

**XIAOTONG (ANTHONY) SONG, M.A.**Curriculum Vitae

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**CONTACT INFORMATION**

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 Lexington, KY 40506  
 ORCID: 0009-0001-3561-5852

Email: [Xiaotong.Song@uky.edu](mailto:Xiaotong.Song@uky.edu)**EDUCATION & TRAINING**

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- 08/2024- **Ph.D., Clinical Psychology**  
 University of Kentucky, Lexington, KY  
 Major Area of Study: Neuropsychology  
 Advisors: Jordan P. Harp, Ph.D., Justin E. Karr, Ph.D.
- 09/2019-05/2021 **M.A., General Psychology, Clinical Track**  
 New York University, New York, NY  
 Thesis Advisors: Kathy F. Yates, Ph.D., Elizabeth A. Bauer, Ph.D.
- 09/2015-05/2019 **B.A., Psychology**  
 Skidmore College, Saratoga Springs, NY  
 Honors Thesis Advisor: Denise L. Evert, Ph.D.

**FELLOWSHIPS/GRANTS RECEIVED**

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- 05/2023 NYU Langone ADRC REC Junior Scholar Grant (P30 AG066512; \$1,500)
- 07/2020 NYU Wasserman Center for Career Development Internship Grant (\$1,000)

**RESEARCH & CLINICAL EXPERIENCE**

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- 05/2023-06/2024 **Research Education Component (REC) Junior Scholar**  
 NYU Langone Alzheimer's Disease Research Center (ADRC)  
 Center for Cognitive Neurology  
 Department of Neurology  
Mentors: Ricardo Osorio, M.D., Rebecca Betensky, Ph.D.
- Independent Research Projects:
- Examination of Global Grey vs. White Matter <sup>11</sup>C-Pittsburgh Compound B (PiB) Standard Uptake Volume Ratio (SUVR) Abnormalities in PET Scans of Individuals with Obstructive Sleep Apnea (OSA)*
  - Examination of Relationship between OSA Severity & Hippocampal Cerebrovascular Reactivity to Carbon Dioxide (CVR<sub>CO2</sub>)*
- 05/2022-06/2024 **Assistant Research Scientist**  
 05/2021-05/2022 **Research Data Associate**  
 NYU Grossman School of Medicine  
 Department of Psychiatry  
*Mood Disorders and Cognition Research Program*  
PIs: Dan V. Iosifescu, M.D., M.Sc., Ricardo Osorio, M.D.
- Responsibilities: manage and conduct multiple clinical trials/research studies in Alzheimer's Disease (AD) and mood disorders, run participant study visits, conduct vital signs checks and venipunctures, compose and submit study IRB documents and modifications, compose and submit study reports to NIH and FDA, organize and host

meetings for data safety monitors, oversee all study financial operations, assist in writing study grants and budgets, train and manage study team members, provide neuropsychological assessment training to externs;

List of trials I managed and ran:

- *Transcranial Photobiomodulation for Alzheimer's Disease (TRAP-AD; NIH-NIA R01-NCT04784416; PI: Dan Iosifescu, M.D., M.Sc.);*
  - o Aim: examine the efficacy of repeated application of near infrared light (i.e., transcranial Photobiomodulation - tPBM) to Dorsolateral Prefrontal Cortex (EEG electrode positions F4, F3) in improving cognition (measured via RBANS Update) in participants with Mild Cognitive Impairment (MCI) or mild AD, and explore brain tau burden and specifics of brain bioenergetics via multimodal neuroimaging (<sup>18</sup>F-MK6240 tau-PET, sMRI, fMRI, & <sup>31</sup>P-MRS);
- *Transcranial Near Infrared Radiation and Cerebral Blood Flow in Depression (TRIAD; NIH R33-NCT05573074, R61-NCT04366258; PI: Dan Iosifescu, M.D., M.Sc.);*
  - o Aim: confirm the target engagement of tPBM treatments in a cohort of adults with Major Depressive Disorder (MDD) via the examination of fMRI BOLD signals (e.g., fractional Amplitude of Low-Frequency Fluctuations - fALFF), and explore the efficacy of repeated tPBM treatments in improving symptoms of depression (measured by MADRS);
- *A Pilot, Phase II, Open-Label, Single-Center Study of Sodium-Glucose Cotransporter-2 Inhibitor Empagliflozin in Major Depressive Disorder (SGLT2-MDD; ASCP NCT05757791; PI: David T. Liebers, M.D., M.Phil., M.P.P.);*
- *A Single-Center Observational Study of Reference Point Setting in Major Depressive Disorder (RESET-MDD; NIMH; PI: Paul Glimcher, Ph.D.);*
- *Sequential Multiple Assignment Randomized Trial for Bipolar Depression (SMART-BD; PCORI; PI: Andrew A. Nierenberg, M.D.);*
- *Augmentation versus Switch: Comparative Effectiveness Research Trial for Antidepressant Incomplete and Non-responders with Treatment Resistant Depression (ASCERTAIN-TRD; PCORI NCT02977299; PI: George I. Papakostas, M.D.).*

