
Sattvik Basarkod

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<https://www.sattvik-basarkod.com/>

Education

Bachelor of Science (BS) in Neuroscience Honors

September 2020- December 2023

Minor in Health Psychology

Irvin D Reid Honors University College

Wayne State University

42 W Warren Ave

Detroit, MI, 48202

GPA: 3.96

Honors Research Thesis: *Corticolimbic Structural Changes Following Trauma Exposure in Preadolescent Children*

Awards

17th Annual Amygdala, Stress, and PTSD Conference Poster Award

April 2024

Selected for Best Clinical Poster Award: <https://amygdalaptsdconference.org/posters/virtual-poster-awards-winners>

Undergraduate Research Opportunities Program (UROP) Warriors Scholars Award

March 2023

Received \$250 for placing Top 8 Poster Presenters at UROP conference.

Abstract: *Mobile Skin Conductance Response is a Biomarker for Future PTSD and Anxiety Symptoms in Children with Trauma Exposure*

Warriors Scholarship Award from Irvin D Reid Honors College

2020 – 2023

Received \$3000 every Fall and Winter semester for getting accepted into Honors College

Wayne State University Dean's List

2020, 2021, 2022, 2023

Senior Year Departmental Award in Theory of Knowledge (TOK)

2020

Selected as top student in the class of 2020 for TOK class award. Presented slides on social psychology of confirmation bias and cognitive dissonance in education systems and students.

Self- Published Book

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1. **Basarkod, Sattvik.** Nature of Reality: A personal reflection on several epistemological concepts. Paperback and Kindle, May 8, 2022, Amazon Publishing: <https://a.co/d/elw3XYU>.

Manuscripts in Press

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1. France, J.M., Valbrun S., Grasser L.R., Wiltshire, C.N., **Basarkod, S.**, Davie, W.M., Reda, M., George, S., Winters, S., Bradley-Davino, B., Stenson, A., van Rooij, S., Stevens, J., Daugherty, A.M., Jovanovic, T. (September 2025). *Trauma from the Eye of the Beholder: Reporter Discordance in Child's Trauma, Psychopathology, and Neurobiology*, Biological Psychiatry: Cognitive Neuroscience and Neuroimaging.
 2. **Basarkod, S.**, Valbrun, S., Wiltshire, C.N., France, J.M., Davie, W., Winters, S., George, S., and Jovanovic, T. (January 2024). *Prospective measurement of skin conductance response during trauma interview predicts future PTSD severity in trauma exposed children*. Journal of Mood and Anxiety Disorders.
 3. Wiltshire, C.N., Kouri, N., Wanna, C.P., Minton, S.T., France, J.M., Reda, M., Davie, W., **Basarkod, S.**, Winters, S., Hinrichs, R., Stenson, A.F., Jovanovic, T. (March 2024). *Resting heart rate associations with violence exposure and posttraumatic stress symptoms: Sex differences in adolescence*. Journal of Biology of Sex Differences.

Manuscripts in Review

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1. **Basarkod, S.**, Lipshutz R., Valbrun, S., Wiltshire, C.N., Reda, M., France, J.M., Ely, T., Minton, S., Winters, S., George, S., van roij, S., Stevens, J., Jovanovic, T. (In Preparation). *Amygdala volume as a risk and resiliency factor for PTSD symptoms in trauma-exposed youth: cross-sectional and longitudinal replication*. Neuroimaging of Human Emotion Book.

Oral Presentations

1. **Basarkod, S.**, Wiltshire, C.N., France, J., Valbrun S., Davie, W., Winters, S., George, S., Jovanovic, T. (2024, May). *Sex-Specific Associations between Brain Structures and Anxiety Symptoms in Preadolescent Children*. Society for Biological Psychiatry (SOBP), Austin, TX.
2. **Basarkod S.**, Wiltshire CN., Davie W., Burnette T., Reda M., France J., Wana CP., Winters S., Minton S., Hinrichs., George S., Stenson A., Jovanovic T. (2023, May). *Amygdala Reactivity is Associated with Skin Conductance Response in Predicting Future PTSD and Anxiety Symptoms in Children with Trauma Exposure*. Translational Neuroscience Program Annual Symposium, Detroit, MI.

