

Denise Werchan, Ph.D.

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EMPLOYMENT

2025 – Present **University of California, Irvine**
Assistant Professor
Department of Psychology

EDUCATION & TRAINING

2020 – 2025 **NYU School of Medicine**, New York, NY
Postdoctoral Research Fellow
Department of Child & Adolescent Psychiatry
Department of Population Health

2013 - 2020 **Brown University**, Providence, RI
Ph.D., Cognitive Science
Advisors: Dr. Dima Amso, Dr. Michael J. Frank
Dissertation Title: Prefrontal Cortex Contributions to Learning in Infancy

2013 - 2016 **Brown University**, Providence, RI
M.S., Psychology

2009 - 2012 **University of Arizona**, Tucson, AZ
B.S., Psychology with Honors, *Summa Cum Laude*, *Phi Beta Kappa*
Minor in Computer Science

2008 - 2009 **Pima Community College**, Tucson, AZ
A.A., General Education Studies

RESEARCH INTERESTS

- Early Contextual Experiences and Infant Neurocognitive Development
- Trajectories of Attention, Learning, and Self-Regulation
- Mechanisms Linking Caregiving and Sociocultural Contexts with Infant Development

HONORS & AWARDS

2022 Early Career Award – *American Psychological Association Div 7*

2020 Student Investigator Award – *International Society for Developmental Psychobiology*

2020 Dissertation Award – *FLUX Society for Developmental Cognitive Neuroscience*

2017 Betty R.H. and James M. Pickett Fellowship Fund – *Brown University*

2015 Friedman Family Fund Award – *Brown University*

2014 Travel Award – *International Society for Developmental Psychobiology*

2013 Sackler Developmental Psychobiology Fellowship – *Cornell University*
 2012 Phi Beta Kappa Society Inductee
 2012 Richard. A. Harvill Graduate Research Fellowship – *University of Arizona*
 2012 Excellence in Research Award – *University of Arizona*
 2012 William James Award – *University of Arizona*
 2012 Galileo Circle Scholarship – *University of Arizona*
 2011 Undergraduate Research Grant – *University of Arizona*
 2011 William C. Dement Sleep Research Fellowship – *Brown University*

TRAVEL AWARDS

2023 NIH/National Eye Institute Travel Grant – *Vision Sciences Society*
 2021 Travel Award – *International Society for Developmental Psychobiology*
 2016 Travel Award – *International Congress of Infant Studies*
 2014 Travel Award – *International Society for Developmental Psychobiology*
 2013 Travel Award – *Sleep Research Society*

CURRENT GRANT SUPPORT

Noel Drury, M.D. Institute for Translational Depression Discoveries 2026-2027

LIFT-D Seed Grant

Intergenerational Depression Risk and Buffering Effects of Perinatal Health Behaviors

Total Costs: \$50,000

Role: Principal Investigator

National Institute of Mental Health U01 UF1MH141129 2025-2029

Behavioral Phenoscreening: Remote Assessment of Child Mental Health (REACH)

Total Costs: \$4,952,060

Role: Co-Investigator (MPIs: Shuffrey, Thomason)

National Institute on Drug Abuse R01 DA 059415 2023-2027

Integrating eye-tracking and ECG methodologies for remote infant neurocognitive assessments in the home

Total Costs: \$2,264,518

Role: Co-Investigator (PI: Brito)

COMPLETED GRANT SUPPORT

Brain and Behavior Research Foundation NARSAD Young Investigator Award 2023-2025

Ontological origins of psychopathology: intergenerational transmission through maternal programming of the developing gut microbiome in offspring

\$70,000

Role: Principal Investigator

Society for Research in Child Development Early Career Grant 2022-2024

Naturalistic studies of infant visual attention: improving ecological validity and diversity in developmental science through innovation in remote infant eye tracking

\$7,500

Role: Principal Investigator

Robin Hood Fund for Early Learning 2021-2022

Connected Caregiver Network at Social Creatures (<https://www.thesocialcreatures.org/>)

\$170,000

Role: Consulting Research Scientist (PI: Perry)

Carney Institute Graduate Award in Brain Science 2018-2019

Prefrontal Contributions to Learning and Attention in Infancy

\$70,000

Role: Principal Investigator

The British Society Newton International Fellowship 2018-2020

Executive Control Over Learning and Visual Processing in Infancy

£78,000 (declined)

