

Curriculum Vitae

Name Whitney I. Mattson
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Department Center for Biobehavioral Health

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Research Institute at Nationwide Children's Hospital
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Citizenship United States

Higher Education

Institutional

Ph.D., 2014 University of Miami, Degree in Psychology
Dissertation Advisor: Daniel S. Messinger
Dissertation Title: *The temporal dependency hypothesis: Previous look durations predict next look durations.*

M.S., 2012 University of Miami, Degree in Psychology
Thesis Advisor: Daniel S. Messinger
Thesis Title: *Emotion intensification in 6-month-old infants: The role of eye constriction*

B.A., 2005 University of California, Davis; Degree in Psychology

Experience

Academic

2017-Present Research Scientist - Center for Biobehavioral Health, The Research Institute at Nationwide Children's Hospital, Supervisor: Eric E. Nelson

2014-2017 Post-doctoral Fellow on a NICHD T32 training grant in Developmental Psychology, Department of Psychology, University of Michigan, Supervisor: Christopher S. Monk

2009-2014 Graduate Researcher - Developmental, University of Miami

2005-2009 Staff Researcher - M.I.N.D. Institute, University of California, Davis

Publications

Peer-Reviewed Articles

Mattson, W. I., Messinger, D. S., Gangi, D. N., & Myers, N. D. (2018). A break in parental interaction does not affect the temporal dependency of infant social engagement, but disrupts non-social engagement. *Scientific Reports*, *8*(1), 15150. doi: 10.1038/s41598-018-33270-9

Hein, T.C., **Mattson, W.I.**, Dotterer, H.L., Mitchell, C., Lopez-Duran, N., Thomason, M.E., . . . Monk, C.S. (2018). Amygdala habituation and uncinate fasciculus connectivity in adolescence: A multi-modal approach. *NeuroImage*, *183*, 617-626. doi: 10.1016/j.neuroimage.2018.08.058

Malek, N., Messinger, D., Gao, A., Krumhuber, E., **Mattson, W.I.**, Joober, R., . . . Martinez-Trujillo, J. (2018). Generalizing duchenne to sad expressions with binocular rivalry and perception ratings. *Emotion*. doi: 10.1037/emo0000410.

Moser, J.S., Dougherty, A., **Mattson, W.I.**, Katz, B., Moran, T.P., Guevarra, D., . . . Kross, E. (2017). Third-person self-talk facilitates emotion regulation without engaging cognitive control: Converging evidence from erp and fmri. *Scientific Reports*, *7*(1), 4519. doi: 10.1038/s41598-017-04047-3

Messinger, D. S., **Mattson, W. I.**, Todd, J. T., Gangi, D. N., Myers, N. D., & Bahrnick, L. E. (2017). Temporal dependency and the structure of early looking. *PLoS ONE*, *12*(1), e0169458. doi: 10.1371/journal.pone.0169458

Velasquez, F., Wiggins, J.L., **Mattson, W.I.**, Martin, D.M., Lord, C., & Monk, C.S. (2016). The influence of 5-httlpr transporter genotype on amygdala-subgenual anterior cingulate cortex connectivity in autism spectrum disorder. *Developmental Cognitive Neuroscience*. doi: <http://dx.doi.org/10.1016/j.dcn.2016.12.002>

Mattson, W. I., Hyde, L. W., Shaw, D. S., Forbes, E. E., Monk, C. S. (2016). Clinical neuroprediction: Amygdala reactivity predicts depressive symptoms two years later. *Social Cognitive and Affective Neuroscience*, online first publication. doi: 10.1093/scan/nsw018

Aviezer, H., Zangvil, S., **Mattson, W. I.**, Gangi, D. N., Messinger, D. S. (2015). Thrill of victory or agony of defeat? Perceivers fail to utilize information in facial movements. *Emotion*, *15*(6), 791-797. doi: 10.1037/emo0000073

Lambert-Brown, B. L., McDonald, N. M., **Mattson, W. I.**, Martin, K. B., Ibañez, L. V., Stone, W. L., & Messinger, D. S. (2015). Positive emotional engagement and autism risk. *Developmental Psychology*, *51*(6), 848. doi: 10.1037/a0039182

Johnson, N., Medina, P., Zhao, G., Messinger, D. S., Horgan, J., Gill, P., Bohorquez, J. C., **Mattson, W. I.**, Gangi, D. N., Qi, H., Manrique, P., Velasquez, N., Morgenstern, A., Restrepo, E. M., Johnson, N., Spagat, M., Zarama, R. (2013). Simple mathematical law benchmarks human confrontations. *Scientific Reports*, *3*. doi: 10.1038/srep03463 PMID: PMC3857569

Mattson, W. I., Cohn, J. F., Mahoor, M. H., Gangi, D. N., & Messinger, D. S. (2013). Darwin's Duchenne: Eye constriction during infant joy and distress. *PLoS ONE*, *8*(11). doi: 10.1371/journal.pone.0080161 PMID: PMC3835870

