

Yu Sun Chung

Curriculum Vitae

Department of Psychology
St. Mary's College of Maryland
47645 College Drive
St. Mary's City, MD 20686-3001
Email: ychung@smcm.edu

Research Interests

- Typical and atypical developments of frontal-limbic system supporting emotional processing and cognitive control using multi-modal neuroimaging (i.e., EEG/ERP, fMRI)
- Effects of puberty on adolescent cognitive and emotional developments
- Sex differences in developmental psychopathology
- Relationships among hormones, brain, and motivated behaviors in adolescents

Teaching Experiences

Visiting Assistant Professor of Psychology

2022 – 2023 Lifespan Development PSYC 230.02, 230.03
Developmental Psychopathology PSYC 480
Department of Psychology, St. Mary's College of Maryland

Instructor

2018 – 2019 Psychological Evaluation PSY451-01
Department of Psychology, Central Connecticut State University

Guest Lecturer

2012 Abnormal Psychology
Department of Psychology & Brain Sciences, Washington University

Teaching Assistant

2012 Abnormal Psychology
Department of Psychology & Brain Sciences, Washington University

Research Mentoring

Graduate Student Research Mentoring

2020 Armen Bagdasarov
Department of Psychology & Neuroscience, Duke University

Undergraduate Student Research Mentoring

2019 - Present Athena Tsai, Ainsley Buck*, Jasalyn Bennekin, Kyle Shutkind*,
Michael Greenstein, Sonia He, Sydney Albert
Department of Psychology & Neuroscience, Duke University

Employment

2022 - Present Visiting Assistant Professor (Developmental Psychology)
St. Mary's College of Maryland

2019 - 2021 Postdoctoral Associate
Department of Psychology & Neuroscience
Duke University
PI: Michael S. Gaffrey; Co-Mentor: Marty G. Woldorff
(Training: Early Childhood Development using Event-Related Potentials)

2018 - 2019 Adjunct Faculty
Central Connecticut State University, Department of Psychology

2015 - 2018 Postdoctoral Fellow
Clinical Neuroscience and Development Laboratory
Olin Neuropsychiatry Research Center, Hartford, CT
PI: Michael C. Stevens
(Training: Adolescent Brain Development using functional Magnetic Resonance Imaging)

Education & Training

2008-2014 Ph.D., Psychology, Washington University, St. Louis, MO
Specialization: Brain, Behavior & Cognition
Cognitive, Computational, & Systems Neuroscience Pathway
Dissertation: *Sustained and Transient Reward Effects on Cognitive Control in Schizophrenia: The Relevance of Negative Symptoms*
Advisor: Deanna Barch; Co-Advisor: Todd Braver

2003-2005 M.A., Clinical Psychology, Korea University, Seoul, South Korea

1999-2003 B.A. Psychology, Korea University, Seoul, South Korea

Funding Awards & Applications

2022/12-2024/11 R21-MH129754-01A1
Role: **Principal Investigator**
Project Title: Beyond Reward Sensitivity: Mechanistic Mechanism of Probabilistic Learning in Emerging Risk for Depression.
Status: Not funded

* Neuroscience Research Independent Study

- 2021/03- 2021/12 Charles Lafitte Foundation
 Role: **Principal Investigator**
 Project Title: Effects of Pubertal Development on Feedback-based Reward Learning
 Status: Completed
- 2016-2018 R01 MH102854-02
 Role: **Co-Author**/Postdoctoral Fellow
 Project Title: Neural Architecture of Emotion Regulation, Adolescent Development and Depression
 Status: Completed
 (This is a PA-14-077 proposal for supplemental funding to augment R01MH102854 "Neural Architecture of Emotion Regulation, Adolescent Development and Depression." The goal is to determine whether sex hormone levels (i.e., testosterone, estradiol, progesterone) modulate emotion regulation-related effective connectivity in boys and girls and identify the specific targets of any sex hormone effects)

Publications

(Google Scholar h-index: 10)