Role: Principal Investigator

National Science Foundation Graduate Research Fellowship Program 2013-2016

Impact of Sleep and Reward on Learning and Generalization

\$132,000

Role: Principal Investigator

PUBLICATIONS

Google Scholar Profile: <https://bit.ly/4d5F0AA>

30. **Werchan, D.M.**, Aitken, A., Giménez, L., Braren, S. & Brito, N.H. (in press). Unpredictable caregiving is associated with disrupted neurophysiological measures of attention and autonomic function in three-month-old infants. *Developmental Cognitive Neuroscience*.
29. **Werchan, D.M.**, Suskind, B., Howell, B., Brito, N.H., Thomason, M.E. (in press). Maternal milk allopregnanolone may buffer negative associations between maternal postpartum psychological distress and infant regulatory capacity. *Developmental Psychobiology*.
28. Thomason, M.E., **Werchan, D.M.**, Ji, L., Hendrix, C.L., Susskind, B., Duffy, M., Brito, N. H., & McCormack, C. (2025). COVID-19 Infection During Pregnancy and Infant Neurodevelopment. *Pediatric Research*.
27. **Werchan, D.M.**, Hume, AM, Zhang, M., Vo, T., & Brito, N. H. (2025). From Focus to Function: Longitudinal Insights into Infant Attention and Emerging Executive Functions

via Remote Webcam Eye Tracking. *Developmental Psychology*.

26. Brandes-Aitken, A., Hume, A., Braren, S., **Werchan, D.M.**, Zhang, M., & Brito, N. H. (2024). Maternal Heart Rate Variability at 3-Months Postpartum is Associated with Maternal Mental Health and Infant Neurophysiology. *Scientific Reports*, 14(1), 18766. DOI: 10.1038/s41598-024-68398-4
25. **Werchan, D.M.**, Aitken, A.B., Ku, S., & Blair, C. (2024). Naturalistic Patterns of Sustained Attention Across Early Childhood: Developmental Profiles and Longitudinal Associations with Executive Functions. *Developmental Psychology*. DOI: 10.1037/dev0001786
24. Ku, S., **Werchan, D.M.**, Feng, X., & Blair, C. (2024). Trajectories of Maternal Depressive Symptoms from Infancy Through Early Childhood: The Roles of Perceived Financial Strain, Social Support, and Intimate Partner Violence. *Development & Psychopathology*. DOI: 10.1017/S0954579424000117
23. **Werchan, D.M.**, Hendrix, C.L., Hume, A., Zhang, M., Thomason, M.E., & Brito, N.H. (2023). Effects of Prenatal Psychosocial Stress and COVID-19 Infection on Infant Attention and Socioemotional Development. *Pediatric Research*. DOI: 10.1038/s41390-023-02807-8
22. **Werchan, D.M.**, Thomason, M.E., & Brito, N.H. (2022). OWLET: An Automated, Open-Source Method for Infant Gaze Tracking using Smartphone and Webcam Recordings. *Behavior Research Methods*. DOI: 10.3758/s13428-022-01962-w
21. **Werchan, D.M.**, Brandes-Aitken, A., & Brito, N.H. (2022). Signal in the Noise: Dimensions of Predictability in the Home Auditory Environment are Associated with Neurobehavioral Measures of Early Infant Sustained Attention. *Developmental Psychobiology*. DOI: 10.1002/dev.22325
20. Hendrix, C.L., Ji, L., **Werchan, D.M.**, Majbri, A., Trentacosta, C.J., Burt, A., & Thomason, M.E. (2022). Fetal Frontolimbic Connectivity Prospectively Associates with Aggression in Toddlers. *Biological Psychiatry: Global Open Science*. DOI: 10.1016/j.bpsgos.2022.09.003
19. Hendrix, C.L., **Werchan, D.M.**, Ablow, J.C., Amstadter, A.B., Austin, A.C., Babineau, V., Bogat, G. A., Cioffredi, L., Conradt, E., Crowell, S. E., Dumitriu, D., Fifer, W., Firestein, M. R., Gao, W., Gotlib, I. H., Graham, A., Gregory, K.D., Gustafsson, H.C., Havens, K.L., ... Thomason, M.E. (2022). Geotemporal Analysis of Perinatal Care Changes and Maternal Mental Health: An Example from the COVID-19 Pandemic. *Archives of Women's Mental Health*. DOI: 10.1007/s00737-022-01252-6
18. **Werchan, D.M.**, Ku, S., Berry, D., & Blair, C. (2022). Sensitive Caregiving and Reward Responsivity: A Novel Mechanism Linking Parenting and Executive Functions Development in Early Childhood. *Developmental Science*. DOI: 10.1111/desc.13293
17. Thomason, M.E., Hendrix, C.L., **Werchan, D.M.**, & Brito, N.H. (2022). Perceived

