Isabella E. Rosario
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EDUCATION

Columbia University, Columbia College   New York, NY
Bachelor of Arts, Neuroscience & Behavior   May 2020

Relevant Coursework: Neurobiology, Developmental Psychology, Topics – Neurobiology & Behavior, Consciousness & Attention, Experimental Psychology: Cognition & Decision Making

Honors: Columbia Undergraduate Scholars Program (2016 – 2020), Dean's List (Fall 2016, Spring 2017, Fall 2018, Spring 2019, Fall 2019)

RESEARCH EXPERIENCE

Research Coordinator   June 2022 - Present
New York State Psychiatric Institute
Principal Investigator: Guillermo Horga, M.D., Ph.D.
- Recruit and coordinate participants from clinical and high-risk populations for studies examining the neural and computational mechanisms underlying psychotic symptoms
- Perform fMRI and neuromelanin-sensitive MRI scanning procedures
- Administer clinical and neuropsychological assessments and conduct behavioral tasks
- Analyze and organize datasets for project examining the developmental trajectories of cognitive performance and resting-state fMRI-based indices of excitation/inhibition balance in cortical microcircuits
- Manage IRB and NIH reports, amendments, and proposals

Postbaccalaureate IRTA Research Fellow   August 2021 – May 2022
National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism   Bethesda, MD
Principal Investigator: Reza Momenan, Ph.D.
- Coordinated the recruitment of participants for protocol examining neural correlates of acute alcohol intoxication on HIV-risk behaviors
- Administered questionnaires and cognitive assessments during screening procedures
- Prepared progress reports for IRB review and assist with regulatory submissions
- Designed pilot task for characterizing the effects of alcohol use disorder on the role of visuo-perceptive deficits in negative emotion recognition
- Analyzed data for independent project examining the associations among changes in alcohol consumption, quality of life, and resting state data

Research Assistant   September 2020 – February 2021
Columbia University, Department of Psychology   New York, NY
Principal Investigator: Alfredo Spagna, Ph.D.
Research Volunteer   February 2021 – August 2021
Alfredo Spagna, Ph.D.   New York, NY
- Assisted in preparation of grant proposal and EEG data collection for pilot study investigating the neural markers of classroom engagement in collaboration with Columbia University SOLER
- Co-authored manuscript and analyzed data comparing the efficacy of antidepressant treatments in ameliorating attentional deficits and clinical symptoms
- Performed virtual tractography and data analysis examining white matter alterations in schizophrenia and their associations with cognitive functioning
- Provided guest lecture on white matter tract dissection for Fundamentals of Neuropsychology course
- Contributed to editing of manuscript examining the interactions between spatial attention and conscious visual perception

Supervised Individual Research September 2019 – May 2020
Columbia University, Department of Psychology New York, NY
Advisor: Alfredo Spagna, Ph.D.
- Developed independent research project investigating global and local feature processing in early stages of visual perception
- Programmed backward-masking paradigm and collection of eye-tracking measures
- Prepared submission of IRB protocol, consent form, and recruitment materials

PUBLICATIONS

Spagna, A.*, Wang, J.*, **Rosario, I.E***., Zhang, L., Zu, M., Wang, K., & Tian, Y. (2022). Cognitive Considerations in Major Depression: Evaluating the Effects of Pharmacotherapy and ECT on Mood and Executive Control Deficits. *Brain Sciences*, *12*(3), 350. *Co-first authorship indicated by *.*

Rosario, I.E., Spagna. A global-to-local processing bias in conditions of restricted awareness: the case of symmetry and illusory figures. *Registered Report granted In-Principle Acceptance at Neuroscience of Consciousness*.

PREPRINTS

Goldberg, A., **Rosario, I.E.,** Power, J., Horga, G., Wengler, K. (2024). Strategies for motion- and respiration-robust estimation of fMRI intrinsic neural timescales. *bioRxiv*, 2024-05.

Shatto, C. L., Thorpe, J. N., Friedman, J. S., **Rosario, I.E.**, Gu, Z., Shi, J., ... & Spagna, A. (2023). Present: flexible neuroscience-and technology-driven frameworks for the study of classroom engagement. *bioRxiv*, 2023-06.

SUBMITTED PAPERS

Rosario, I.E., Luk, J.W., Stangl, B.L., Schwandt, M.L., Joseph, P.V., Diazgranados, N., Ramchandani, V.A., Goldman, D., Momenan, R. Identifying resting state functional connectivity regions associated with fluctuations in levels of alcohol consumption. Submitted, 2023.

PRESENTATIONS

Rosario, I.E., Goldberg, A.T., Lee, S., Wengler, K., Horga, G. "Developmental Patterns and Cognitive Relevance of Intrinsic Neural Timescales in Humans." Society for Neuroscience; November 11 – 15 2023, Washington, D.C.

ABSTRACTS

Momenan, R., **Rosario, I.E.**, Stangl, B.L., Luk, J.W., Schwandt, M.L., Joseph, P.V., Goldman, D., Diazgranados, N., Ramchandani, V. "Can Resting State Connectivity Predict Alcohol Misuse Changes?" Organization for Human Brain Mapping; July 22-26 2023, Montreal, Canada.

Shatto, C., Gu, Z., Hui, X., **Rosario, I.E.**, Brown, A., He, X., Spagna, A. "Who gets an A+? Discipline Based Education Research meets Neuroscience in the Classroom." 29th Annual Meeting of the Cognitive Neuroscience Society; April 23-26 2022, San Francisco, New York.

ADDITIONAL WORK EXPERIENCE

Program Coordinator May – June 2021
Columbia University, Department of Psychology New York, NY
Virtual Columbia Summer Global Virtual Bootcamp: Neuroscience of Consciousness
- Coordinated with international laboratories to plan program activities involving speaker events, data analysis practicums, and meetings with lab members
- Served as general resource to students regarding academic and administrative needs
- Prepared course materials, provided individual feedback, and graded assignments

- Promoted program activities and content highlighting student experiences through social media

Tutor   September 2018 – June 2020
Columbia University Tutoring and Learning Center   New York, NY
- Provided in-person and online tutoring sessions in geometry for students attending Columbia Secondary School and A. Philip Randolph High School
- Prepared students for Regents standardized examinations through review of course material and development of test-taking strategies
- Mentored students on identifying academic goals, exploring career options, and transitioning to online learning

ACTIVITIES

Volunteer   January 2018 – May 2020
Student Health Outreach (Community Impact at Columbia University)   New York, NY
- Directed individuals to free or low-cost resources for housing, legal aid, and health care
- Assisted individuals with application materials for New York City identification cards, Supplemental Nutrition Assistance Program, and cell phone program
- Provided referrals for food and clothing pantries

Volunteer   March 2018 – September 2019
Cardiac Catherization Lab, Mount Sinai St. Luke's Hospital   New York, NY
- Aided nursing staff by organizing medical supplies and paperwork, delivering bloodwork to Pathology Lab, and responding to patient' requests
- Provided Spanish-English translation for communication between patients and nursing staff
- Trained new volunteers on patient confidentiality, regular duties, and clinical guidelines

SKILLS

Software Tools: PsychoPy, TrackVis, MNE, Tobii SDK, CONN, AFNI, JASP, Microsoft Office
Programming Languages: MATLAB, Python, R
Languages: Proficient Spanish, Intermediate French