn: Memory- and Uncertainty-driven Attention*, Brown University, *April 8, 2016*
- *How People Learn Nouns: Memory- and Uncertainty-driven Attention*, University of North Carolina, Charlotte, *February 29, 2016*
- *How People Learn Nouns (and more)*, Syracuse University, *December 3, 2015*
- *How People Learn Nouns*, New York University, *April 24, 2015*
- *Word Learning Trajectories on Different Timescales*, University of Groningen, *November 25, 2014*
- *Word Learning Trajectories on Different Timescales*, University of Edinburgh, *July 2, 2014*
- *Word Learning Trajectories on Different Timescales*, Stanford University, *May 20, 2014*

- *How People Learn Words: Modeling Semantic Bootstrapping and Frequency Effects*, Swansea University, *April 2, 2014*
- *Similarity and Strategic Effects in Recognition Memory: Attack of the Blobs!*, Indiana University, *October 9, 2013*
- *Explaining Word Learning Using Domain-General Mechanisms*, University of Colorado at Boulder, *September 30, 2013*
- *Domain-General Mechanisms for Learning Word-Referent Mappings*, Leiden University, *October 10, 2012*
- *Domain-General Mechanisms for Learning Word-Referent Mappings*, Japan Advanced Institute for Science and Technology, *June 27, 2012*
- *How Children Learn Words*, Carleton College, *April 25, 2012*
- *Domain-General Mechanisms for Learning Word-Referent Mappings*, Syracuse University, *April 15, 2012*
- *Dynamic Effects of Perceptual and Categorical Similarity on Recognition Memory*, Syracuse University, *April 15, 2012*
- *Domain-General Mechanisms for Learning Word-Referent Mappings: Empirical and Modeling Evidence*, Cognitive Lunch, Indiana University, *April 4, 2012*
- *Actively Learning Nouns Across Ambiguous Situations Using Associative Mechanisms*, Stanford University, *February 21, 2012*
- *Modeling the Acquisition of the Mental Lexicon*, Cognitive Lunch, Indiana University, *April 28, 2010*

Membership and Professional Service

- **Associate Editor**, Frontiers in Psychology: Cognition, *July 2016–Present*
- **Ad hoc reviewer**: Child Development; Cognition; Current Biology; Developmental Psychology; Developmental Science; Memory & Cognition; Psychological Review; Psychonomic Bulletin and Review; Applied Psycholinguistics; Behavior Research Methods; Cognitive Science Journal; Cognitive Science Conference; Data Mining and Knowledge Discovery; Infant Behavior and Development; Infancy; Journal of Mathematical Psychology; Journal of Speech, Language, and Hearing Research; Journal of Experimental Psychology: Learning, Memory, and Cognition; Frontiers in Behavioral Neuroscience; Language Learning; Learning and Individual Differences; NeuroImage; PLOS ONE; IEEE Transactions on Cognitive and Developmental Systems; IEEE Conference on Development and Learning (ICDL-EpiRob)
- **Member** of Cognitive Science Society, *2005–Present*
- **Member** of The Society for Mathematical Psychology, *2008–Present*