Discrimination as a Modifier of Health, Disease, and Medicine: Empirical Data from the COVID-19 Pandemic. *Translational Psychiatry*. DOI: 10.1038/s41398-022-02047-0

16. Brito, N.H., **Werchan, D.M.**, Brandes-Aitken, A., Greaves, A., Zhang, M. (2022). Paid Maternal Leave is Associated with Infant Brain Function at 3-Months of Age. *Child Development*. DOI: 10.1111/cdev.13765
15. **Werchan, D.M.**, Hendrix, C.L., Ablow, J.C., Amstadter, A.B., Austin, A.C., Babineau, V., Bogat, G.A., Cioffredi, L., Conradt, E., Crowell, S.E., Dumitriu, D., Fifer, W., Firestein, M. R., Gao, W., Gotlib, I.H., Graham, A., Gregory, K.D., Gustafsson, H.C., Havens, K.L., ... Brito, N.H. (2022). Behavioral Coping Phenotypes and Psychosocial Outcomes in a National US Sample of Pregnant and Postpartum Women During The COVID-19 Pandemic. *Nature Scientific Reports*. DOI: 10.1038/s41598-022-05299-4
14. Thomason, M.E., **Werchan, D.M.**, & Hendrix, C.L. (2022). COVID-19 Patient Accounts of Illness Severity, Treatments and Lasting Symptoms. *Nature Scientific Data*. DOI: 10.1038/s41597-021-01103-6
13. Thomason, M.E., Palopoli, A.C., Jariwala, N.N., **Werchan, D.M.**, Chen, A., Adhikari, S., Espinoza-Heredia, C., Brito, N.H., & Trentacosta, C.J. (2021). Miswiring the Brain: Human Prenatal Δ 9-Tetrahydrocannabinol Use Associated with Altered Fetal Hippocampal Brain Network Connectivity. *Developmental Cognitive Neuroscience*. DOI: 10.1016/j.dcn.2021.101000
12. **Werchan, D.M.** & Amso, D. (2021). All Contexts Are Not Created Equal: Social Stimuli Win the Competition for Organizing Reinforcement Learning in 9-Month-Old Infants. *Developmental Science*. DOI: 10.1111/desc.13088
11. **Werchan, D.M.**, Kim, J., & Gómez, R.L. (2021). A Daytime Nap Combined with Nighttime Sleep Promotes Learning in Toddlers. *Journal of Experimental Child Psychology*. DOI: 10.1016/j.jecp.2020.105006
10. **Werchan, D.M.** & Amso, D. (2020a). Top-Down Knowledge Rapidly Acquired Through PFC-Dependent Rule Learning Biases Visual Attention in 9-Month-Old Infants. *Developmental Cognitive Neuroscience*. DOI: 10.1016/j.dcn.2020.100761
9. **Werchan, D.M.** & Amso, D. (2020b). Adaptive Rule Learning of Event Sequences During the A-not-B Task in 9-Month-Old Infants. *Developmental Psychobiology*. DOI: 10.1002/dev.21999
8. **Werchan, D.M.**, Lynn, A., Baumgartner, H., Kirkham, N.Z., & Amso, D. (2019). The Emergence of Object-Based Visual Attention in Infancy: A Role for Family Socioeconomic Status and Competing Visual Features. *Infancy*. DOI: 10.1111/infa.12309
7. **Werchan, D.M.**, Baumgartner, H., Lewkowicz, D. & Amso, D. (2018). The Origins of Cortical Multisensory Dynamics: Evidence from Human Infants. *Developmental Cognitive*

