

## Education

University of Rochester, Rochester, NY

- 3<sup>rd</sup> year graduate student in the department of Brain and Cognitive Science
- MD/PhD student in the Medical Scientist Training Program
- Medical Years 1 & 2 completed

Cornell University, Ithaca, NY – Cumulative GPA of 3.774

- Bachelor of Science in Human Development, Concentration in Developmental Behavioral Neuroscience

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## Grants, Honors, and Scholarships

- Donald M. and Janet C. Barnard Fellowship 2023-2024
  - This fellowship awards outstanding academic and research achievement as well as evidence of leadership, mentoring and teaching accomplishments, and outreach to the community.
- Neuronal & Systems Mechanisms of Affective Touch & Therapeutic Tissue Manipulation Research Network Travel Award of \$500 2023
- Autism Science Foundation Pre-Doctoral Fellowship Award 2022-2023
  - \$35,000 Training Award provided to support graduate students, medical students and postdoctoral fellows interested in pursuing careers in basic and clinical research relevant to autism spectrum disorders
- Leadership Education in Neurodevelopmental Disabilities (LEND) Fellow 2021-2022
  - Fellowship focused on leadership and interdisciplinary collaboration to improve healthcare for people with neurodevelopmental disabilities
- CNF Neurodevelopmental Disabilities (NDD) Research Scholarship Summer 2019
  - \$3,500 scholarship to fund clinical research focused on neurodevelopmental disabilities in children
- International Meeting for Autism Research Student/Trainee Travel Award Spring 2017
- College of Human Ecology Summer Research Stipend of \$4,000 Summer 2015

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## Publications

**Isenstein E.L.**, Waz T., LoPrete A., Hernandez Y., Knight E.J., Busza A., Tadin D. Rapid assessment of hand reaching using virtual reality and application in cerebellar stroke. *PLoS One*. 2022 Sep 29;17(9): e0275220. PMID: 36174027.

**Isenstein E.L.**, Grosman HE, Guillory SB, Zhang Y, Barkley S, McLaughlin CS, Levy T, Halpern D, Siper PM, Buxbaum JD, Kolevzon A and Foss-Feig JH (2022). Neural Markers of Auditory Response and Habituation in Phelan-McDermid Syndrome. *Frontiers in Neuroscience*. 16:815933. doi: 10.3389/fnins.2022.815933

Guillory S.B., Baskett V.Z., Grosman H.E., McLaughlin C.S., **Isenstein E.L.**, Wilkinson E., Weissman J., Britvan B., Trelles M.P., Halpern D.B., Buxbaum J.D., Siper P.M., Wang A.T., Kolevzon A., Foss-Feig J.H.. Social visual attentional engagement and memory in Phelan-McDermid syndrome and autism spectrum disorder: a pilot eye tracking study. *Journal of Neurodevelopmental Disorders*. 2021 Dec 4;13(1):58. PMID: 34863106, PMCID: PMC8903604.

Yao, B., Rolfs, M., McLaughlin, C., **Isenstein, E.L.**, Guillory, S., Grosman, H., Kashy, D., Foss-Feig, J.H., Thakkar, K. (2021). Oculomotor Corollary Discharge Signaling is related to Repetitive Behavior in Children with Autism Spectrum Disorder. *Journal of Vision*. Aug 2;21(8):9. PMID: 34351395; PMCID: PMC8354038.

**Isenstein E.L.**, Park WJ, Tadin D. (2021) Atypical and inflexible visual encoding in autism spectrum disorder. *PLoS Biology*. 2021 Jun 8;19(6):e3001293. PMID: 34101723; PMCID: PMC8213133.

Levy, E., **Isenstein, E.L.**, Foss-Feig, J.H., Srihari, V., Anticevic, A., Naples, A., McPartland, J. (2021) Electrophysiological Studies of Reception of Facial Communication in Autism Spectrum Disorder and Schizophrenia. *Review Journal of Autism and Developmental Disorders*. 9(4):521-554. PMID: 36568688, PMCID: PMC9783109.

