

Shou-An Ariel Chang, M.S., M. Phil.
ariel.chang@yale.edu
P.O. Box 208205 New Haven, CT 06520

EDUCATION

Yale University

Doctoral Candidate, Clinical Psychology
Master of Philosophy, Clinical Psychology
Master of Science, Clinical Psychology

New Haven, CT

2017-present
2019-2020
2017-2019

The University of Chicago

Bachelor of Arts in Psychology, minor in French Language and Literature
Cumulative GPA: 3.7/4.00

Chicago, IL

2015

AWARDS

Conference Travel Award (\$500) <i>Yale Graduate Student Assembly</i>	April 2019
Lagerspetz Award for Excellent Student Presentation (\$100) <i>International Society for Research on Aggression</i>	July 2018
Student Travel Award (\$285) <i>International Society for Research on Aggression</i>	July 2018
Psychology Department Pre-Dissertation Research Funds Award (\$300) <i>Yale University</i>	September 2017

PUBLICATIONS

Peer-Reviewed Articles

Chang, S.A. & Baskin-Sommers, A. (2020). Neighborhood disorder is associated with differences in the processing of facial trustworthiness. *Frontiers in Psychology*, 11. doi:10.3389/fpsyg.2020.00409.

Carter Leno, V., Tomlinson, S. B., Chang, S.A., Naples, A. J., & McPartland, J. C. (2018). Resting-state alpha power is selectively associated with autistic traits reflecting behavioral rigidity. *Scientific reports*, 8(1), 11982. doi:10.1038/s41598-018-30445-2

Under Review

Chang, S.A., Jara-Ettinger, J., & Baskin-Sommers, A. Resource Scarcity Compromises Explore-Exploit Decision-Making. Manuscript submitted for publication.

Invited Publications and Book Chapters

Baskin-Sommers, A., Chang, S.A. & Chan, L. (invited review, finalizing submission). Psycho-Social Determinants of the Effectiveness of Programs Designed to Impact of Youthful Offenders. *Annual Review of Criminology*, 5.

Tillem, S., Chang, S.A. & Baskin-Sommers, A. (2020). Comparison of socio-affective processing across subtypes of antisocial psychopathology. In F. Focquaert, E. Shaw & B. Waller (Eds.), *The Routledge Handbook of the Philosophy and Science of Punishment*. (pp. 288-302). Routledge: Abingdon, UK.

Chang, S.A. & Baskin-Sommers, A. (2020). Methodological advancements needed in neuroimaging research on Personality Disorders: Commentary on Chan et al. In C. Lejuez (Ed.), *Handbook of Personality Disorders*. (pp. 24-26). NY: Cambridge University Press.