Mattson, W. I., Ekas, N. V., Lambert, B., Tronick, E., Lester, B. M., & Messinger, D. S. (2013). Emotional expression and heart rate in high-risk infants during the face-to-face/still-face. *Infant Behavior and Development*, *36*(4), 776-785. doi: 10.1016/j.infbeh.2012.11.009 PMID: PMC3874324

Messinger, D. S., **Mattson, W. I.**, Mahoor, M. H., & Cohn, J. F. (2012). The eyes have it: Making positive expressions more positive and negative expressions more negative. *Emotion*, *12*(3), 430-436. doi: 10.1111/j.1532-7078.2011.00074.x

Published Abstracts

Zaker, N., Mahoor, M. H., **Mattson, W. I.**, Messinger, D. S., & Cohn, J. F. (2012). Intensity Measurement of Spontaneous Facial Actions: Evaluation of Different Image Representations. *Proceedings of the 2012 IEEE International Conference on Development and Learning and Epigenetic Robotics*, 1-2.

Alie, D., Mahoor, M. H., **Mattson, W. I.**, Anderson, D., & Messinger, D.S. (2011) Analysis of eye gaze pattern of infants at risk of Autism Spectrum Disorder using Markov models. *Proceedings of the 2011 IEEE Workshop on Applications of Computer Vision*, 282-287.

Chapters

Nelson, E.E., Morningstar, M.A., & **Mattson, W.I.** (2018). Emotions as regulators of motivated behavior. In T. P. Beauchaine & S. E. Crowell (Eds.), *The oxford handbook of emotion dysregulation*. Oxford: Oxford University Press.

Chow, S-M., **Mattson, W. I.**, & Messinger, D. S. (2014). Representing trends and moment-to-moment variability in dyadic and family processes using state-space modeling techniques. In Booth, A., McHale, S., & Landale, N. (Eds.). *Emerging methods in family research*. New York: Springer.

Oberwelland, E., **Mattson, W. I.**, Ekas, N. & Messinger, D. S. (2011). Facial Expression Learning. In N. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (1259-1262). New York, NY: Springer.

Presentations

Singer Jr., S., Venticinque, J., Morningstar, M., **Mattson, W.I.**, McNally, K., Gedela, S., Nelson, E.E. (2017). *The Effect of VNS and Focal Resection on Seizure Frequency and Behavioral Outcomes in Children with Epilepsy*. Poster presented at the annual American Epilepsy Society conference. Washington, D.C., USA.

Venticinque, J., Singer Jr., S., Fuller, B.A., Morningstar, M., **Mattson, W.I.**, Gedela, S., Nelson, E.E. (2017). *Brain Differences in Children with Temporal Lobe Epilepsy as They Judge Emotional Content in Faces and Voices*. Poster presented at the annual Research Retreat at Nationwide Children's Hospital. Columbus, OH, USA.

Singer Jr., S., Venticinque, J., Morningstar, M., **Mattson, W.I.**, McNally, K., Gedela, S., Nelson, E.E. (2017). *The Effect of VNS and Focal Resection on Seizure Frequency and Behavioral Outcomes in Children with Epilepsy*. Poster presented at the annual Research Retreat at Nationwide Children's Hospital. Columbus, OH, USA.

Morningstar, M., Singer Jr., S., Venticinque, J., Fuller, B.A., **Mattson, W.I.**, Gedela, S., Nelson, E.E. (2017). *Age-related differences in youth's neural activation during facial and vocal emotion recognition*. Poster presented at the annual Research Retreat at Nationwide Children's Hospital. Columbus, OH, USA.

Venticinque, J., Singer Jr., S., Morningstar, M., **Mattson, W.I.**, Gedela, S., Nelson, E.E. (2017). *The Effect of Temporal Lobe Epilepsy on Emotion Recognition in Children*. Poster presented at the Annual Flux Congress. Portland, OR, USA.

Monk, C.S., Hein, T.C., **Mattson, W.I.**, Lopez-Duran, N., Mitchell, C., Hyde, L.W. (2017). *Differential Effects of Abuse and Neglect on Brain Development and Psychopathology in Adolescents Growing up in Poverty*. Paper to be presented at the American College of Neuropsychopharmacology, Palm Springs, CA, USA.

Mattson, W.I., Hein, T.C., Velasquez, F., Lopez-Duran, N., Hyde, L.W., Mitchell, C. & Monk, C.S. (2017). *Concurrent eye tracking during an fMRI face-processing task predicts amygdala reactivity to neutral faces*. Poster to be presented at the Society for Research in Child Development Biennial Meeting, Austin, Texas, USA.