Migó M, Guillory SB, McLaughlin CS, **Isenstein E.L.**, Grosman HE, Thakkar KN, Castellanos FX, Foss-Feig JH. Investigating Motor Preparation in Autism Spectrum Disorder With and Without Attention Deficit/Hyperactivity Disorder (2021). *Journal of Autism and Developmental Disorders*. Jun 23. PMID: 34160725.

McLaughlin CS, Grosman HE, Guillory SB, **Isenstein E.L.**, Wilkinson E, Trelles MDP, Halpern DB, Siper PM, Kolevzon A, Buxbaum JD, Wang AT, Foss-Feig JH. (2021) Reduced engagement of visual attention in children with autism spectrum disorder. *Autism*. 2021 Oct;25(7):2064-2073. PMID: 33966481.

Giserman-Kiss I, Gorenstein M, Feldman E, Rowe M, Grosman H, Weissman J, Rouhandeh A, Wilkinson E, Meyering K, Durkin A, **Isenstein E.L.**, Kolevzon A, Buxbaum JD, Siper PM. (2020) The Immersive Theater Experience for Individuals with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*. 2020 Mar; 50(3):1073-1080. PMID: 31797184.

Gorenstein M, Giserman-Kiss I, Feldman E, **Isenstein E.L.**, Donnelly L, Wang AT, Foss-Feig JH. (2020) Brief Report: A Job-Based Social Skills Program (JOBSS) for Adults with Autism Spectrum Disorder: A Pilot Randomized Controlled Trial. *Journal of Autism and Developmental Disorders*. 2020 Dec;50(12):4527-4534. PMID: 32297122.

## Under Review:

McLaughlin, C.S., Guillory, S.B., Trayvick, J., **Isenstein, E.L.**, Roach, B.N., Mathalon, D.H., Thakkar, K.N., Foss-Feig, J.H. Sensory consequences of action in children with autism spectrum disorder. Under review: *Journal of Child Psychology and Psychiatry*.

Reese, M., Berry-Kravis E., Thaliath, A., **Isenstein, E.L.**, Durkin A.R., Foss-Feig, J.H., Siper, P.M., Nelson, C.A., Baczewski, L.M., Levin, A.R., Powell, C.M., White, S.P., Mosconi, M.W., Kolevzon, A., Ethridge, L.E. Phenotypic variation in neural sensory processing by deletion size, age, and sex in Phelan McDermid Syndrome. Under review: *Journal of Neurodevelopmental Disorders*.

Guillory, S., Grosman, H., McLaughlin, C., **Isenstein, E.L.**, Wilkinson, E., Siper, P.M., Kolevzon, A., Buxbaum, J.D., Wang, A.T., Foss-Feig, J.H. Temporal resolution of visual attention in autism spectrum disorder. Under review: *Autism*.

## In Preparation:

**Isenstein, E.L.**, Xu, J., Freedman, E.G., Foxe, J.J. Parametric Somatosensory Duration Mismatch Negativity in Young Adults.

**Isenstein, E.L.**, Hernandez, Y., Alleluia Shenge, V. Johnson, D., Iyer, S., Tadin, D., Knight, E. Assessing Imbalance of Visual-Proprioceptive Integration in Autism using Virtual Reality.

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## Oral Presentations

“Getting in touch with autism: How we interact with the physical world” presented at the 2022 Skirboll Family Autism Conference as an invited speaker. <https://www.urmc.rochester.edu/childrens-hospital/developmental-disabilities/skirboll-conference/skirboll-autism-materials.aspx>

“Using VR and EEG to Understand Active and Passive Touch in Autistic Adults” presented at the 2022 Applications of Virtual Reality in Autism Research Conference as an invited speaker. <https://www.youtube.com/watch?v=T-TfO-mqe30>

“Creating a More Comprehensive and Equitable Medical School Disability Curriculum” presented at the 2022 American Academy of Developmental Medicine and Dentistry One Voice Conference in Orlando, Florida.