Neuroscience. DOI: 10.1016/j.dcn.2018.07.002

6. **Werchan, D.M.** & Amso, D. (2017). A Novel Ecological Model of Prefrontal Cortex Functional Development. *Psychological Review*, 24(6), 720-739. DOI: 10.1037/rev0000078
5. **Werchan, D.M.**, Collins, A.G.E, Frank, M.J., & Amso, D. (2016). Role of Prefrontal Cortex in Learning and Generalizing Hierarchical Rules in 8-Month-Old Infants. *The Journal of Neuroscience*, 36(40), 10314-10322. DOI: 10.1523/JNEUROSCI.1351-16.2016
4. Simon, K.N.S., **Werchan, D.M.**, Goldstein, M., Sweeney, L., Bootzin, R.R., Nadel, L., & Gómez, R.L. (2016). Sleep Confers a Benefit for Retention of Statistical Language Learning in 6.5-Month-Olds. *Brain & Language*, 167, 3-12. DOI: 10.1016/j.bandl.2016.05.002
3. **Werchan, D.M.**, Collins, A.G.E, Frank, M.J., & Amso, D. (2015). Eight-Month-Old Infants Spontaneously Learn and Generalize Hierarchical Rules. *Psychological Science*, 26(6), 805-15. DOI: 10.1177/0956797615571442
2. **Werchan, D.M.** & Gómez, R.L. (2014). Wakefulness (Not Sleep) Promotes Generalization of Word Learning in 2.5-Year-Old Children. *Child Development*, 85(2), 429-436. DOI: 10.1111/cdev.12149
1. **Werchan, D.M.** & Gómez, R.L. (2013). Generalizing Memories Over Time: Reinforcement and Sleep Facilitate Transitive Inference. *Neurobiology of Learning and Memory*, 100, 70-76. DOI: 10.1016/j.nlm.2012.12.006

OPEN-SOURCE SOFTWARE PACKAGES

The Online Webcam-Linked Eye Tracker (OWLET)

GitHub Repository: <https://github.com/denisemw/owlet>

Infant Eye Tracking Video Preprocessing

GitHub Repository: <https://github.com/denisemw/owlet-preprocessing>

INVITED TALKS

June 2025	CIFAR Infant and Machine Learning Workshop, Northwestern University
June 2023	Child Development Lab, University of Maryland
July 2022	NIDA Workshop on Impact of Comorbid COVID-19 and Substance Use During Pregnancy on Fetal and Infant Development
April 2022	National Institutes of Health Social, Behavioral, and Economic (SBE) Health Impacts of COVID-19 Spring Webinar
May 2021	T32 Fellowship Seminar, Department of Psychiatry, Columbia University Irving Medical Center
November 2020	International Society for Developmental Psychobiology, Student Investigator Award talk

September 2020	FLUX Congress for Developmental Cognitive Neuroscience, Dissertation Award talk.
January 2020	Department of Psychology, University of Texas - Dallas
January 2020	Department of Psychology, University of Oregon
January 2019	Department of Psychology, Columbia University
December 2018	Department of Psychology, University of Toronto
December 2018	Department of Psychology, Carnegie Mellon University
November 2018	Department of Psychology, Stanford University
October 2018	Department of Psychology, Boston College
October 2018	Department of Psychology, Harvard University
September 2018	SaxeLab, Massachusetts Institute of Technology

PRESENTATIONS

Conference talks

1. Werchan, D.M., Aitken, A., Hume, A.M., Zhang, M., Vo, T., & Brito, N.H. (2025, September). *The Online Remote Child Assessment (ORCA) Project: Capturing Infant Attention in Naturalistic Home Environments*. Talk presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience. Dublin, Ireland.
2. Thomason, M.E., Werchan, D.M., Ji, L., Menu, I., Hendrix, C.L., Susskind, B., Duffy, M., Brito, N.H., & McCormack, M. (2024, October). *Maternal Prenatal Sars-Cov-2 Infection and Infant Brain and Behavioral Outcomes*. Talk presented at the International Society for Developmental Psychobiology. Chicago, IL.
3. Hendrix, C.L., Bhatia, T., Forde, M., Palopoli, A., Siddiqui, S., Srinivasan, H., Werchan, D.M., McCormack, M., Ji, L., Brito, N.H., & Thomason, M.E. (2024, October). *Chronicity and Liability of Maternal Depressive Symptoms Exert Distinct Impacts On Infant Behavior*. Talk presented at the International Society for Developmental Psychobiology. Chicago, IL.
4. Werchan, D.M., Hendrix, C. L., Blair, C., Thomason, M. E., & Brito, N. H. (2022, July). *Influences of the Home Visual Environment on Infant Attention: Insights from Remote Webcam Eye Tracking*. Talk presented at the annual meeting for the Vision Sciences Society, St. Pete Beach, FL.
5. Werchan, D.M., Hendrix, C. L., Blair, C., Thomason, M. E., & Brito, N. H. (2022, July). *Blunted Reward Sensitivity as a Novel Link Between Maternal Depression and Self-Regulation Development: Convergent Evidence from Two Prospective Longitudinal Cohorts*. Talk to be presented at the International Congress of Infant Studies, Ottawa, ON.
6. Werchan, D.M., Thomason, M. E. Brito, N. H., VanTieghem, M. et al. (2021, April). *COVID-19 and Perinatal Experiences: Individual Differences in Coping Strategies Predict Emotional Wellbeing in Perinatal Women*. Talk presented at the biennial meeting for the Society for Research in Child Development, virtual meeting.