Peer-Reviewed Journal Articles

1. Gertler, J, Novotny S, Poppe A, **Chung YS**, Gross JJ, Pearlson G, Stevens MC (2020). Neural correlates of non-specific skin conductance responses during resting state fMRI. *NeuroImage*, 214:116721
2. **Chung, YS**, Calhoun VD, and Stevens, MC (2020). Adolescent Sex Differences in Cortico-Subcortical Functional Connectivity During Response Inhibition. *Cognitive, Affective, & Behavioral Neuroscience*, 20(1), 1-18.
3. **Chung, YS**, Poppe, AB, Novotny, S, Epperson, CN, Kober, H, Granger, D.A., Blumberg H, Ochsner K, Gross J, Pearlson GD, and Stevens MC (2019). A Preliminary Study of Association between Adolescent Estradiol Level and Dorsolateral Prefrontal Cortex Activity during Emotion Regulation. *Psychoneuroendocrinology*, 109, 104398.
4. **Chung, YS**, Hyatt, CJ, and Stevens, MC (2017). Adolescent Maturation of the Relationship Between Cortical Gyrification and Cognitive Ability. *NeuroImage*, 158, 319-31.
5. **Chung, YS** and Barch, DM (2016). Frontal-Striatum Dysfunction During Reward Processing: Relationships to Amotivation in Schizophrenia. *Journal of Abnormal Psychology*, 125(3), 453-69.
6. **Chung, YS** and Barch, DM (2015). Anhedonia is Associated with Reduced Incentive Cue Related Activation in the Basal Ganglia. *Cognitive, Affective, & Behavioral Neuroscience*, 15(4), 749-67.
7. **Chung, YS**, Barch, DM, and Strube M. (2014). A Meta-Analysis of Mentalizing Impairments in Adults with Schizophrenia and Autism Spectrum Disorder. *Schizophrenia Bulletin*, 40(3), 602-16.

8. Mann, CL, Footer O, **Chung YS**, Driscoll LL, and Barch DM (2013). Spared and Impaired Aspects of Motivated Cognitive Control in Schizophrenia. *Journal of Abnormal Psychology*, 122(3), 745-55.
9. **Chung, YS** and Barch DM. (2011). The Effect of Emotional Context on Facial Ratings In Schizophrenia. *Schizophrenia Research*, 131(1-3), 235-41.
10. **Chung, YS**, Mathews J, and Barch DM. (2011) The Effect of Context Processing on Different Aspects of Social Cognition in Schizophrenia. *Schizophrenia Bulletin*, 37(5), 1048-56.
11. Shim, KG, Kang, DH, **Chung, YS**, Yoo, SY, Shin, NY and Kwon, JS. (2008). Social Functioning Deficits in Young People At Risk For Schizophrenia. *Australian and New Zealand Journal of Psychiatry*, 42(8), 678-85.
12. **Chung, YS**, Kang, DH, Shin, NY, Yoo, SY and Kwon, JS. (2008). Deficit of Theory of Mind In Individuals at Ultra-High-Risk for Schizophrenia. *Schizophrenia Research*, 99(1-3), 111-118.
13. **Chung, YS** and Kwon, JH. (2008). The Efficacy of Bibliotherapy for Social Phobia. *Brief Treatment and Crisis Intervention*, 8(4), 390.

Preprints

1. Sørensen, L, **Chung, YS**, Khadka, S and Stevens, MC. Moment-to-moment fluctuations of hemodynamic responses in posterior default mode networks differentially predict level of attentional lapses in adolescents with Attention-Deficit/Hyperactivity Disorder (medRxiv, DOI:10.1101/2022.01.31.22270169)
2. **Chung, YS**, Bagdasarov A, and Gaffrey, MS. Sex differences in the neural processing of reward feedback in young children (bioRxiv, doi: <https://doi.org/10.1101/2022.06.20.496831>)

Working Draft (Data Completed)

1. **Chung, YS** & Posner J. Associations between DHEA level and cortical-subcortical brain activations during negative emotion regulation (In prep)
2. **Chung, YS**, van den Berg B, Roberts K, Gaffrey MS, Woldorff, M. The reward-related positivity and P300 during a novel probabilistic reward learning task are associated with behavior strategies in young children (In prep).