05/2020-05/2021

**Master's Thesis**

NYU Graduate School of Arts and Sciences

Department of Psychology

**Title:** CNS-VS vs. "Traditional" Battery: The Examination of Psychometric Properties

**Advising faculty:** Kathy F. Yates, Ph.D., Elizabeth A. Bauer, Ph.D.

- Investigated the psychometric properties of a prevalent computer-based neuropsychological assessment battery, CNS-Vital Signs (CNS-VS), when it is used to assess the cognitive functions of a clinically obese adolescent population;
- Responsibilities: searched and reviewed relevant literature, selected thesis topic, formulated hypotheses for statistical analyses, cleaned and analyzed data via Python and SPSS, wrote and defended thesis paper.

01/2020-05/2021

**Graduate Research Assistant**

NYU Grossman School of Medicine

Department of Psychiatry

*Brain, Obesity, and Diabetes Laboratory (BODyLab)*

**Research Supervisors:** Kathy F. Yates, Ph.D., Antonio J. Convit, M.D.

- Administered study-dedicated neuropsychological assessment batteries (e.g., CVLT-II) to participants with obesity and Type 2 Diabetes Mellitus (T2DM);
- Scored assessment batteries, cleaned and managed data, and recruited participants;
- **Assisted in study:** Modifiable Cardiovascular Factors Linking Type 2 Diabetes and Alzheimer's Disease (R01; PI: Antonio J. Convit, M.D.).

11/2019-04/2020

**Graduate Research Assistant**

NYU Grossman School of Medicine

Department of Neurology

Research Supervisor: Alexander B. Chervinsky, Ph.D., ABPP-CN

- Programed experiment apparatuses for a new computerized neuropsychological assessment tool using Python and PsychoPy;
- Administered study-dedicated neuropsychological assessment batteries (e.g., TOMM) to clinical participants hospitalized in the Epilepsy Monitoring Center, scored assessment batteries, managed data, and recruited participants;
- Assisted in study: Pilot Study of New Computer-Based Neuropsychological Tool: Visual Tests, Touch Responses (PI: Alexander B. Chervinsky, Ph.D., ABPP-CN).

02/2018-05/2019

**Undergraduate Honors Thesis**

Skidmore College

Department of Psychology

Title: *Examination of Attentional Biases and Priming Effects in Cognitive Task Performance*

Advising faculty: Denise L. Evert, Ph.D.

- Investigated the effects of attentional biases and priming tasks on cognitive task performance in individuals who spent time with dementia patients;
- Responsibilities: searched and reviewed literature, selected thesis topic, formulated hypotheses for statistical analyses, designed experiment apparatuses via PsychoPy, wrote IRB applications, conducted experiments, trained and managed first-year undergraduate research team members on experiment administration, gathered and analyzed data via PsychoPy and SPSS, wrote and defended thesis paper, presented thesis posters.

