

# JEREMY I. BORJON

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## EDUCATION & POSITIONS

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<b>Assistant Professor</b> <i>University of Houston, Houston, TX</i> Dept. of Psychology Integrative Program in Developmental, Cognitive, & Behavioral Neuroscience Texas Center for Learning Disorders Texas Institute for Evaluation, Measurement, and Statistics	2023 –
<b>Postdoctoral Fellow</b> <i>Indiana University, Bloomington, IN</i> Dept. of Psychological and Brain Sciences Advisors: Linda B. Smith (Indiana University, Bloomington) & Chen Yu (University of Texas at Austin)	2017 – 2023
<b>Ph.D. in Psychology and Neuroscience</b> <i>Princeton University, Princeton, NJ</i> Dept. of Psychology & Princeton Neuroscience Institute Advisor: Asif A. Ghazanfar Oral Committee: Asif A. Ghazanfar, Elizabeth Gould, & Casey Lew-Williams Reading Committee: Asif A. Ghazanfar, Michael S.A. Graziano, & Jordan A. Taylor Dissertation Title: “Autonomic nervous system dynamics and primate vocal production”	2012 – 2017
<b>M.A. in Psychology</b> <i>Princeton University, Princeton, NJ</i> Dept. of Psychology & Princeton Neuroscience Institute Advisor: Asif A. Ghazanfar Thesis Title: “Cardiorespiratory coupling during vocal communication in the common marmoset”	2012 – 2014
<b>Simons Fellow in Computational Neuroscience</b> <i>Emory University School of Medicine, Atlanta, GA</i> Marcus Autism Center	2011 – 2012
<i>Yale University School of Medicine, New Haven, CT</i> Child Study Center Advisors: Ami Klin & Warren R. Jones	2010 – 2011
<b>A.B. in Psychology with certificate in Neuroscience</b> <i>Princeton University, Princeton, NJ</i> Advisors: Asif A. Ghazanfar & Alexander Todorov Thesis Title: “The influence of eye gaze and facial expression on spatial hearing”	2006 – 2010

## RESEARCH GRANTS AND FELLOWSHIPS

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K99/R00 NICHD 105920 Pathway to Independence Award (PI, \$1,026,360)	2021 – 2026
NSF SBE Postdoctoral Research Fellowship 1908519 (PI, \$144,750)	2019 – 2021
Society for Research in Child Development Small Research Grant for Early Career Scholars (PI, \$7,500)	2019 – 2021
Emerging Areas of Research Initiative, Indiana University	2017 – 2020
F32 NICHD 100092 National Research Service Award (\$60,610, Percentile 21, Payline 30, Likely Funded)	Withdrawn
T32 NICHD 007475-23:24 Training Program in Integrative Developmental Process (\$96,288)	2017 – 2019
NSF Graduate Research Fellowship DGE-1148900 (\$138,000, Awarded in April 2012)	2014 – 2017
President’s Fellowship, Princeton University (\$134,300)	2012 – 2014
Simons Fellowship in Computational Neuroscience (\$68,000)	2010 – 2012
Round Table Senior Thesis Grant, Office of the Dean of the College, Princeton University (\$678)	2009 – 2010

## PUBLICATIONS

<sup>†</sup> = equal contribution    \* = corresponding author

Sahoo M.K., Yu C., Smith L.B., **Borjon J.I.**\* (In Prep). Prosody of caregiver utterances support infant sustained visual attention.

**Borjon, J.I.**, Zhang D., Poustka L., Schaaf, C.P., Marschik P.B. (Invited). Rebuilding developmental science for a world of diverse families. *Behavioral and Brain Sciences*.

