

Joseph A. Colantonio II

[Lab Member Page](#)

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Education

2018–Present	PhD in Psychology, Cognition - Rutgers University, Newark, NJ USA.
2021	MA in Psychology, Cognitive Science - Rutgers University, Newark.
2016–2018	Non-Matriculating Graduate Student - Rutgers University, Newark.
2012–2016	BA in Applied Mathematics (Summa Cum Laude), Minors in Psychology and Physics - Jointly awarded by Rutgers University, Newark and New Jersey Institute of Technology.

Fellowships & Awards

2022 - 2023	Rutgers University-Newark - <i>Dean's Dissertation Completion Fellowship</i>
2018 - 2020	National Institutes of Health - <i>Minority Biomedical Research Support Program</i>
2020	National Science Foundation - <i>Graduate Research Fellowship, Honorable Mention</i>
2019	Cognitive Development Society - <i>Graduate Student Diversity Travel Award</i>
2018	Society for Philosophy and Psychology - <i>Graduate Student Travel Award</i>
	Rutgers University-Newark
2016 - 2018	<i>Post-Baccalaureate Research Experience Program Grant</i>
2016	<i>Inaugural Charles Pine Interdisciplinary Award - Mathematics & Physical Sciences</i>
2012 - 2016	<i>Dean's List</i>
2015	<i>Phi Beta Kappa</i>
2015 - 2016	<i>Undergraduate Biomedical Research Support Grant</i>
2014	<i>Garden State-Louis Stokes Alliance for Minority Participation - Membership</i>
2015 - 2016	<i>Dan and Lisa DiFilippo Endowed Scholarship</i>
2013 - 2016	<i>Arthur B. Newman Honors College Scholars</i>

Research Experience

	Computational Cognitive Development Lab Harvard University
2022–Present	Visiting Research Fellow
2020–2022	Research Staff
	Computational Cognitive Development Lab Rutgers-Newark
2018–Present	Graduate Research Assistant
2016–2018	Post-Bachelor Research Technician
2014–2016	Undergraduate Honors Research Student

Teaching Experience

	Graduate School of Education, Harvard University
2021	Teaching Fellow <i>Course:</i> Curiosity and Creativity in Learning and Development
	Psychology Department, Rutgers-Newark
2020–2022	Graduate Teaching Assistant <i>Courses:</i> Statistical Methods for the Cognitive and Behavioral Sciences, Research Methods for the Cognitive and Behavioral Sciences
2020–2022	Course Coadjutant <i>Courses:</i> Developmental Psychology, Psychology of Language
	Mathematics Department - Rutgers-Newark
2014	Teaching Apprentice Advisor: Dr. William Keigher <i>Course:</i> Precalculus

Mentoring & Outreach

	Graduate School of Education Harvard University
2021	<i>Masters Student:</i> Xiao (Zoe) Feng
	Psychology Department Rutgers-Newark
2016–Present	<i>Undergraduate Honors Students:</i> Umradha Shievkumar (2020) <i>Undergraduate Research Assistants:</i> Akshaya Sridharan, Aryanah Solano, Bassem Rezkalla, Diksha Patel, Jazmin Carchi, Jillian Brandmaier, Leeza Camilo, Lude-line Jean, Naa Adei Kotey, Parthenia Bogdady, Sarah Hamoud, Srita Chintapalli, Umradha Shievkumar, Yossy Montecinos
2020 - 2022	Psi Chi National Honor Society Graduate Liason & Executive Board Member Coordinate and lead chapter workshops & meetings. Coordinate graduate-undergraduate mentorships.
2020	NSF REU, Rutgers-Newark Recruit and supervise undergraduate interns
2015 - 2016	Garden State-Louis Stokes Alliance for Minority Participation Peer-led Instructional Team Leader <i>Courses:</i> Calculus I, Calculus II, Linear Algebra, Computers & Programming I, Programming II

News & Social Media

2020	Child Trends News Service - Postitive Parenting News Network <i>The Power of Awe Sparks Learning</i>
2019	Child & Family Blog <i>A New Idea For Early Learning In Pre-Schoolers: Inspire Them With Awe</i>

Publications

- Colantonio, J., Bascandziev, I., Theobald, M., Brod, G. and Bonawitz, E. (2023, accepted) Seeing the Error in my “*Bayes*”: Children’s Degree of Belief Change Correlates with Pupillary Surprise Responses when they Make Predictions. *Entropy*, 25(2), 211; <https://doi.org/10.3390/e25020211>
- *Park, A., *Colantonio, J., Delgado Reyes, L., Sharp, S., Mackey, A., and Bonawitz, E. (*in review*) Question asking fosters curiosity and learning in children. [* indicates joint first-authorship]
- Colantonio, J., Bascandziev, I., Theobald, M., Brod, G. and Bonawitz, E. (2022, in press) Priors, Progressions, and Predictions in Science Learning: Theory-Based Bayesian Models of Children’s Revising Beliefs of Water Displacement. *IEEE Transactions on Cognitive and Developmental Systems*, 2022, doi:10.1109/TCDS.2022.3220963.
- Colantonio, J., Durkin, K., Caglar, L. R., Shafto, P., and Bonawitz, E. (2021) The Intentional Selection Assumption. *Frontiers in Psychology, Decision Neuroscience*.
- Kominsky, J., Begus, K., Bass, I., Colantonio, J., Leonard, J., Mackey, A., and Bonawitz, E. (2021) Organizing the Methodological Toolbox: Lessons Learned From Implementing Developmental Methods Online. *Frontiers in Psychology, Developmental Psychology*.
- Persaud, K., I. Bass, Colantonio, J., Macias, C., and Bonawitz, E. (2020) Opportunities and Challenges Integrating Resource-Rational Analysis with Developmental Perspectives. [Peer commentary on “Resource-rational analysis: understanding human cognition as the optimal use of limited computational resources” by F. Lieder & T. L. Griffiths]. *Brain and Behavioral Sciences*.
- Colantonio, J., and Bonawitz, E. (2018) Awesome play: Awe increases preschooler’s exploration and discovery, in *Proceedings of the 40th Annual Conference of the Cognitive Science Society*.