“Using Virtual Reality to Assess Visual-Proprioceptive Integration in Children with Autism Spectrum Disorder” presented at the 2020 Frameless XR Symposium:

[https://www.youtube.com/watch?v=rC\\_PsRVMgpM&list=PLKmczcvVL2RTuuGGUdMwWVytUchdjTdG7n&index=10](https://www.youtube.com/watch?v=rC_PsRVMgpM&list=PLKmczcvVL2RTuuGGUdMwWVytUchdjTdG7n&index=10)

“Interaction Between Visual and Proprioceptive Information in Children with Autism Spectrum Disorder” presented at the 2019 University of Rochester MSTP Annual Retreat.

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## Manuscript Reviews

Peer reviewer for European Journal of Neuroscience, Neuropsychiatric Disease and Treatment, Scientific Reports

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## Research Experience

University of Rochester, Cognitive Neurophysiology Lab 2020 - present

PIs John Foxe, PhD and Edward Freedman, PhD; Rochester, NY

Focus: Examining the neural correlates of somatosensation in neurotypical and autistic adults (EEG, haptics)

University of Rochester, Vision and Cognitive Neuroscience Lab 2019 - present

PI Dujie Tadin, PhD; Rochester, NY

Focus: Investigating the weighting of visual and proprioceptive information in children with autism (virtual reality, psychophysics)

Icahn School of Medicine, Seaver Autism Center 2016 - 2018

PI Jennifer Foss-Feig, PhD; New York, NY

Focus: Assessing multisensory and behavioral processing in autism spectrum and related monogenic disorders (EEG, fMRI, eye-tracking, psychophysics)

Cornell University Affect and Cognition Lab 2014 - 2016

PI Adam Anderson, PhD; Ithaca, NY

Focus: Studying how emotion modulates judgement and sensory perception (EEG, fMRI)

Marcus Autism Center Summer 2014

PI Gordon Ramsay, PhD; Atlanta, GA

Focus: Exploring speech development in infants at high risk of developing autism spectrum disorder

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## Selected Poster Presentations

**Isenstein, E.L.**, Xu, A., DeAndrea-Lazarus, I., Freedman, E.G., Foxe, J.J. (2022, May) Somatosensory Duration Mismatch Negativity in Young Adults With and Without Autism Spectrum Disorder. International Society for Autism Research Annual Meeting, Austin, Texas, USA.

**Isenstein, E.L.**, Shenge, V.A., Johnson, D., Iyer, S., Knight, E., Tadin, D. (2020, May) Integration of Visual and Proprioceptive Information in Children with Autism Spectrum Disorder. International Society for Autism Research Annual Meeting, Seattle, Washington, USA (presented digitally due to COVID-19).

**Isenstein, E.L.**, Grosman, H., Zhang, Y., Mulhern, M., McLaughlin, C., Durkin, A., Wilkinson, E., Siper, P.M., De Rubeis, S., Buxbaum, J.D., Ethridge, L.E., Kolevzon, A., Foss-Feig, J.H. (2019, May) Genetic Correlates of Electrophysiological Responses to Repeated Auditory Stimuli in Phelan-Mcdermid Syndrome. International Society for Autism Research Annual Meeting, Montreal, Canada.

**Isenstein, E.L.**, Durkin, A., Zhang, Y., Feldman, E., Servedio, N., Harony-Nicolas, H., Buxbaum, J., Kolevzon, P., Foss-Feig, J.H. (2018, May). Electrophysiological Evidence of Auditory Habituation Abnormalities in Young Adults with Phelan-McDermid Syndrome. Society of Biological Psychiatry, New York City, NY.

**Isenstein, E.L.**, Key, A.P., Foss-Feig, J.H. (2017, November). Electrophysiological correlates of simulated language acquisition in autism spectrum disorder. Society for Neuroscience Annual Meeting, Washington, D.C.

**Isenstein, E.L.**, Wolf, J., Kolevzon, A., Buxbaum, J.D., Mazefsky, C. & Foss-Feig, J.H. (2017, May). Testing the utility of positive, negative, and cognitive dimensions for parsing ASD heterogeneity. International Meeting for Autism Research, San Francisco, CA.