05/2018-09/2018

**Assistant to Physician/Clinical Neuropsychology Technologist**

Capital Medical University, Xuanwu Hospital, Beijing, P.R.C.

Department of Neurology

*Neural-Cognitive Screening Center*

Clinical Supervisors: Lina Zhao, M.D., Ph.D., Hongmei Jin, Ph.D.

- Trained on and administered several neuropsychological assessment batteries (e.g., MoCA) under supervision on patients with suspected AD pathology;
- Observed clinical administration of Clinical Dementia Rating and Global Deterioration Scale, and participated in interdisciplinary diagnostic consensus meetings.

12/2017-05/2019

**Undergraduate Research Assistant**

Skidmore College

Department of Psychology

Research Supervisor: Denise L. Evert, Ph.D.

- Conducted literature reviews on the topic of hemispheric lateralization and participated in research lab meetings;
- Conducted experiments using PsychoPy to examine psychomotor processing speed and performed data analyses via SPSS;
- Assisted in study: Examination of Hemispheric Lateralization Effects of Emotion Regulation Strategies on Cognitive Task Performance (PI: Denise L. Evert, Ph.D.).

02/2016-09/2017

**Undergraduate Research Assistant**

Skidmore College

Department of Psychology

Research Supervisor: Ke Fang, Ph.D.

- Conducted literature reviews in the fields of social and cross-cultural psychology and participated in research lab meetings;
- Collected data on anxiety and life satisfaction and performed data analyses via SPSS;
- Assisted in study: Examination of Effects that Social Acculturation, Enculturation, and Social Anxiety Have on East Asian Students' Life Satisfaction at Skidmore College (PI: Ke Fang, Ph.D.).

## TEACHING EXPERIENCE

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08/2024-

### Graduate Teaching Assistant

Department of Psychology  
University of Kentucky

- Responsibilities: teach two 2-hour lab sessions per week, grade weekly homework and lab assignments, hold office hours and answer questions, proctor and grade exams;

### Courses:

- PSY 216: Applications of Statistics in Psychology
- PSY 323: Developmental Psychology

## PUBLISHED PEER-REVIEWED MANUSCRIPTS

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Weerasekera, A., Coelho, D.R.A., Ratai, E.-M., Collins, K.A., Hurtado Puerto, A.M., De Taboada, L., Gersten, M.B., Clancy, J.A., Hoptman, M.J., Irvin, M.K., Sparpana, A.M., Sullivan, E.F., **Song, X.**, Adib, A., Cassano, P., & Iosifescu, D.V. (2024). Dose dependent effects of transcranial photobiomodulation on brain temperature in patients with major depressive disorder: A spectroscopy study. *Lasers in Medical Science*, 39(1), 249. <https://doi.org/10.1007/s10103-024-04198-6>

Gaggi, N.L., Roy, N.L., **Song, X.**, Peterson, A.L., Iosifescu, D.V., Diaz-Arrastia, R., Cassano, P., & Kim, J.J. (2024). Transcranial photobiomodulation and chronic traumatic brain injury. *Photonics*, 11(3), 260. <https://doi.org/10.3390/photonics11030260>

Iosifescu, D.V., **Song, X.**, Gersten, M.B., Adib, A., Cho, Y., Collins, K.M., Yates, K.F., Hurtado-Puerto, A.M., McEachern, K.M., Osorio, R.S., & Cassano, P. (2023). Protocol report on the transcranial photobiomodulation for Alzheimer's Disease (TRAP-AD) study. *Healthcare*, 11(14), 2017. <https://doi.org/10.3390/healthcare11142017>

## ABSTRACTS & POSTER PRESENTATIONS

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Gaggi, N.L., Collins, K.A., Hurtado, A.M., **Song, X.**, Parincu, Z., Evans, K., Gersten, M.B., Peterson, A., Osorio, R.S., Castellanos, F.X., Cassano, P., & Iosifescu, D.V. (2023, December 3-6). *The effects of transcranial photobiomodulation on regional intrinsic brain activity in early Alzheimer's Disease* [Abstract] [Hot Topic Poster Presentation]. 62<sup>nd</sup> Annual American College of Neuropsychopharmacology (ACNP) Conference, Tampa, Florida, USA.