Laudańska Z., Caunt A., Cristia A., Warlaumont A., Patsis K., Tomalski P., Warreyn P., Abney D.H., **Borjon J.I.**, Airaksinen M., Jones E.J.H., Bölte S., Dall M., Holzinger D., Poustka L., Roeyers H., Wass S., Zhang D., Marschik P.B. (2025). From data to discovery: Technology propels speech-language research and theory-building in developmental science. *Neuroscience & Biobehavioral Reviews*, 106199. [\[Link\]](#)

**Borjon J.I.**\*, Sahoo M.K., Rhodes K.D., Lipshutz R., Bick J.R. (2024). Recognizability and timing of infant vocalizations relate to fluctuations in heart rate. *Proceedings of the National Academy of Sciences of the United States of America*. 121(52), e2419650121. [\[Link\]](#)

**Borjon J.I.**\*, Abney D.H., Yu C., Smith L.B. (2024). Infant vocal productions coincide with body movements. *Developmental Science*. 27(4), e13491. [\[Link\]](#)

Fu X., Franchak J.M., MacNeill L.A., Gunther K.A., **Borjon J.I.**, Yurkovic-Harding J., Harding S.M., Bradshaw J., Pérez-Edgar K. (2024). Implementing mobile eye tracking in psychological research: A practical guide. *Behavior Research Methods*. 56, 8269–8288. [\[Link\]](#)

**Borjon J.I.**\*, Abney D.H., Yu C., Smith L.B. (2021). Stable gaze and stable heads: Looking behavior in 12- to 24-month-old infants. *Journal of Vision*. 21(8), 1–18. [\[Link\]](#)

Maitha C., Goode J.C., Maulucci D.P., Lasassmeh S.M.S., Yu C., Smith L.B., **Borjon J.I.**\* (2020). An open-source, wireless vest for measuring autonomic function in infants. *Behavior Research Methods*. 52, 2324–2337. [\[Link\]](#) [\[QSE\]](#)

Gustison M.L., **Borjon J.I.**, Takahashi D.Y., Ghazanfar A.A. (2019). Vocal and locomotor coordination develops in association with arousal state. *eLife*. 8, e41853. [\[Link\]](#)

**Borjon J.I.**<sup>†\*</sup>, Abney D.H.<sup>†\*</sup>, Smith L.B., Yu C. (2018). Developmentally changing attractor dynamics of manual actions on objects in late infancy. *Complexity*. (2018), 4714612. [\[Link\]](#)

Slone L.K., Abney D.H., **Borjon J.I.**, Chen C., Percy D., Suarez-Rivera C., Zhang Y., Smith L.B., Yu C. (2018). Gaze in action: Head-mounted eye tracking of children's dynamic visual attention during naturalistic behavior. *Journal of visualized experiments: JoVE*. (141), e58496. [\[Link\]](#) [\[Video\]](#)

**Borjon J.I.**<sup>†\*</sup>, Schroer S.E.<sup>†</sup>, Bambach S., Slone L.K., Abney D.H., Crandall D.J., Smith L.B. (2018). A view of their own: Capturing the egocentric view of infants and toddlers with head-mounted cameras. *Journal of visualized experiments: JoVE*. (140), e58445. [\[Link\]](#) [\[Video\]](#)

Ghazanfar A.A., Takahashi D.Y., Zhang Y.S., **Borjon J.I.** (2018). Marmoset monkey vocal communication: Common trajectories with humans and possible mechanisms. In J. Ellison & M. Sera (Eds.). *The Minnesota Symposia on Child Psychology*, Vol. 39. Hoboken: John Wiley & Sons, Inc. [\[Link\]](#)

**Borjon J.I.**, Takahashi D.Y., Cordero D.C., Ghazanfar, A.A. (2016). Arousal dynamics drive vocal production in marmoset monkeys. *Journal of Neurophysiology*. 116, 753–764. [\[Link\]](#)

Takahashi D.Y., Fenley A.R., Teramoto Y., Narayanan D.Z., **Borjon J.I.**, Holmes P., Ghazanfar A.A. (2015). The developmental dynamics of marmoset monkey vocal production. *Science*. 349(6249), 734–738. [\[Link\]](#)

**Borjon J.I.**, Ghazanfar A.A. (2014). Convergent evolution of vocal cooperation without convergent evolution of brain size. *Brain, Behavior and Evolution*. 84(2), 93–102. [\[Link\]](#)