7. Hendrix, C. L., Werchan, D. M., Lenniger, C. J., Austin, A. C., Brito, N. H., & Thomason, M. E. (2021, April). *Geographic Variability in Perinatal Care Disruptions as a Consequence of COVID-19*. Talk presented at the biennial meeting for the Society for Research in Child Development, virtual meeting.
8. Werchan, D.M., Collins, A. G. E., Frank, M. J., & Amso, D. (2016, May). *8-Month-Old Infants Create Hierarchical Rules to Support Learning and Generalization in Novel Contexts*. Talk presented at the International Congress of Infant Studies, New Orleans, LA.
9. Werchan, D.M., Kim, J., & Gomez, R. L. (2016, May). *Nighttime Sleep Enhances Preschoolers' Long-Term Generalization of Word Learning*. Talk presented at the International Congress of Infant Studies, New Orleans, LA.
10. Newman-Smith, K., Werchan, D.M., Bootzin, R., Nadel, L., & Gomez, R.L. (2015, March). *Retention of Statistical Learning in 6.5-Month-Old Infants*. Talk presented at the Society for Research in Child Development biennial meeting, Philadelphia, PA.
11. Werchan, D.M., Collins, A. G. E., Frank, M. J., & Amso, D. (2014, November). *The Development of Hierarchical Rule Learning and Generalization in Infancy*. Talk presented at the Society for Neuroscience, Washington, DC.
12. Werchan, D.M., Collins, A. G. E., Frank, M. J., & Amso, D. (2014, September). *The Early Emergence of Hierarchical Rule Learning*. Talk presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Los Angeles, CA.
13. Werchan, D.M., & Gomez, R.L. (2013, April). *Wake (Not Sleep) Promotes Generalization of Word Learning in Toddlers*. Talk presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.

Select conference posters

1. Werchan, D.M., Brito., N.H., & Thomason, M.E. (2024, October). *Breastmilk Allopregnanolone (ALLO) Concentration May Buffer Negative Impacts of Maternal Perceived Stress on Infant Regulatory Capacity*. Poster presented at the International Society for Developmental Psychobiology. Chicago, IL.
2. Vo, T, Brito., N.H., & Werchan, D.M. (2024, October). *Longitudinal Associations Between Infant Attention and Executive Functions Evaluated Using Remote Eye Tracking Technology in Naturalistic Settings*. Poster presented at the International Society for Developmental Psychobiology. Chicago, IL.
3. Zhang, M., Werchan, D.M., & Brito., N.H. (2024, October). *Using A Novel Remote Eye-Tracking Methodology to Examine Associations Between Maternal Mental Health and Infant Memory*. Poster presented at the International Society for Developmental Psychobiology. Chicago, IL.