PRESENTATIONS

- Chang, S.A.**, Jara-Ettinger, J., Baskin-Sommers, A.R. (2020, May). Living in Concentrated Disadvantage Affects the Precision of Resource Decision-Making. The Association for Psychological Science Annual Convention, Chicago, IL. (Conference canceled).
- Chang, S.A.**, Baskin-Sommers, A.R. (2019, May). The Effects of Neighborhood Disorder on Neural Processing and Behavioral Responses to Facial Trustworthiness. Poster presented at the Association for Psychological Science Annual Convention, Washington, DC.
- Chang, S.A.**, Baskin-Sommers, A.R. (2019, May). Subjective Ratings and Neural Processing of Facial Trustworthiness in Psychopathic and Externalizing Individuals. Poster presented at the Biennial Meeting of the Society for the Scientific Study of Psychopathy, Las Vegas, Nevada.
- Chang, S.A.**, Baskin-Sommers, A.R. (2018, July). Neural Mechanisms Underlying Facial Perception of Trustworthiness in Relation to Approach Avoidance and Aggressive Behavior in Externalizing Individuals. Poster presented at the International Society for Research on Aggression, Paris, France.
- Day, T.C., Naples, A., Lewis, B., McNaughton, K., **Chang, S.A.A.**, Rolison, M.J., Ellison, K., Wolf, J., Jarzabek, E., Malak, S., Trapani, J., Stinson, K., Foss-Feig, J., McPartland, J. (2017, November). Brain-Behavior Relationships in Autism Spectrum Disorder and Typical Development during an Interactive Social Paradigm. Poster presented at the Society for Neuroscience Annual Meeting, Washington, DC.
- Atyabi, A., McAllister, T., Hasselmo, S., **Chang, S.A.**, Rolison, M.J., Halligan, T.A., Lewis, B., Day, T.C., McNaughton, K.A., Ellison, K.S., Wolf, J., Stinson, K., Malak, S.M., Trapani, J.A., Jarzabek, E., McPartland, J., Naples, A. (2017, May). Applying Regionalized Tessellation to Detect Diagnostic Markers of ASD in Resting EEG Data. Poster presented at the International Meeting for Autism Research, San Francisco, CA.
- Chang, A.**, Shic, F., Li, B., Malak, S., Trapani, J., Stinson, K., McPartland, J., Naples, A., (2017, May). Neural Correlates of the Pupillary Light Reflex in the Broader Autism Phenotype. Poster presented at the International Meeting for Autism Research, San Francisco, CA.
- Day, T., Lewis, B., Naples, A., McNaughton, K., **Chang, S.A.**, Rolison, M.J., Ellison, K., Wolf, J., Jarzabek, E., Malak, S., Trapani, J., Stinson, K., Foss-Feig, J., McPartland, J. (2017, May). Gaze Preference and Underlying Brain Responses to Dynamic Eye Movement in Individuals with ASD Across Development. Poster presented at the International Meeting for Autism Research, San Francisco, CA.
- Hasselmo, S., Malak, S., Trapani, J., Rolison, M.J., McNaughton, K., Day, T., **Chang, S.A.**, Ellison, K., Lewis, B., Jarzabek, E., Wolf, J., Foss-Feig, J., Srihari, V., Anticevic, A., Naples, A., McPartland, J. (2017, May). Resting State EEG and Sensory Responsivity in ASD and Schizophrenia. Poster presented at the International Meeting for Autism Research, San Francisco, CA.
- Malak, S., **Chang, A.**, Trapani, J., Stinson, K., McPartland, J., Naples, A. (2017, May). Influence of Autistic Traits and Social Anxiety on Gaze Patterns to Faces and Associated Neural Response. Poster presented at the International Meeting for Autism Research, San Francisco, CA.
- Rolison, M., Naples, A., Foss-Feig, J., Trapani, J., **Chang, A.**, McNaughton, K., Day, T., McAllister, T., McPartland, J. (2017, April) Attention and Brain Response to Eye Contact During an Interactive Social Neuroscience Experiment. Oral presentation given as part of Paper Symposium at Society for Research in Child Development, Austin, TX.
- Naples, A., **Chang, A.**, Hasselmo, S., Rolison, M., Malak, S., Trapani, J., Stinson, K., McPartland, J. Neural (2017, April) Response to Feedback and Reward in Simulated Interactions in ASD. Oral presentation to be given as part of Paper Symposium at Society for Research in Child Development, Austin, TX.
- Trapani, J., Naples A., Rolison, M., **Chang, S.A.**, Stavropoulos, K., Stinson, K., Jarzabek, E., Ellison, K., McNaughton, K., McAllister, T., Foss-Feig, J., McPartland, J. (2016, November). Attention and neural response to simulated social interactions in ASD. Poster presented at Society for Neuroscience Annual Meeting, San Diego, CA.
- Naples, A., Foss-Feig, J.H., McAllister, T., **Chang A.**, Trapani, J., Stavropoulos K.K., Rolison M., Anticevic, A., Srihari, V., McPartland, J. (2016, May). Neural Correlates of Emotion Processing during Simulated Social Interactions in Adults with Autism Spectrum Disorder and Schizophrenia. Oral presentation given at the International Meeting for Autism Research, Baltimore, MD.
- Naples, A., Rolison, M., Foss-Feig, J.H., **Chang, A.**, Stavropoulos K.K., Winkelman, T., Stinson, K., Jarzabek, E., Ellison, K., McAllister, T., McPartland, J. (2016, May). Attention and Brain Response During Simulated Interactions in ASD. Poster presented at the International Meeting for Autism Research, Baltimore, MD.
- Foss-Feig, J.H., Naples, A., Deckert, K., Levy, E., Stavropoulos, K., Rolison, M., **Chang, S.A.**, Trapani, J., Ellison, K., McAllister, T., Malak, S., Santamauro, N., Schleifer, C., Anticevic, A., Srihari, V., McPartland, J. (2016, May).

Dissociating Social Functioning in ASD and Schizophrenia Using Clinical Assessment and Neural Response to Gaze Cues. Poster presented at the International Meeting for Autism Research, Baltimore, MD.

Chang, S.A.A., & Decety, J. (2015, April) Developmental Changes in the Mechanisms Motivating Empathic Concern and Helping Behavior in Children. Poster presented at the Chicago Area Undergraduate Research Symposium, Chicago, IL.