**Borjon J.I.**, Ghazanfar A.A. (2013). Commentary: Neural tuning of human face processing. *Proceedings of the National Academy of Sciences of the United States of America*. 110(42), 16702–3. [\[Link\]](#)

**Borjon J.I.**<sup>†</sup>, Shepherd S.V.<sup>†</sup>, Todorov A., Ghazanfar A.A. (2011). Eye-gaze and arrow cues influence elementary sound perception. *Proceedings of the Royal Society B*. 278, 1997–2004. [\[Link\]](#)

## INVITED TALKS

Leibniz-Centre General Linguistics, Berlin, Germany	October	2025
Hewlett Packard Data Science Institute, University of Houston, Houston, TX	May	2025
Department of Psychology, University of Miami, Miami, FL	February	2025
Institute of Psychology, Polish Academy of Sciences, Warsaw, Poland	September	2023
Department of Psychological and Brain Sciences, University of Iowa, Iowa City, IA	January	2023
Department of Psychology, Oklahoma State University, Stillwater, OK	January	2023
Department of Child and Adolescent Psychiatry, New York University Grossman School of Medicine, New York, NY	January	2023
Department of Psychology, University of Houston, Houston, TX	November	2022
Department of Psychology, Stanford University, Palo Alto, CA	February	2022
Development and Learning from Theory to Application Center, University of Iowa, Iowa City, IA	February	2022
Developmental Seminar, Dept. of Psych. and Brain Sciences, Indiana University, Bloomington, IN		2017 – 2021
Center for Cognition, Action and Perception, University of Cincinnati, Cincinnati, OH	March	2020
Graduate Cognitive Research Seminar, Princeton University, Princeton, NJ		2013 – 2017
Huberman Lab, Dept. of Neurobiology, Stanford University, Palo Alto, CA	December	2016
Smith Lab, Dept. of Psych. and Brain Sciences, Indiana University, Bloomington, IN	November	2016
Leopold Lab, Laboratory of Neuropsychology, National Institutes of Health, Bethesda, MD	August	2016
Princeton Research Day, Princeton University, Princeton, NJ	May	2016
Klin Lab, Emory University School of Medicine, Marcus Autism Center, Atlanta, GA	March	2016
PSY/NEU 260 Life Cycle of Behaviors, Princeton University, Princeton, NJ	May	2014
Eskandar Lab, Massachusetts General Hospital, Harvard Medical School, Boston, MA	March	2012

## CONFERENCE PRESENTATIONS

Sahoo M.K., Rhodes K.D., **Borjon J.I.** (2025, September). Multidimensional physiological states of infant visual attention. The IEEE International Conference on Development and Learning. Prague, CZ. Poster.

Rhodes K.D., Arriaga L. Sahoo M.K., **Borjon J.I.** (2025, September). Cardiac foundations of infant-directed speech. The IEEE International Conference on Development and Learning. Prague, CZ. Poster.

**Borjon J.I.**, Sahoo M.K., Rhodes K.D., Laughlin H., Jimenez A.O., Lipshutz R., Bick J.R. (2024, September). Autonomic processes support infant vocal productions. Neuroscience Symposium on Body-Brain Waves. Salerno, IT. Talk.

Sahoo M.K., Rhodes K.D., **Borjon J.I.** (2024, July). Disentangling the developing systems underlying infant development. Pre-Conference on Developmental Research using Machine Learning and Computer Vision. International Congress of Infant Studies. Glasgow, UK. Flash Talk.

**Borjon J.I.**, Sahoo M.K., Rhodes K.D., Laughlin H., Jimenez A.O., Lipshutz R., Bick J.R. (2024, July). Autonomic processes support infant vocal productions. International Congress of Infant Studies. Glasgow, UK. Talk.

Sahoo M.K., Yu C., Smith L.B., **Borjon J.I.** (2024, July). Caregiver prosody is contingent on infant sustained visual attention. International Congress of Infant Studies. Glasgow, UK. Talk.