4. Hume, A., Brandes-Aitken, A., Zhang, M., Werchan, D.M., & Brito., N.H. (2024, October). *Remote Assessment of Physiological Synchrony: A Novel Method for Investigating Mother-Infant Heart Rate Coordination*. Poster presented at the International Society for Developmental Psychobiology. Chicago, IL.
5. Gimenez, L., Yan, L., Werchan, D.M., & Brito., N.H. (2024, October). *Exploring the Impact of Unpredictability of Household Resources on Infant Attention*. Poster presented at the International Society for Developmental Psychobiology. Chicago, IL.
6. Werchan, D.M., Brito., N.H., & Thomason, M.E. (2023, September). *Distinct Profiles of Maternal Mental Health and Household Chaos Predict Individual Differences in Infant Emotional Reactivity and Regulation*. Poster presented at the International Congress on Infant Studies, Glasgow, Scotland.
7. Werchan, D.M., Hume, A., Zhang, M., Brandes-Aitken, A., & Brito., N.H. (2023, September). *Longitudinal Associations Between the Predictability of Maternal Behavior and Infant Brain Function*. Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Santa Rosa, CA.
8. Zhang, M., Werchan, D.M., Brito, N.H., & Thomason, M.E. (2023, July). *Maternal Mental Health and Maternal Sensory Input During Play with 6-Month-Old Infants*. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Leiden, The Netherlands.
9. Gaines, L., Susskind, B., Srinivasan, H., Hendrix, C., Werchan, D.M., McCormack, C., Brito, N. H., & Thomason, M. E. (2023, July). *Temperament of Infants Exposed to Sars-Cov-2 Infection and Pandemic Stress in Utero*. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Leiden, The Netherlands.
10. Susskind, B., Gaines, L., Srinivasan, H., McCormack, C., Werchan, D.M., Brito, N. H., & Thomason, M. E. (2023, July). *The Impact of Maternal Sars-Cov-2 Infection on Maternal Inflammation, Maternal Depressive Symptoms, and Child Outcomes*. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Leiden, The Netherlands.
11. Perez, G., Tisborn, K., Yan, L., Klein, R., Werchan, D.M., Thomason, M. E., & Brito, N. H. (2023, July). *Emotion Regulation and Associations to Maternal Mental Health: Comparing Measures of Emotion Regulation at 6 and 12 Months*. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Leiden, The Netherlands.
12. Werchan, D.M., Brandes-Aitken, A., Ku, S. & Blair, C. (2021, November). *Naturalistic Patterns of Attention During Shared Book Reading in Early Childhood: Longitudinal Trajectories and Associations with Emerging Executive Functions*. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Chicago, IL.
13. Werchan, D.M., Hendrix, C., Thomason, M. E., & Brito, N. H. (2021, November). *Infant*

Visual Attention and Maternal Depression: A Novel Remote Assessment for Examining Longitudinal Impacts of the COVID-19 Pandemic on Infant Development. Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Chicago, IL.

14. Hume, A., Werchan, D.M., Hendrix, C., Thomason, M. E., & Brito, N. H. (2021, November). *COVID-19 Perinatal Care Disruptions, Maternal Depression, and Subsequent Infant Outcomes: Investigating Longitudinal Associations and Protective Factors.* Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Chicago, IL.
15. Zhang, M., Werchan, D.M., Thomason, M. E., & Brito, N. H. (2021, November). *Examining Infant Attention in Relation to Mother Infant Behavioral Synchrony.* Poster presented at the annual meeting for the International Society for Developmental Psychobiology, Chicago, IL.
16. Martino, R.M., Amso, D. & Werchan, D.M. (2021, April). *Acquisition of Gender STEM Stereotypes through Reinforcement Learning in School-Age Children.* Poster presented at the biennial meeting for the Society for Research in Child Development, virtual meeting.
17. Martino, R.M., Amso, D. & Werchan, D.M. (2020, September). *Acquisition of Gender STEM Stereotypes through Reinforcement Learning in School-Age Children.* Poster presented at the Flux Congress for Developmental Cognitive Neuroscience, virtual meeting.
18. Werchan, D.M., Gordon, L., & Amso, D. (2019, October). *Top-down activation in mid-level visual regions supports efficient object perception in 8-10-month-old infants.* Poster presented at the Biennial Conference of the Cognitive Development Society, Louisville, KY.
19. Werchan, D.M. & Amso, D. (2018, September). *Abstract Rule Learning Supports the Development of Visual Attentional Biases in 9-Month-Old Infants.* Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Berlin, Germany.
20. Placido, D., Nketia, J., Werchan, D.M. & Amso, D. (2018, September). *Exploring the effects of emotional enrichment on components of executive functions in children of varying socioeconomic status.* Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Berlin, Germany.
21. Novick, A. M., Werchan, D.M., Amso, D., Parade, S. H., Ackerman, L, Gunther, K., Seifer, R., Philip, N. S., & Tyrka, A. R. (2018, May). *Cognitive and Affective Function in School-Aged Children Experiencing Trauma and Adversity.* Poster presented at the 73rd Annual Meeting of the Society of Biological Psychiatry, New York, NY.
22. Werchan, D.M., Gunther, K., & Amso, D. (2017, September). *9-Month-Old Infants use Higher-Order Contexts to Support Working Memory in the A-Not-B Task.* Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Portland, OR.
23. Werchan, D.M., Baumgartner, H., Martino, R., Lewkowicz, D. & Amso, D. (2017, April).