Awards & Honors

2013 –2014	Dissertation Fellowship, Washington University in St. Louis
2013	Travel Fund, Washington University in St. Louis
2012	Travel Award, Society for Research in Psychopathology
2012	Travel Award, Conference on Executive Function at the NIMH Behavioral Science Center
2008-2013	McDonnell International Scholarship, Washington University in St. Louis; Global leadership program
2008-2010	Cognitive, Computational & Systems Neuroscience Trainee, McDonnell Centre for Systems Neuroscience, Washington Univ.
2004	Scholarship, Korea University, Seoul, South Korea
2002	Honors Scholarship, Korea University, Seoul, South Korea

Invited & Symposium Talks

1. **Chung, YS** (October, 2021). 2021 Virtual Annual Meeting of the Society for Psychophysiological Research.
2. **Chung, YS** (April, 2019). Bowdoin College, Brunswick, Maine.
3. **Chung, YS** (April, 2019). Anxiety and Traumatic Stress Disorders Laboratory, McLean Hospital, Harvard Medical School, Belmont, MA.
4. **Chung, YS** (January, 2019). Psychological and Brain Sciences, University of Massachusetts, Amherst, MA.
5. **Chung, YS** (November, 2018). Shriver Academic Seminar, University of Massachusetts, Medical School, Worcester, MA.
6. **Chung, YS** (September, 2018). Developmental Biopsychiatry Research Program, McLean Hospital, Harvard Medical School, Belmont, MA.
7. **Chung, YS** (June, 2018). Clinical Neuroscience Laboratory, Martinos Center, Harvard Medical School, Boston, MA.
8. **Chung, YS** (May, 2015). Olin Neuropsychiatry Research Center, Hartford, CT.
9. **Chung, YS** (April, 2014). Laboratory of Neurocognitive Development, University of Pittsburgh Medical Center, Pittsburgh, PA.

Selected Conference Posters

1. Camacho, NL, Bagdasarov, A, Caress, A, **Chung, YS**, and Gaffrey, MS. (2021, September). Concurrent and longitudinal associations between early childhood reward responsivity and irritability (Under review). Poster submitted at the FLUX Virtual Congress.
2. **Chung, YS**, Poppe, AB, Novotny, S, Epperson, CN, Kober, H, Gross JJ, Pearlson GD, and Stevens MC (2018, May). Estradiol modulation of female adolescent emotion regulation. Poster presented at the Society of Biological Psychiatry, New York, USA.
3. Poppe, AB, Novotny, S, **Chung, YS**, Pearlson GD, Kober, H, Phillips M, Ochsner K, Gross J, Stevens MC (2018, May). Evidence for common and unique brain structures underlying emotion regulation with different strategies and valence: A developmental study. Poster presented at the Society of Biological Psychiatry, New York, USA.
4. Novotny, S, **Chung, YS**, Poppe, AB, Pearlson GD, Kober, H, Phillips M, Ochsner K, Gross J, Stevens MC (2018, May). Individual differences in executive functioning, emotion regulation traits, and their neural correlates during successful cognitive reappraisal (2018, May). Poster presented at the Society of Biological Psychiatry, New York, USA.
5. **Chung, YS** and Stevens, MC (2017, June). Inhibitory control-related network functional connectivity associations with dimensional symptom severity in adolescents with Attention Deficit Hyperactivity Disorder. Poster presented at the Organization for Human Brain Mapping, Vancouver, Canada.
6. **Chung, YS** and Stevens, MC (2017, June). Adolescent sex differences in cortico-subcortical functional connectivity during inhibitory control. Poster presented at the Organization for Human Brain Mapping, Vancouver, Canada.

7. **Chung, YS**, Hyatt, CJ and Stevens, MC (2016, September). Cortical Folding Individual Differences Associated with Cognitive Ability in Adolescence. Poster presented at the Annual Flux Congress, St. Louis, USA.
8. **Chung, YS** and Barch, DM (2015, March). Sustained and Transient Reward Effect on Cognitive Control in Schizophrenia: The Relevance of Negative Symptoms. Poster presented at the Cognitive Neuroscience Society, San Francisco, USA.
9. **Chung, YS** and Barch, DM (2014, April). The Temporal Dynamics of Motivated Cognitive Control: Relationships to Social Anhedonia. Poster presented at the Cognitive Neuroscience Society, Boston, USA.
10. **Chung, YS** and Barch, DM (2013, Sep). Sustained and Transient Reward Effects on Cognitive Control in Schizophrenia: a Mixed State-item fMRI study. Poster presented at the Society for Research in Psychopathology, Oakland, California, USA.
11. **Chung, YS** and Barch, DM (2012, Oct). Reward Context-Dependent and Cue-Driven Effects on Cognitive Control function In Schizophrenia. Society for Research in Psychopathology, Ann Arbor, Michigan, USA.
12. **Chung, YS** and Barch, DM. (2012, Jan) Mentalizing Impairments Between Schizophrenia and Autism Spectrum Disorders: A Meta-Analytic Review. Poster presented at the NIMH Behavioral Science Center: Determinants of Executive Function & Dysfunction conference, Boulder, Colorado, USA.
13. **Chung, YS** and Barch, DM. (2011, April). The Effect of Emotional Context and Attention on the Dimensional Rating of Faces. Poster presented at the International Congress on Schizophrenia Research, Colorado Springs, Colorado, USA.
14. **Chung, YS** and Barch, DM. (2010, October). The Effect of Strategic Manipulation on Facial Emotion Perception in Schizophrenia. Poster presented at the Society for Research in Psychopathology, Seattle, USA.