Taheri P., Benham S., Yu C., Smith L.B., **Borjon J.I.** (2024, July). Body movements can shape the length of infant vocalizations. International Congress of Infant Studies. Glasgow, UK. Talk.

Sahoo M.K., Yu C., Smith L.B., **Borjon J.I.** (2024, May). Caregiver prosody is contingent on infant sustained visual attention. The IEEE International Conference on Development and Learning. Austin, TX. Poster.

**Borjon J.I.**, Bradshaw J., Yurkovic-Harding J., Harding S.M., Sahoo M.K., Abney D.H. (2024, May). Best practices for collecting and analyzing cardiorespiratory data in the lab and in the home. The IEEE International Conference on Development and Learning. Austin, TX. Workshop.

**Borjon J.I.** (2023, September) What is the autonomic nervous system and how do we measure it? (2023, September). Movement and Dyadic Interactions in Infancy: Novel Tools and Approaches. Warsaw, Poland. Talk.

Sahoo M., **Borjon J.I.** (2023, September). Synchronizing and pre-processing ECG using SigSync and TonaFlow. Movement and Dyadic Interactions in Infancy: Novel Tools and Approaches. Warsaw, Poland. Talk.

Sahoo M., Smith L.B., Yu C., **Borjon J.I.** (2023, September). The effect of caregiver speech on infant sustained visual attention. Movement and Dyadic Interactions in Infancy: Novel Tools and Approaches. Warsaw, Poland. Talk.

- Borjon J.I.**, Abney D.H., Yu C., Smith L.B. (2022, July). The motor development of vocal production in late infancy. International Congress of Infant Studies. Ottawa, CA. Talk.
- Benham, S., **Borjon J.I.**, Yu C., Smith L.B. (2022, July). The alignment of vocalization onset with head and hand movement in infants and toddlers: speech and language contributions. International Congress of Infant Studies. Ottawa, CA. Poster.
- Sahoo M., **Borjon J.I.**, Yu C., Smith L.B. (2021, June). Identifying common phrase-level pitch contours in natural infant-directed speech. Development in Motion Conference. Virtual. Poster.
- Borjon J.I.**, Abney D.H., Yu C., Smith L.B. (2020, July). Stable gaze in 12- to 24-month-old infants requires a still head and eye-head alignment. International Congress of Infant Studies. Virtual. Poster.
- Borjon J.I.**, Abney D.H., Ouzzine A., Nystrom O., Yu C., Smith L.B. (2020, July). The motor coordination of vocal production in late infancy. International Congress of Infant Studies. Virtual. Poster.
- Maitha C., Goode J.C., Maulucci D.P., Lasassmeh S.M.S., Yu C., Smith L.B., **Borjon J.I.** (2020, July). An open-source, wireless vest for measuring autonomic function in infants. International Congress of Infant Studies. Virtual. Poster.
- Borjon J.I.**, Abney D.H., Yu C., Smith L.B. (2019, August). Attractor dynamics of vocal production in late infancy. Lancaster Conference on Infant and Child Development. Lancaster, UK. Talk.
- Borjon J.I.**, Abney D.H., Yu C., Smith L.B. (2019, July). The development of vocal-manual coordination in late infancy. International Conference on Perception and Action. Gronigen, NL. Talk.
- Borjon J.I.**, Abney D.H., Mendez A., Yu C., Smith L.B. (2019, March). The sensorimotor coordination of vocal production in late infancy. Biennial Meeting of the Society for Research in Child Development. Baltimore, MD. Poster.
- Borjon J.I.**, Abney D.H., Smith L.B., Yu C. (2019, March). Developmentally changing attractor dynamics of manual actions on objects in late infancy. Biennial Meeting of the Society for Research in Child Development. Baltimore, MD. Poster.
- Gustison, M.L., **Borjon, J.I.**, Takahashi, D.Y., Ghazanfar, A.A. (2018, August). Energy mediates developmental interactions between vocal, postural and locomotor behaviors in marmoset monkeys. 55th Annual Conference of the Animal Behavior Society, Milwaukee, WI. Poster.
- Borjon, J.I.**, Abney D.H., Yu C., Smith L.B. (2018, July). The sensorimotor development of naturalistic looking behavior in infants. International Congress for Neuroethology. Brisbane, QLD. Poster.
- Borjon, J.I.**, Abney D.H., Yu C., Smith L.B. (2018, July). The sensorimotor development of naturalistic looking behavior in infants. International Congress of Infant Studies. Philadelphia, PA. Poster.
- Borjon J.I.**, Takahashi D.Y., Cordero D.C., Ghazanfar, A.A. (2015, October). Cardiorespiratory dynamics of vocal production in marmoset monkeys. Society for Neuroscience Annual Meeting. Chicago, IL. Poster.
- Borjon J.I.**, Takahashi D.Y. and Ghazanfar A.A. (2013, October) Vocal-respiratory coupling in marmoset monkeys. Society for Neuroscience Annual Meeting. San Diego, CA. Poster.
- Borjon J.I.**, Trubanova A., Shepherd S.V., Jones W., Klin A., Ghazanfar A.A. (2012, March). Socially contextualized multisensory integration processing in autism. International Meeting for Autism Research. Toronto, ON. Poster.
- Borjon J.I.**, Goursaud A.P., Jones W., Bachevalier J. (2011, May). Social monitoring in rhesus monkeys with lesions to either the amygdala, hippocampus, or orbitofrontal cortex. International Meeting for Autism Research. San Diego, CA. Talk.
- Borjon J.I.**, Shepherd S.V., Jones W., Klin A., Ghazanfar A.A. (2011, May). The influence of perceived gaze cues on elementary sound perception in individuals with autism. International Meeting for Autism Research. San Diego, CA. Poster.
- Borjon J.I.**, Shepherd S.V., Todorov A., Ghazanfar A.A. (2010, October). Social cues influence elementary sound perception. Social and Affective Neuroscience Society Annual Meeting. Chicago, IL. Poster.
- Borjon J.I.**, Shepherd S.V., Todorov A., Ghazanfar A.A. (2010, May). Observed eye gaze influences elementary sound perception. Princeton University Undergraduate Research Symposium. Princeton, NJ. Poster.