Gaggi, N.L., **Song, X.**, Collins, K.A., Hurtado, A.M., Parincu, Z., Evans, K., Gersten, M.B., Peterson, A., Osorio, R.S., Castellanos, F.X., Cassano, P., & Iosifescu, D.V. (2023, October 25). *The effects of single-dose transcranial photobiomodulation on regional intrinsic brain activity and global cognition in MCI and early Alzheimer's disease* [Abstract] [Poster Presentation]. 5<sup>th</sup> Annual Psychiatry Research Day, NYU Langone Health, New York City, New York, USA.

Wu, L., Iosifescu, D.V., Raio, C., Vittala, A., Liebers, D.T., Tell, E., **Song, X.**, Gouda, A., & Glimcher, P. (2023, October 25). *The decisional reference point, the computational instantiation of reward expectation, predicts severity of depression* [Abstract] [Poster Presentation]. 5<sup>th</sup> Annual Psychiatry Research Day, NYU Langone Health, New York City, New York, USA.

Vieira, W., Cassano, P., Hurtado-Puerto, A.M., Gersten, M.B., De Taboada, L., Clancy, J.A., Irvin, M.K., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., McEachern, K.M., Funes, C., Camprodon, J., & Iosifescu, D.V. (2023, January 1). *Transcranial photobiomodulation in major depressive disorder: dose-dependent effects on depression and anxiety scores* [Abstract]. *Brain Stimulation*, 16(1), 360-361. <https://doi.org/10.1016/j.brs.2023.01.701>

Weerasekera, A., Ratai, E., Dmochowski, J., Collins, K.A., Hurtado, A.M., De Taboada, L., Gersten, M.B., Clancy, J.A., Hoptman, M.J., Irvin, M.K., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., Cassano, P., & Iosifescu, D.V. (2022, December 4-7). P325. *Dose dependent effects of transcranial*

*photobiomodulation on brain temperature in major depression* [Abstract] [Poster Presentation]. 61<sup>st</sup> Annual American College of Neuropsychopharmacology (ACNP) Conference, Phoenix, Arizona, USA. <http://dx.doi.org/10.1038/s41386-022-01485-0>

Cassano, P., Hurtado, A.M., Collins, K., Gersten, M.B., De Taboada, L., Clancy, J.A., Irvin, M., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., McEachern, K.M., Funes, C.J., Camprodon, J.A. & Iosifescu, D.V. (2022, April 28-30). P295. *Transcranial photobiomodulation in major depressive disorder: dose dependent effects on MADRS score* [Abstract] [Poster Presentation]. 77<sup>th</sup> Annual Society of Biological Psychiatry (SOBP) Conference, New Orleans, Louisiana, USA. <https://doi.org/10.1016/j.biopsych.2022.02.531>

Iosifescu, D.V., Collins, K., Hurtado, A.M., Dmochowski, J.P., De Taboada, L., Irvin, M.K., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., Clancy, J.A., Gersten, M.B., McEachern, K.M., & Cassano, P. (2022, April 28-30). P374. *Specific parameters of transcranial near infrared light modulate its impact on cerebral blood flow* [Abstract] [Poster Presentation]. 77<sup>th</sup> Annual Society of Biological Psychiatry (SOBP) Conference, New Orleans, Louisiana, USA. <https://doi.org/10.1016/j.biopsych.2022.02.610>

Cassano, P., Hurtado, A.M., Collins, K., Gersten, M.B., De Taboada, L., Clancy, J.A., Irvin, M., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., Camprodon, J., & Iosifescu, D.V. (2021, December 5-8). P280. *Dose dependent effects of transcranial photobiomodulation on depression severity in major depressive disorder* [Abstract] [Poster Presentation]. 60<sup>th</sup> Annual American College of Neuropsychopharmacology (ACNP) Conference, San Juan, Puerto Rico. <https://doi.org/10.1038/s41386-021-01237-6>