Invited Presentations & Lectures

- Invited Guest Presentation for graduate course “Behavioral Methods in Developmental Learning Research”. Harvard Graduate School of Education, Harvard University, Cambridge, MA. (March 9th 2023, *forthcoming*)
- Invited Guest Presentation for graduate course “Behavioral Methods in Developmental Learning Research”. Harvard Graduate School of Education, Harvard University, Cambridge, MA. (April 6th 2023, *forthcoming*)

Talks

- Colantonio, J., Park, A., Delgado Reyes, L., Sharp, S., Mackey, A., and Bonawitz, E. (2023, forthcoming) “*Question Asking Increases Children’s Valuation of New Information*,” Symposium paper presented at the Society for Research in Child Development, Salt Lake City, UT.
- Colantonio, J., Park, A., Delgado Reyes, L., Sharp, S., Mackey, A., and Bonawitz, E. (2022) “*Science Training That Encourages Question Asking Increases Young Children’s Valuation of New Information*,” Symposium paper presented at the Association for Psychological Science, Chicago, Illinois, USA.
- Colantonio, J., Bascandziev, I., Theobald, M., Brod, G. and Bonawitz, E. (2022) “*Theory-Based Bayesian Models of Elementary School Children’s Belief Revision & Pupillary Surprise during Science Learning*,” Individual oral paper presented at the Biennial Meeting of the Cognitive Development Society, Wisconsin, USA.
- Colantonio, J., Bascandziev, I., Theobald, M., Brod, G. and Bonawitz, E. (2021) “*Theory-Based Bayesian Models of Elementary School Children’s Pupillary Surprise*,” Symposium paper presented at Society for Research in Child Development, Wisconsin, USA. Conference held virtually due to COVID-19)
- Colantonio, J., Sharp, S., Mackey, A., and Bonawitz, E. (2021) “*Promoting Question Asking to Foster Curiosity: An Intervention Study*,” Symposium paper presented at Society for Research in Child Development, Wisconsin, USA. Conference held virtually due to COVID-19)
- Colantonio, J., and Bonawitz, E. (2019) “*Affecting play: Awe increases preschooler’s exploration and discovery*,” Lightning Talk presented at the Curiosity, Explanation, Exploration Workshop, Princeton, New Jersey, USA.

- Colantonio, J., Walden, Z., Dehrone, T., and Bonawitz, E. (2019) “*When Innovators Succeed: Empowerment Strategies Increase Preschoolers’ Exploration*,” Speed Talk presented at the Play and Learning Conference, Newark, USA.
- Colantonio, J., and Bonawitz, E. (2019) “*Affecting play: Awe increases preschooler’s exploration and discovery*,” Talk presented at the Society for Research in Child Development, Baltimore, Maryland, USA.
- Colantonio, J., and Bonawitz, E. (2018) “*Affecting play: Awe increases preschooler’s exploration and discovery*,” Talk presented at the Society for Philosophy and Psychology, Ann Arbor, Michigan, USA.

Posters

- Colantonio, J., Bascandziev, I., Theobald, M., Brod, G. and Bonawitz, E. (2020) “*Modeling pupillary surprise response in elementary school children with theory-based Bayesian models*,” Poster session presented at the 42nd Annual Conference of the Cognitive Science Society, Toronto, Canada. (Conference held virtually due to COVID-19)
- Colantonio, J., Walden, Z., Dehrone, T., and Bonawitz, E. (2019) “*When Innovators Succeed: Empowerment Strategies Increase Preschoolers’ Exploration*,” Poster session presented at the 10th Biennial Meeting of the Cognitive Development Society, Kentucky, USA.
- Colantonio, J., Walden, Z., Dehrone, T., and Bonawitz, E. (2018) “*When Innovators Succeed: Empowerment Strategies Increase Preschoolers’ Exploration*,” Poster session presented at the Guided Playful Workshop of the 41st Annual Conference of the Cognitive Science Society, Montreal, Canada.
- Colantonio, J., and Bonawitz, E. (2018) “*Awesome play: Awe increases preschooler’s exploration and discovery*,” in *Proceedings of the 40th Annual Conference of the Cognitive Science Society*, Madison, Wisconsin, USA.
- Durkin, K., Colantonio, J., Caglar, L., Bonawitz, E., and Shafto, P. (2017) “*Why are these my options? Roles of social inferences in choice behavior*,” Poster session presented at the 10th Biennial Meeting of the Cognitive Development Society, Portland, Oregon, USA.
- Durkin, K., Colantonio, J., Caglar, L., Bonawitz, E., and Shafto, P. (2017) “*Why are these my options? Roles of social inferences in choice behavior*,” Poster session presented at the 43rd Annual Meeting of the Society for Philosophy and Psychology, Baltimore, Maryland, USA.

Theses

- Colantonio, J. (2020) The Time to Choose Another Strategy: The Effects of Time Horizon Constraints on Young Children’s Explore-Exploit Strategies *Psychology Department, Rutgers-Newark Pre-doctoral Qualifying Exam*.
- Colantonio, J. (2016) Quantifying Children’s Development Across Standard False-Belief Trials. *Rutgers University Undergraduate Honors Thesis*. Advisers: Elizabeth Bonawitz and Patrick Shafto.

Skills

Programming	Python, HTML, CSS, L ^A T _E X
Software	MS Office, SPSS, Qualtrics, Atom, Jupyter/INotebooks