RESEARCH EXPERIENCE

Mechanisms of Disinhibition Laboratory

Yale University

Research Assistant

New Haven, CT

August 2017-present

Advisor: Arielle Baskin-Sommers, Ph.D.

- Conduct diagnostic (SCID 5) and neuropsychological (Shipley, WRAT, Trails A&B, Digit Backwards, Stroop) assessments for research about the influence of neighborhood characteristics on cognitive-affective mechanisms
- Design and conduct research utilizing EEG (Neuroscan, MATLAB, EEGLab, PhysBox), behavioral measures and self-report questionnaires to examine the relationship between neighborhood characteristics and cognitive-affective mechanisms underlying antisocial behavior
- Train research assistants on EEG data set up and collection and on conducting clinical interviews

Autism Biomarkers Consortium for Clinical Trials

Yale University

Sara S. Sparrow Research Fellow

New Haven, CT

November 2015-June 2017

Supervisors: James McPartland, Ph.D., & Adam Naples, Ph.D.

- Member of the eye tracking and EEG branches of the Data Analytics and Acquisition Core
- Contributed Matlab code to ERP pipeline utilized to analyze biomotion, VEP, and face EEG paradigms
- Designed, built, and maintained light meters used in pupillary light reflex paradigm
- Scripted luminance matching of face and house stimuli utilizing the SHINE toolbox in MATLAB
- Analyzed all ERP EEG paradigms utilizing high performance computing cluster and perform correlations between EEG and eye tracking data
- Generated regions of interest for ET analysis of dynamic social scenes
- Performed manual quality control on eye tracking data to ensure adherence to the eye tracking acquisition protocol
- Contributed to authoring the eye tracking data acquisition protocol, manual of operations, and training videos
- Represented the data analytics and acquisition core on weekly calls with clinical investigative sites to discuss data collection strategies, changes to experimental protocols, and answer site questions
- Attended weekly calls between the eye tracking, EEG, and video tracking data analytics cores as well as the data coordinating core to discuss data storage, workflow, and analysis strategies

McPartland Lab

Yale Child Study Center

Sara S. Sparrow Research Fellow

New Haven, CT

November 2015-June 2017

Supervisors: James McPartland, Ph.D., & Adam Naples, Ph.D.

- Analyzed EEG resting state data using field trip toolbox to investigate the relationship between variability in EEG power and coherence and the broader autism phenotype in typically developing adults
- Automated cleaning and artifact detection of raw EEG data using PREP Pipeline and EEGLAB on high performance computing cluster
- Assisted in behavioral management of typically developing children and adults, as well as individuals with autism spectrum disorder (ASD) for eye tracking EEG studies
- Analyzed EEG ERP and eye tracking data on studies looking at differences between typically developing children and children with ASD, as well as typically developing adults, adults with ASD, and adults with schizophrenia in the neural correlates of social cognition
- Collected and analyzed data on independent research project utilizing EEG and eye-tracking to investigate the neural correlates of the pupillary light reflex and behavioral traits in typically developing adults
- Cleaned and analyzed eye tracking data utilizing combination of python and R code to conduct a time series analysis of face scanning
- Attended and contributed to weekly lab meetings discussing ongoing projects and collaborations

- Administered DAS with typically developing children as well as children with ASD as part of clinical characterization for various research studies in the lab
- Administered Vineland II to parents of participants as part of clinical characterization for various research studies

Department of Cognitive Neurology/Neuropsychology
 Johns Hopkins University School of Medicine
Research Assistant

Baltimore, MD
 August-November 2015
Supervisor: Joseph Dien, Ph.D.

- Analyzed HRV data in Matlab to explore the relationship between self-injurious behavior and physiological reactivity in an individual with ASD
- Performed literature review on auditory discrimination task to compare validity of data collected from Empatica4 with data collected from gold standard equipment
- Initiated study involving EEG and eye-tracking to investigate the neural circuitry underlying physiological reactivity to auditory stimuli in typically developing populations and individuals with ASD

Child NeuroSuite
 The University of Chicago
Research Assistant

Chicago, IL
 October 2012-June 2015
Supervisors: Jean Decety, Ph.D., & Jason Cowell, Ph.D.