Iosifescu, D.V., Dmochowski, J.P., Collins, K., Hurtado, A.M., De Taboada, L., Hoptman, M.J., Irvin, M., Sparpana, A., Sullivan, E., **Song, X.**, Adib, A., Clancy, J.A., Gersten, M.B., & Cassano, P. (2021, December 5-8). P286. *Dose dependent effects of transcranial photobiomodulation on brain hemodynamics in major depression* [Abstract] [Poster Presentation]. 60<sup>th</sup> Annual American College of Neuropsychopharmacology (ACNP) Conference, San Juan, Puerto Rico. <https://doi.org/10.1038/s41386-021-01237-6>

**Song, X.**, & Evert, D.L. (2020, April 24). *The examination of attentional biases and priming effects in cognitive task performance in individuals who spent time with dementia patients* [Poster Presentation]. 24<sup>th</sup> Annual NYU GSAS M.A. Psychology Research Conference, New York City, New York, USA.

**Song, X.**, & Evert, D.L. (2019, May 1). *The examination of attentional biases and priming effects in cognitive task performance in individuals who spent time with dementia patients* [Abstract] [Poster Presentation]. 21<sup>st</sup> Annual Skidmore College Academic Festival, Saratoga Springs, New York, USA.

Fang, K., Yoon, E., Jessel, V., **Song, X.**, & Li, M. (2017, August 3-6). *Context-specific social pathways toward life satisfaction among eastern Asian international students* [Abstract] [Poster Presentation]. Division 52, 125<sup>th</sup> Annual American Psychological Association (APA) Convention, Washington, DC, USA.

## PROFESSIONAL CERTIFICATIONS

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10/2024	<u>National Child Traumatic Stress Network: Psychological First Aid (PFA)</u> - Certified to apply PFA principles to help individuals and families in the immediate aftermath of disaster and terrorism
10/2024	<u>ZEROSuicide Institute: Counseling on Access to Lethal Means</u> - Certified to perform Means Restriction/Reduction counseling to reduce suicide risks
09/2022	<u>CUNY BMCC: EKG and Phlebotomy for Health Professionals</u> - Certified to perform venipuncture, electrocardiogram, and vital signs checks (e.g., heart rate, blood pressure, body temperature)
10/2021-10/2023	<u>Research Foundation for Mental Hygiene: C-SSRS Training</u> - Certified to conduct suicide assessments using Columbia-Suicide Severity Rating Scale (C-SSRS)

- 06/2021 American Institute of Medical Laser Applications: Medical Laser Safety with Dr. Robert Splinter  
- Trained on the topics of medical laser safety and safe operations of medical lasers
- 05/2021 NYU Langone Health: EPIC Electronic Medical Record System  
- Certified to order medical tests and neuroimaging procedures on NYU Langone's EPIC medical record system
- 05/2020 NYU Langone Health: Operation and Clinical-Research Use of MagVenture rTMS for MDD  
- Certified to perform cortical brain mapping and operate MagVenture repetitive Transcranial Magnetic Stimulation (rTMS) device for both clinical treatments and research
- 05/2020 NYU Langone Health: Operation and Research Use of LiteCure's tPBM-2.0  
- Certified to operate LiteCure's transcranial Photobiomodulation (tPBM-2.0) device for research

## **HONORS, AWARDS & PROFESSIONAL AFFILIATIONS**

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- 11/2023 Recipient, 2<sup>nd</sup> Place Award, Top 3 Best Poster Contest, 5<sup>th</sup> Annual Psychiatry Research Day, NYU Langone Health
- 04/2023 Affiliate, Asian Neuropsychological Association (ANA)
- 03/2021 Inductee, The International Honor Society in Psychology (Psi Chi), NYU Chapter
- 06/2020 Group Representative, Association of Neuropsychology Students and Trainees (ANST), NYU Chapter, APA Division 40
- 05/2020 Student Affiliate, APA Division 40, Society of Clinical Neuropsychology (SCN)
- 04/2020 Recipient, 3<sup>rd</sup> Place Award (\$100), Blue Room, 24<sup>th</sup> Annual NYU Graduate School of Arts and Science (GSAS) M.A. Psychology Research Conference
- 10/2019 Chair of Advocacy, NYU GSAS Graduate Student Council (GSC)
- 05/2019 Recipient, Departmental Honors in Psychology, Skidmore College
- 03/2019 Inductee, The International Honor Society in Psychology (Psi Chi), Skidmore Chapter
- 05/2016 Dean's List, Skidmore College