Unisensory and Multisensory Processing in Cortex. Poster presented at the Society for Research in Child Development, Austin, TX.

24. Werchan, D.M., Gunther, K., & Amso, D. (2017, April). *9-Month-Old Infants use Contextual Cues to Support Working Memory in the A-Not-B Task.* Poster presented at the Society for Research in Child Development, Austin, TX.
25. Baumgartner, H, Werchan, D.M., Lewkowicz, D. & Amso, D. (2016, September). *Cortical Plasticity and Specialization in Response to Multimodal Events in Infancy.* Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, St. Louis, MO.
26. Werchan, D.M., Collins, A. G. E., Frank, M. J., & Amso, D. (2015, September). *Activation of Prefrontal Cortex During Hierarchical Rule Learning in 8-Month-Old Infants: Data from Near-Infrared Spectroscopy.* Poster presented at the Flux Congress on Integrative Developmental Cognitive Neuroscience, Leiden, The Netherlands.
27. Werchan, D.M., Collins, A. G. E, Frank, M. J., & Amso, D. (2014, November). *Hierarchical Rule Learning and Generalization in Infancy.* Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Washington, DC.
28. Newman-Smith, K., Werchan, D.M., Goldstein, M., Bootzin, R., Nadel, L., & Gomez, R.G. (2014, June). *A Nap and its Relationship to Consolidation and Retention of New Learning in 6.5-Month-Olds.* Poster presented at the annual meeting of the Society for Sleep Research, Minneapolis, MN.
29. Werchan, D.M., & Gomez, RL. (2013, June). *Wake (Not Sleep) Enhances Preschool Age Children's Generalization of Word Learning.* Poster presented at the annual meeting of the Society for Sleep Research, Baltimore, MD.
30. Werchan, D.M., & Gomez, RL. (2013, June). *Integrating Memories Over Time: Reward Mediates the Formation of Inferences During Sleep.* Poster presented at the annual meeting of the Society for Sleep Research, Baltimore, MD.
31. Werchan, D.M., & Gomez, RL. (2013, April). *The Role of Sleep and Reinforcement in Memory Integration.* Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.
32. Werchan, D.M., & Gomez, RL. (2012, October). *The Effects Of Sleep and Reinforcement on Transitive Inference.* Poster presented at the annual meeting of the Society for Neuroscience, New Orleans, LA.

TEACHING EXPERIENCE

- 2026 Instructor, Lifespan Developmental Psychology
University of California, Irvine, Department of Psychology

- 2026 Instructor, Field Study
University of California, Irvine, School of Social Ecology
- 2026 Instructor, Developmental Psychobiology Graduate Seminar
University of California, Irvine, Department of Psychology
- 2020 Guest Lecturer, “Attention Development”, Graduate Cognitive Development Seminar
New York University, Department of Applied Psychology
- 2019 Guest Lecturer, “fNIRS in Developmental Research”, Psycholinguistics Laboratory
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2018 Guest Lecturer, “fNIRS Applications in Linguistics”, Psycholinguistics Laboratory
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2016 Teaching Assistant, Statistics for the Behavioral Sciences
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2015 Guest Lecturer, “Neurodevelopmental Disorders”, Elementary Psychology
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2015 Teaching Assistant, Elementary Psychology
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2015 Laboratory Instructor, Elementary Psychology
Brown University, Department of Cognitive, Linguistics, and Psychological Sciences
- 2014 Teaching Assistant, Introduction to Cognitive Science
Brown University, Cognitive, Linguistics, and Psychological Sciences Dept.
- 2011-12 Teaching Assistant, Scientific Computing in Python
The University of Arizona, Department of Computer Science
- 2011-12 Laboratory Instructor, Scientific Computing in Python
The University of Arizona, Department of Computer Science