Hein, T.C., **Mattson, W.I.**, Dotterer, H.L., Mitchell, C., Thomason, M.E., Peltier, S.J., Welsh, R.C., Hyde, L.W., & Monk, C.S. (2017). *Amygdala Habituation, Uncinate Fasciculus Integrity, and Task-Based Functional Connectivity in a Large, Diverse Adolescent Sample*. Poster to be presented at the Society for Research in Child Development Biennial Meeting, Austin, Texas, USA.

Mattson, W.I., Hein, T.C., Hyde, L.W., Mitchell, C., & Monk, C.S. (2016). *Concurrent eye tracking during an fMRI face-processing task interacts with emotional facial expression type to predict amygdala activation*. Poster presented at the Association for Psychological Science annual convention, Chicago, IL, USA.

Hein, T.C., **Mattson, W.I.**, Dotterer, H.L., Mitchell, C., Thomason, M.E., Peltier, S.J., Welsh, R.C., Luke W. Hyde, L.W., & Monk, C.S. (2016). *Amygdala habituation and uncinate fasciculus integrity in a representative, diverse adolescent sample*. Poster presented at the Association for Psychological Science annual convention, Chicago, IL, USA.

Velasquez, F., Lord, C., Martin, D. M., **Mattson, W.I.**, Monk, C.S., Wiggins, J.L. (2016). *The Influence of Serotonin Transporter Genotype on Amygdala-Ventromedial Prefrontal Cortex Connectivity in Autism Spectrum Disorder*. Poster presented at the Association for Psychological Science annual convention, Chicago, IL, USA.

Messinger, D. S., Myers, N. D., Gangi, D. N., Todd, J. T., Bahrck, L. E., & **Mattson, W. I.** (2015). *Temporal dependency: One look predicts the next*. Poster presented at the Association for Psychological Science Annual Convention, New York, NY, USA.

Mattson, W.I., Shaw, D.S., Forbes, E.E., Monk, C.S., & Hyde, L.W. (2015). *Developmental trajectories of anxiety symptoms and amygdala reactivity predict depression in adolescent males from low-income families*. Poster presented at the annual meeting of the Society for Biological Psychiatry, Toronto, Canada.

Gangi, D. N., Messinger, D.S., **Mattson, W.I.**, Todd, J. T., Myers, N., Bahrck, L. E. (2014). *Temporal dependency in the context of habituation*. Poster presented at the Biennial International Conference on Infant Studies, Berlin, Germany.

McDonald, N., Lambert-Brown, B. L., **Mattson, W. I.**, & Messinger, D. S. (2014). *Infant emotional responsiveness and autism risk*. Poster presented at the International Meeting for Autism Research, Atlanta, GA, USA.

Messinger, D. S., **Mattson, W. I.**, Todd, J. T., Myers, N. D., Gangi, D. N., & Bahrck, L. E. (2013). *Temporal dependency and the structure of early infant looking*. Poster presented at the Learning to Attend, Attending to Learn Workshop, La Jolla, California, USA.

Hammal, Z., Cohn, J. F., Messinger, D. S., **Mattson, W. I.**, & Mahoor, M. (2013). *Head Movement Dynamics During Normal and Perturbed Parent-Infant Interaction*. Paper presented at the Biannual Conference on Affective Computing and Intelligent Interaction (ACII). Geneva, Switzerland.

Messinger, D. S., **Mattson, W. I.**, Fogel, A., & Beebe, B. (2013). *Mini-Moods: Consistent patterning of affective expressions in time*. Paper presented at the International Society for Research on Emotion. Berkeley, California.

Mattson, W. I., Bahrck, L. E., Todd, J. T., Beebe, B., Stone, W. L., & Messinger, D.S. (2013). *'Look ma, no interaction!' Infants structure their own gaze durations in the absence of parental scaffolding*. Poster presented at the Association for Psychological Science Annual Convention. Washington, D.C., USA.

Zaker, N., Mahoor, M. H., **Mattson, W. I.**, Messinger, D. S., & Cohn, J. F. (2013). *A study on different classification methods for automatic measurement of spontaneous facial expression*. Poster presented at the 2013 IEEE Conference on Automated Face and Gesture. Shanghai, China.

Mattson, W. I., Bahrick, L. E., Todd, J. T., Beebe, B., Stone, W. L., Yee, N., & Messinger, D.S. (2013). *Infant interest: Patterns of gaze in the face-to-face/still-face paradigm*. Poster presented at the 2013 Society for Research in Child Development Biennial Meeting, Seattle, WA, USA.

Messinger, D.S, **Mattson, W. I.**, Mahoor, M. H., Cohn, J.F., (2012). Rule-based similarities between positive and negative facial expressions. Paper presented at the Association for Psychological Science (APS) Annual Convention, Chicago, IL, USA.