## TEACHING

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Developmental Neuromechanics (PSYC 6397), University of Houston	Spring	2025 –
Foundations of Developmental Science (PSYC 6304), University of Houston	Spring	2024 –
Directed Research in Developmental Psychology (PSYC 6365), University of Houston	Spring/Fall	2023 –
The Life Cycle of Behaviors (PSY/NEU 260), Princeton University, Assistant Instructor	Spring	2014

## ACADEMIC HONORS AND AWARDS

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Sigma Xi Scientific Research Society	2010
Edward E. Jones Memorial Senior Thesis Prize, Dept. of Psychology, Princeton University	2010
3 <sup>rd</sup> Place Undergraduate Research Symposium, Princeton University	2010
Class Day Student Speaker, Dept. of Psychology, Princeton University	2010
The Frank A. Petito, Class of 1936 Scholarship, Princeton University	2009 – 2010
The Howard Crosby Warren Scholarship, Princeton University	2008 – 2010
Early Concentration, Dept. of Psychology, Princeton University	2008
Outstanding Work by a Sophomore (Fiction), Peter B. Lewis Center for the Arts, Princeton University	2008
The Class of 1916 National Scholarship, Princeton University	2007 – 2008
The Kenneth Sawyer Goodman War Memorial Scholarship, Princeton University	2007 – 2008
Walter E. Hope Class of 1901 Memorial Freshman Debate, Finalist, Princeton University	2007
The Edward Franklin Pelton Memorial Scholarship, Princeton University	2006 – 2007
The Class of 1898 Scholarship, Princeton University	2006 – 2007