Additional Research Experience

2007 – 2008	Clinical Researcher, Clinical Cognitive Neuroscience Center at Seoul National University College of Medicine (Advisor: Jun Soo Kwon, MD, PhD) (http://neuroimage.net/)
2004	Research Assistant, Dept. of Psychology, Korea University, Seoul.
2003- 2006	Group leader, Cognitive Behavioral Group Treatment for social phobia, Korea University Social Phobia Counseling Center

Professional Activities & Services

Editorial Board:

Journal of the Korean Academy of Child and Adolescent Psychiatry

Ad hoc Journal Reviewer:

Australian and New Zealand Journal of Psychiatry | Brain Connectivity | Brain Imaging and Behavior | Cognition and Emotion | Developmental Cognitive Neuroscience | Journal

of Psychiatric Research | Psychoneuroendocrinology | Peer Journal | Schizophrenia Bulletin | Schizophrenia Research

Professional Memberships:

Cognitive Neuroscience Society | Flux: Society for Developmental Cognitive Neurosci | Human Brain Mapping | Society of Biological Psychiatry | Society for Psychophysiological Research | Society for Research in Psychopathology

Additional Professional Training

2019	Brain Electrical Source Analysis Workshop
2019	Brain Vision Analyzer Workshop at Florida State
2016	HCP Course 2016: Exploring the Human Connectome
2014	The Mind Research Network: fMRI Image Acquisition and Analyses

University and Community Services

Duke University

2019 - Present	A member of Scientists Promoting Equity and Knowledge(SPEAK): (SPEAK: A group of early-career researchers at Duke University: Discussing issues of equity and power in academia and promoting a more diverse, inclusive, and equitable environment)
2019 - 2020	Duke University Brain Awareness Week

Olin Neuropsychiatric Research Center

2017 - 2018	BrainDance Awards Celebration (Tour guides of neuroimaging research facility)
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Washington University

2009 - 2013	Neuroscience public outreach volunteer experiences: SciFest/Amazing Brain Carnival Volunteer, St. Louis Science Center: (Demonstrations on brain structure and function aimed for general public) St.Louis Science Center, school and community groups: (Teaching science and aimed for middle school students)
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References:

Deanna Barch, Ph.D. (academic advisor)
Department of Psychological and Brain Sciences
Departments of Psychiatry and Radiology
Washington University in St. Louis
St. Louis, MO
dbarch@wustl.edu

Michael C. Stevens, Ph.D. (Former postdoctoral advisor)
Olin Neuropsychiatry Research Center
Institute of Living, Hartford Hospital
Hartford, CT
Yale Department of Psychiatry
New Haven, CT

Yu Sun Chung

ychung@smcm.edu

Michael.Stevens@hhchealth.org

Michael Santo Gaffrey, Ph. D. (Former postdoctoral advisor)
Department of Psychology & Neuroscience
Duke University
Durham, NC
Michael.gaffrey@duke.edu

Marty Woldorff, Ph.D. (Former co-mentor)
Department of Psychiatry; Psychology & Neuroscience; Neurobiology
Center for Cognitive Neuroscience
Duke University, Durham, NC
woldorff@duke.edu

Collaborators:
Elizabeth (Birdie) Shirtcliff, Ph.D
Research Professor
University of Oregon
birdie@uoregon.edu

Jonathan Posner, MD
Vice Chair for Research
Department of Psychiatry & Behavioral Sciences
Duke University School of Medicine
jonathan.posner@duke.edu