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## Outreach and Community Service

Medical Student Transition Educator Project (Coordinator and Educator)

2020 – present

- Coordinates initiative that pairs medical student educators with adolescent patients with epilepsy to assist them with transitioning from a pediatric to an adult neurologist
- Serve as a transition educator and work with patients to improve their ability to navigate the healthcare system as they transition to a non-pediatric neurologist.

Certified Therapy Riding Instructor (ID: 6877520) 2016 - present

- Certification through the Professional Association of Therapeutic Horsemanship International

Equine Assisted Therapy Volunteer 2009 - present

- 3-4 hours per week volunteering with therapeutic horseback and horsemanship lessons at Equicenter NY (present) or Chastain Horse Park (high school and college breaks)
- Work with children and adults with physical and developmental disabilities, as well as veterans and at-risk youth

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## Leadership

American Academy of Developmental Medicine and Dentistry (AADMD) Representative 2019 - present

- Apply leadership and advocacy skills learned through Leadership Education in Neurodevelopmental Disabilities (LEND) Fellowship to serve as student representative for national AADMD organization
  - Led composition of letter to administration urging more comprehensive education and inclusion for patients and students with disabilities
  - Coordinate monthly meetings of organization dedicated to improving healthcare for individuals with developmental disabilities
  - Plan volunteer and awareness events with organizations such as the Special Olympics
  - Develop talks and events where medical students can learn about healthcare for individuals with disabilities

Autism Vision Clinic 2022 - present

- Along with a team of ophthalmologists and occupational therapists, wrote and coordinated a proposal to fund a vision clinic specifically for children and adolescents with autism.
- Will lead the research effort of this initiative by collecting satisfaction surveys and exam completion metrics and comparing results to metrics non-specialized clinic

URMC Jewish Association of Medical Students Co-President 2019 - present

- Advocate for accommodations and support for Jewish medical students
- Plan religious, cultural, and educational events that celebrate the intersection of Judaism and medicine
- Coordinate with local Jewish resources to create a welcoming and active Jewish environment at URMC

URMC Medical Scientist Training Program Student Council Member 2019 – present

- Social Chair - Organize and coordinate regular programmatic social events (2022-2023)
- Information and Technology Chair – Identify and implement survey and organization technology to benefit the students and administrators in the program (2019-2022)

Big Red Marching Band Head Manager 2015

- Managed all non-musical aspects of the Cornell University Big Red Marching Band, an organization of over 200 students
- Oversaw other leadership positions, coordinated all international and domestic travel of the Band, communicated with collegiate and national football teams and organizations, and organized all community service and volunteer efforts by the Band

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## Mentorship and Teaching

Undergraduate mentorship 2019-present

- Mentor and oversee undergraduate students with the goal of promoting as much independence and ownership over projects as possible and allow students to explore their own research interests as they develop; I have mentored 5 students, including those from the NeuroCITY summer, the Post-baccalaureate Research Education Program (PREP), and the Meliora Fellowship

Medical student mentorship 2022-present

- Supervise and advise two medical students who followed up on a research project that I developed by extending the research question to a larger sample by recruiting additional clinical participants

Problem-Based Learning tutor for Molecules to Cells Spring 2021, 2022

# Emily Isenstein

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- Facilitate and oversee group of medical students as they discuss clinical cases and give presentations on learning objectives; These sessions are part of the biochemistry and genetics course in the second year of medical school

Teaching Assistant for Action and Perception

Fall 2021

- Hosted office hours and review sessions, assisted with writing exam, graded exams and assignments

Teaching Assistant for Social and Affective Neuroscience

2015

- Hosted office hours, assisted with teaching lectures, prepared materials for classes, graded exams
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## Skills

- Coding software: Unity and C# for virtual reality development, EEGLab (Matlab Package), Presentation (Neurobehavioral Systems), Microsoft Excel, ePrime, NetStation, Matlab, SPSS
- Clinical Skills: Phlebotomy trained, eRecord, CPR and Basic Life Support certified, history taking, physical exam, ADOS-2 administration
- Examinations approved to administer: Wechsler Abbreviated Scale of Intelligence – 2 (WASI-2), Beery-Buktenica Developmental Test of Visual-Motor Integration, Autism Diagnostic Observation Schedule - 2 (ADOS-2)