## SERVICE

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### UNIVERSITY SERVICE

Member, DCBN Curriculum Committee, University of Houston	2025 –
Co-Chair, DCBN Qualifying Examination Reform Committee, University of Houston	2024 –
Committee Member, Anh Lac Tran Scholarship, University of Houston	2024 –
Mentor, Office of the Vice President for Diversity, Equity, and Multicultural Affairs, Indiana University	2018 – 2023
ReMatch Graduate Mentor, Office of Undergraduate Research, Princeton University	2015 – 2016
Graduate Representative, Hidden Minority Council, Princeton University	2015 – 2016
Outreach Chair, Latino Graduate Student Association, Princeton University	2014 – 2015
Graduate Representative, Dept. of Psychology, Princeton University	2012 – 2015

### PUBLIC SERVICE

Mentor, International Congress of Infant Studies	2024 –
Mentor, William P. Clements High School Neuroscience Society	2023
Vice-President, Association of Latino Princeton Alumni	2020 – 2022
Treasurer, Association of Latino Princeton Alumni	2018 – 2020
Board Member, Association of Latino Princeton Alumni	2017 – 2022
President, Latino Graduate Student Association, Princeton University	2015 – 2016

## AD HOC REVIEWING

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### ACADEMIC JOURNALS

eLife, Cognition, Developmental Science, Psychological Review, Child Development, Infancy, Philosophical Transactions B, Scientific Reports, Animal Cognition, Annals of the New York Academy of Sciences, Philosophical Transactions of the Royal Society B, Psychophysiology, Developmental Cognitive Neuroscience, Infant Behavior and Development, Behavioural Processes, Transactions on Applied Perception, Sensors

### GRANTS

National Science Foundation Directorate for Social, Behavioral and Economic Sciences, National Science Centre of Poland, Society for Research in Child Development Small Grants Program for Early Career Scholars

### CONFERENCES

International Congress of Infant Studies

## ADVISING AND MENTORING

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### GRADUATE STUDENTS

Laura A. Greenwald (Dept. Goldston Graduate Fellowship)	2025 –
Manash K. Sahoo (Dept. Goldston Graduate Fellowship)	2024 –
Parsa H. Taheri, M.A. (Dept. Goldston Graduate Fellowship)	2023 – 2024
- now a Senior Field Marketing Analyst at Epicor Software	

### DATA SCIENTISTS

Manash K. Sahoo	2023 – 2024
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### LAB MANAGERS

Katherine D. Rhodes	2023 –
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#### CO-ADVISED GRADUATE STUDENTS

Elizabeth S. Perkovich	2024 –
Mariana Lopez	2024 –
Hailey Laughlin	2024 –
Xinge Li	2023 –

#### RESEARCH ASSISTANTS

UNIVERSITY OF HOUSTON	2023 –
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*High School Research Assistants:* Evan White, Natasha Mbajonas

#### INDIANA UNIVERSITY, BLOOMINGTON

2017 – 2023

*Undergraduate Capstone Students:* Noah Scott, Jingwen Pang, Taylor Marten, Soumya Gupta, Danielle P. Maulucci, Abir Ouzzine

*Undergraduate Research Assistants:* Madeline Cory, Arghya Kashyap, Alana Snelson, Brittany Alberts, Manash K. Sahoo (Advanced Summer Research Scholar, J.R. Kantor Prize in Psychology), Ellis S. Cain, Olivia G. Nystrom (Hutton Honors College Undergraduate Research Partner, Emerging Areas of Research Undergraduate Research Scholar), Linnan Li, Zimeng Liu

#### PRINCETON UNIVERSITY

2016 – 2017

*Undergraduate Research Assistant:* A.J. Sermarini, (ReMatch Undergraduate Research Mentee)

### PROFESSIONAL MEMBERSHIPS

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Society for Research in Child Development, International Congress of Infant Studies, International Society for Neuroethology, Society for the Advancement of Native Americans and Chicanos in Science, American Psychological Association

### LANGUAGES

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Fluent in English and Spanish. Learning German.