## **NOTABLE SKILLS AND ABILITIES**

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### Software:

- Fluent in: R, Python, SPSS, PsychoPy, Acquire EDC, REDCap
- Familiar with: FreeSurfer, Visage, MRtrix3, Xnat, Big Purple, Mathematica, MATLAB

### Neuropsychological assessment:

- Trained by Drs. Kathy Yates (licensed senior neuropsychologist) and Alexander Chervinsky (board-certified neuropsychologist) to administer and score the following for research:
  - o NACC's UDS-3 battery, ACE-III, RBANS Update, CVLT-II, computerized WCST, MoCA, MMSE, Anna Thompson Logical Memory, NAART35, Letter & Pattern Comparison Task, Stroop, FNAME-12, Letter Number Sequencing Task (WAIS-III), Trail Making Task A & B, Benson Complex Figure, MINT, Phonemic & Category Fluency, COWAT, RIST-II (GWH & OIO), WAIS-IV Digit Span, Judgment of Line Orientation, DSST, SDMT, NV-MSVT, DVT, TOMM, Boston Naming Test

### Neuropsychiatric Interviews/Questionnaires:

- Trained by Drs. Kate Collins (neuroscientist and licensed Clinical Social Worker) and Dan Iosifescu (PI and licensed Psychiatrist) to administer and score the following for research:
  - o MINI, IDS-C, MADRS, CGI-I & S, C-SSRS, ATRQ, SHAPS, STAI, BDI-II, QIDS, Q-LES-Q, ASQ, GDS, Neuro-QoL, SAFTEE-SI, CAST-IRR, ESS, ISI, PCQ, PSQI

Language:

- Bilingual in English and Mandarin, beginner Spanish (CEFR A2)

## REFERENCES

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Jordan P. Harp, Ph.D.

Associate Professor of Neurology  
 Neuropsychologist and Director of Neuropsychology Fellowship Program  
 Kentucky Neuroscience Institute and Sanders-Brown Center on Aging  
 University of Kentucky College of Medicine  
[jordanharp@uky.edu](mailto:jordanharp@uky.edu)  
<https://ukhealthcare.uky.edu/doctors/jordan-harp>  
 Relationship: Research mentor and advisor

Dan V. Iosifescu, M.D., M.Sc.

Professor of Psychiatry  
 NYU Grossman School of Medicine  
[Dan.iosifescu@nyulangone.org](mailto:Dan.iosifescu@nyulangone.org)  
<https://med.nyu.edu/departments-institutes/psychiatry/research/mood-disorders-cognition>  
 Relationship: Previous employment supervisor, research mentor

Ricardo Osorio, M.D.

Associate Professor of Psychiatry  
 Biomarker Core Associate Leader, NYU Langone Alzheimer's Disease Research Center  
 NYU Grossman School of Medicine  
[Ricardo.Osorio@nyulangone.org](mailto:Ricardo.Osorio@nyulangone.org)  
<https://med.nyu.edu/faculty/ricardo-m-osorio-suarez>  
 Relationship: Previous Research mentor

Kathy F. Yates, Ph.D.

Research Associate Professor of Psychiatry  
 Senior Neuropsychologist and Assistant Director of BODYLab  
 NYU Grossman School of Medicine  
[Kathy.Yates@nyulangone.org](mailto:Kathy.Yates@nyulangone.org)  
<https://med.nyu.edu/faculty/kathy-f-yates>  
 Relationship: Previous research mentor, neuropsychological assessment supervisor