Mattson, W. I., Cohn, J. F, Mahoor, M. H., & Messinger, D. S. (2012). *Beyond Smiles: Duchenne Distress in Infants*. Poster presented at the 2012 Association for Psychological Science Annual Convention, Chicago, IL, USA.

Mattson, W. I., Cohn, J. F, Mahoor, M. H., & Messinger, D. S. (2012). *Duchenne Smiling in the Face-to-Face/Still Face*. Poster presented at the 2012 International Conference on Infant Studies, Minneapolis, MN, USA.

Lambert, B., Gutierrez, A., **Mattson, W. I.**, Artigas, J., Martinez, O. Kimijima, M., Cassell, J., Cohn, J. F., & Messinger, D.S. (2012). *Responding to Joint Attention Requests from Virtual and Non-Virtual Social Partners*. Poster to presented at the International Meeting for Autism Research. Toronto, Ontario, Canada.

Wu, T., Artigas, J., **Mattson, W. I.**, Ruvolo, P., Movellan, J. & Messinger, D. S. (2011). *Collecting a developmental dataset of reaching behaviors: First Steps*. Workshop presentation at the IEEE/RSJ International Conference on Intelligent Robots and Systems. San Francisco, CA, USA.

Artigas, J., **Mattson, W. I.**, Ruvolo, P., Wu, T., Movellan, J. & Messinger, D. S. (2011). *Rethinking Motor Development and Learning*. Poster and spotlight talk presented at a joint meeting of the International Conference on Development and Learning (ICDL) and the International Conference on Epigenetic Robotics (EpiRob). Frankfurt am Main, Hesse, Germany.

Mattson, W. I., Ekas, N., Tronick, E. Z., Lester, B. M., & Messinger, D. S. (2011). *Emotional expression and physiology during the Face-to-Face/Still-Face (FFSF) in at-risk infants*. Poster session presented at the Association for Psychological Science (APS) Annual Convention, Washington, D.C., USA.

Ekas, N.V., Ibanez, L., **Mattson, W.I.**, & Messinger, D. (2010). *The coordination of attention and affect during the still-face among infants at-risk for autism spectrum disorder*. Poster session presented at the International Conference for Infant Studies, Baltimore, MD, USA.

Mattson, W. I., Mahoor, M.H., Cadavid, S., Martinez, O.L., Messinger, D.S., & Cohn, J.F. (2010). *Eye Constriction in Positive and Negative Emotional Expressions*. Poster session presented at the International Conference for Infant Studies, Baltimore, MD, USA.

Ekas, N., Ibanez, L., **Mattson, W. I.**, & Messinger, D.S. (2010). *Attention During Face-to-Face Interaction: When Do Infants at-Risk for Autism Shift Gaze?* Poster session presented at the International Meeting for Autism Research, Philadelphia, PA, USA.

Messinger, D.S., Baker, J. K., Lindahl, K. M., **Mattson, W. I.**, & Celimli, S. (2010). *A Demonstration Measurement System Relevant to Autism Risk and Symptomatology: Continuous Non-Expert Ratings of Infant and Parent Emotion*. Poster session presented at the International Meeting for Autism Research, Philadelphia, PA, USA.

Teaching

Fall, 2012 Introduction to Biobehavioral Statistics

Workshops and Training

Training Course in fMRI at the University of Michigan - Course (Jonides, Noll, Hernandez-Garcia, Welsh, Falk, LaConte, Spunt, Peltier; 08/14)

Fragile Families Summer Data Workshop 2014 - Workshop (Garfinkel, Mincy, McLanahan, Lennon, Joshi; 06/14)

Reliable Administration and Coding of the ESCS (Early Social Communication Scales) Coding - Workshop (Gealy, W.; 06/10)

Trained in BabyFACS (Facial Action Coding System) - Workshop (Oster, H.; 03/10)

Attended ADI-R (Autism Diagnostic Interview – Revised) Workshop (Olson, J.; 09/09)

Certified FACS (Facial Action Coding System) Coder (Rosenberg, E.; 05/09)

Awards

Travel Award for Fragile Families Summer Data Workshop - 2014

Dr. Keith Scott CARD Graduate Research Award for Excellence in Developmental Research in Autism - 2011

Professional Organizations

Psi Chi – National Honor Society in Psychology – Student Member

Service

Developmental Track Representative – Psychology Graduate Student Association (2010-2012)

Research Dissemination

"Of Machines and Men" Miami Magazine, by Ana Maria Lima (07/05/2011)

"UM and UC San Diego search for insight into infant brains" The Miami Hurricane [Student Newspaper], by Alexandra Leon (11/04/2010)

"A functional example of analyzing co-occurrence and sequence of variables" Measurement Methods [Website, <http://measurement.psy.miami.edu/>], by Whitney Mattson (9/25/2010)

"Non-experts used in study" The Miami Hurricane [Student Newspaper], by Meredith Reilly (1/31/10)