MENTORING

University of California, Irvine

- 2026 - Melanie Thuy, *undergraduate research assistant*
- 2026 - Cate Sanchez Romero, *undergraduate research assistant*
- 2026 - May Allen, *undergraduate research assistant*

2026 - Marley Malesevic, *undergraduate research assistant*

New York University

2023 - 25 Jamiez (Tram) Vo, *NYU Gallatin undergraduate honors thesis mentor*
Awards/Honors: American Psychological Association SUPER Fellowship

2023 - 25 Jenna John, *Hunter College undergraduate honors thesis mentor*

2024 - 25 Riya Gokhale, *undergraduate independent research project advisor*
Awards/Honors: NYU Dean's Undergraduate Research Fund (DURF) Grant

2024 - 25 Bradley Susskind, *postbaccalaureate independent research project advisor*

2023 Netania Stewart, *Child & Adolescent Psychiatry summer research intern*

2020 - 23 Maggie Zhang, *postbaccalaureate independent research project advisor*

2020 - 23 Amy Hume, *postbaccalaureate independent research project advisor*

Brown University

2019-20 Lily Collins, *undergraduate independent research project advisor*

2019-20 Delphine Mahos-Moros, *undergraduate honors thesis mentor*

2018-19 Rachel Martino, *undergraduate honors thesis mentor*

PROFESSIONAL SERVICE

Ad-Hoc Reviewer – Awards & Grants

2025 NSF Human Network and Data Science Infrastructure Program

2024 APA Division 7 Early Career Research Grant Panel

2024 Society for Research in Child Development Small Grants Program for Early Career Researchers Panel

Ad-Hoc Reviewer – Journals

Child Development	Developmental Science
Brain Sciences	Developmental Psychology
Science Advances	Journal of Cognitive Neuroscience
Cognitive Development	Journal of Experimental Psychology – General
Child Neuropsychology	Developmental Cognitive Neuroscience
Emotion	Science Translational Medicine
Journal of Vision	Developmental Psychobiology

Editorial

2026 Guest Editor, *Developmental Cognitive Neuroscience*

Service to School and Department

2025- Committee Member
Psychology Comprehensive Exam Ad-Hoc Committee

2025- Representative for the Psychology Department
School of Social Ecology Executive Committee

2015-17 Graduate Student Representative
Brown University Department of Cognitive, Linguistics, and Psychological Sciences

2012-13 Psychology Colloquium Committee Member
The University of Arizona Psychology Department

Other Professional Service

2025 Review Panel Chair, Attention, Learning, & Memory – International Congress of
Infant Studies (ICIS) 2026 biennial meeting

2025 Workshop Organizer, Infant and Machine Learning, CIFAR Discovery Panel

2023 Review Panel Committee Member, Attention, Learning, & Memory Panel –
International Congress of Infant Studies (ICIS) 2024 biennial meeting

2021-23 Program Development & Evaluation Scientific Committee Member
The Social Creatures Applied Research Non-Profit

2016 Organizer, Communicating Science to Society Symposium
Brown University Friedman Family Fund Lecture Series

2015 STEM Workshop Leader, The Brain 101
Girl Scouts of America Senior Leadership Conference

MEDIA COVERAGE

2023 Healio - *Prenatal COVID-19, maternal stress could affect infants' attention span*

2023 NIH News Releases - *Combined, high maternal stress and prenatal COVID-19
infection may affect attention span in infants*

2022 Scientific American – *U.S. kids are falling behind global competition, but brain
science shows how to catch up*

- 2022 NYU News – *Infant brain study helps make case for a universal US paid leave policy*
- 2022 APA Monitor – *The urgent necessity for paid parental leave*
- 2021 The Atlantic - *The Isolation of New Parenthood During the Pandemic*
- 2016 Science Daily - *Infants Use Prefrontal Cortex in Learning*
- 2014 Psychology Today - *Learning and Sleep in Toddlers*

OTHER TRAINING

- 2022 Designing Ambulatory Assessment Studies
Pittsburgh Summer Stats Workshop
- 2016 Teaching Certificate: Reflective Teaching
Brown University Sheridan Center for Teaching and Learning
- 2016 Functional Near-Infrared Spectroscopy (fNIRS) Course
Harvard University Martinos Institute for Biomedical Engineering