- Conducted honors thesis investigating the underlying mechanisms driving the developmental trajectory of empathic concern and helping behavior in children. Duties included authoring and maintaining protocols and scripts used to obtain IRB approval, designing and creating stimuli, collecting, coding, and analyzing statistical data using SPSS, creating adult version of study on Amazon Mechanical Turk, and authoring write-up of results culminating in honors thesis
- Set-up and collected EEG data for study on the neural correlates of the development of moral cognition in infants and toddlers
- Trained incoming research assistants on EEG system maintenance and data collection
- Hand-edited EEG data utilizing BrainVision Analyzer and EEGLAB
- Recruited, ran, and coded data for cross-cultural study on the relationship between sharing, competition, fairness, and social groups on children's decision making

Behavioral Insights and Parenting Lab
 The University of Chicago
Research Assistant

Chicago, IL
 July-December 2014
Supervisors: Ariel Kalil, Ph.D., & Susan Meyer, Ph.D.

- Co-ordinated recruitment of parents at multiple head-start programs to participate in study that applied tools from behavioral economics to promote parental engagement in educational activities with their children
- Coded video data, entered data, and prepared all materials for on-site recruitment

CLINICAL EXPERIENCE

Transitions Clinic Network
 Yale University
Student Clinician

New Haven, CT
 September 2019-July 2020
Supervisors: Arielle Baskin-Sommers, Ph.D., & Lisa Puglisi, M.D.

- Provide psychoeducation on mental health issues and brief interventions during primary care visits to clients returning to the community from incarceration
- Conduct audio-supervised individual brief therapy sessions using techniques adapted from CBT, DBT, and motivational interviewing with diverse range of clients experiencing comorbid psychological difficulties, such as depression, substance use, and trauma-related symptoms
- Conduct integrated assessment for referrals to community services

Yale Psychology Department Clinic
 Yale University

New Haven, CT
 January 2018-August 2020

Student Clinician

Supervisors: Mary O'Brien, Ph.D., & Christine DeMaio, Ph.D.

- Conduct audio and video-supervised individual therapy sessions using techniques from CBT, DBT, ACT, and motivational interviewing with adults with mood and anxiety disorders
- Co-facilitate audio-supervised DBT skills group with adult community members
- Conduct clinic intakes administering the SCID-5, develop and present case conceptualizations at weekly group conference, and write psychological history reports, treatment plans, and termination reports

Developmental Disabilities Clinic

Yale Child Study Center

Research Fellow

New Haven, CT

November 2016-June 2017

- Administered Vineland II to families visiting clinic to contribute to comprehensive evaluation with emphasis on recommendations for intervention and educational planning

TEACHING EXPERIENCE

Research Methods in Clinical Psychology

Yale University

Teaching Fellow

New Haven, CT

Spring 2020

Instructor: Arielle Baskin-Sommers, Ph.D.

- Led writing sections, held weekly office hours to clarify course material and provide feedback on writing assignments and content, graded exams

Introduction to Psychology

Yale University

Teaching Fellow

New Haven, CT

Fall 2019

Instructor: Nicholas Turk-Browne, Ph.D.

- Developed and led educational lab experience, met with students individually to discuss course content, generated exam questions, graded exams

Abnormal Psychology

Yale University

Teaching Fellow

New Haven, CT

Spring 2019

Instructor: Jutta Joormann, Ph.D.

- Held weekly office hours to discuss course content with students, conducted midterm and final review sessions, graded exams and weekly assignments

The Criminal Mind

Yale University

Teaching Fellow

New Haven, CT

Fall 2018

Instructor: Arielle Baskin-Sommers, Ph.D.

- Met with students individually to discuss course content, conducted midterm and final review sessions, graded exams

PROFESSIONAL SERVICE

Departmental Colloquium Committee

Clinical Area Current Work Student Committee

Fall 2018-Current

Fall 2018-Spring 2019

PROFESSIONAL MEMBERSHIPS

Association for Psychological Science

Society for the Scientific Study of Psychopathy

2018-present

AD HOC REVIEWER

Health and Place

RELEVANT SKILLS

Computer: Proficient in Microsoft Excel, basic knowledge of Stata, Proficient in R, SPSS, MatLab, Python, high performance computing

EEG and Eye-Tracking Analysis: EEG system set-up (EGI and actiCHamp), operation, and data analyses using Brain Vision Analyzer, NetStation, Neuroscan, EEGLAB, ERPLAB, fieldtrip, SHINE TOOLBox, PrepPipeline, PsychToolbox, Eyelink 2000, Eyelink Viewer

Engineering software: 3-D Print, TinkerCad, Cura

Languages: Conversant in Mandarin, proficient in French