National/ International Conference Poster Presentations

1. **Basarkod, S.**, France, J., Valbrun S., Wiltshire, C.N., Poplin, T., Winters, S., George, S., Jovanovic, T. (2025, April). *Decelerated Development of Rostral Anterior Cingulate Cortex Linked to Childhood Trauma*. Brain, Behavior and Mind Annual 2025 Spring Virtual Conference.
2. **Basarkod, S.**, France, J., Valbrun S., Wiltshire, C.N., Poplin, T., Winters, S., George, S., Jovanovic, T. (2025, April). *Childhood Trauma Affects Rostral Anterior Cingulate Cortex (rACC) Development During Preadolescence*. Society of Biological Psychiatry (SOBP) Annual Conference, Toronto, CA.
3. Poplin, T., Valbrun, S., Barnes, W., Akintoroye, O.A., **Basarkod, S.**, Winters, S., George, S.A., Delaney-Black, V., Chiodo, L., Hannigan, J., Norrholm, S., Bale, T., Jovanovic, T. *Trauma Timing and Adolescent Hormone Levels: Associations with Adulthood Fear Extinction and PTSD Symptoms*. Anxiety and Depression Association of America Annual Conference, 2025, Las Vegas, NV.
4. France, J.M., Khatib, D., Valbrun, S.A., **Basarkod, S.**, Davie, W.M., Diwadkar, V.A., Stanley, J.A., Jovanovic, T. *Altered Cortical Glutamatergic Neurotransmission in Trauma-Exposed Adolescents During an Emotional Inhibitory Control Task*. Anxiety and Depression Association of America Annual Conference, 2025, Las Vegas, NV.
5. **Basarkod, S.**, Wiltshire, C.N., France, J., Valbrun S., Winters, S., George, S., Jovanovic, T. (2024, October). *Why some, but not all trauma leads to future PTSD: Structural factors that moderate the positive association between trauma exposure and future PTSD symptoms in preadolescents*. International Society of Developmental Psychobiology (ISDP) Annual Conference, Chicago, IL.
6. **Basarkod, S.**, Wiltshire, C.N., France, J., Valbrun S., Winters, S., George, S., Jovanovic, T. (2024, April). *Right Amygdala Volume Predicts Future PTSD Severity in Children with Trauma Exposure*. Anxiety and Depression Association of America (ADAA) Annual Conference, Boston, MA.
7. **Basarkod, S.**, Wiltshire, C.N., France, J., Valbrun S., Jovanovic, T. (2024, May). *Sex-Specific Associations Between Brain Structures and Anxiety Symptoms in Preadolescent Children*. National Conference on Undergraduate Research (NCUR), Long Beach, CA.
8. **Basarkod, S.**, Wiltshire, C.N., France, J., Valbrun S., Winters, S., George, S., Jovanovic, T. (2024, April). *Right Amygdala Volume Predicts Future PTSD Severity in Children with Trauma Exposure*. Center for Study of Traumatic Stress (CSTS), Virtual Conference. **BEST CLINICAL POSTER AWARD**
9. **Basarkod, S.**, Wiltshire, C.N., Davie, W., Burnette, T., Reda, M., France, J., Wana, C.P., Winters, S., Minton, S., R Hinrichs., George, S., Stenson, A., Jovanovic, T. (2023, April). *Skin Conductance is Associated with Future PTSD and Anxiety Symptoms in Children with Trauma Exposure*. Anxiety and Depression Association of America (ADAA) Annual Conference, Washington, DC.

State Conference Poster Presentations

1. **Basarkod, S.**, Wiltshire, CN., France, J., Valbrun, S., Davie W., Winters, S., George, S., Jovanovic, T. (2024, May). *Why some, but not all trauma leads to future PTSD: Structural factors that moderate the positive association between trauma exposure and future PTSD symptoms in preadolescents*. Translational Neuroscience Program (TNP) Annual Symposium, Detroit, MI.
2. **Basarkod S.**, Jovanovic T. (2023, March). *Mobile Skin Conductance Response is a Biomarker for Future PTSD and Anxiety Symptoms in Children with Trauma Exposure*. Warrior Scholars Undergraduate Conference, Detroit, MI.
3. **Basarkod S.**, Wiltshire CN., Davie W., Burnette T., Reda M., France J., Wana CP., Winters S., Minton S., Hinrichs R., George S., Stenson A., Jovanovic T. (2023, June). *Amygdala Reactivity is Associated with Skin Conductance*

Research Experience

Clinical Research Assistant

Wayne State School of Medicine

Detroit Trauma Project

PI: Dr. Tanja Jovanovic, PhD

Acute to Chronic Pain Study (A2CPS)

August 2024- Now

NIH Funding: 5U54DA049115

<https://a2cps.org/about/biomarkers/>

Served as a research assistant on a large multisite clinical research study, assessing putative biomarkers for chronic pain in patients with total knee arthroplasty (TKA) and thoracic surgery. The goal of this study was to determine biopsychosocial factors that increase vulnerability of acute pain turning into chronic pain in patients with surgery. Certified in collecting several sensory test measures including **pressure-pain threshold** using a pressure algometer, **temporal summation** using a neuropen, and **conditioned pain modulation** using cold water bath.

- **Processed blood** using centrifuge and separated plasma and red blood cells (RBC) for genomic testing.
- Responsible for asking medical history and medications questions to patients following surgery
- Responsible for finding and marking index sites for pain testing. Sites included **deltoid muscle, patellofemoral joint for TKA patients, thoracic cavity and intercostal space between T5-T6 ribs for thoracic surgery patients.**
- Responsible for setting the patient in MRI with a calf cuff algometer and assessing pain during cuff inflation.

Trans auricular Vagus Nerve Stimulation Study (taVNS)

August 2024- Now

Pilot Study

<https://www.detroittraumaproject.com/tavns>

Served as a primary research assistant to recruit and survey patients with PTSD symptoms. The goal of the study was to assess physiological and psychological effects of noninvasive vagus nerve stimulation in patients with PTSD symptoms.

- **Screened** patients for medical contraindications (including hypertension, arrhythmia, and substance abuse disorder).
- **Administered Montreal Cognitive Assessment (MoCA)** for screening cognitive impairment.
- Collected sympathetic arousal data (**skin conductance, heart rate, and eye blink**) while participant went through a fear potentiated startle paradigm.
- Administered noninvasive vagus nerve stimulation (VNS) to **cymba conche** and **tragus** parts of the auditory system.
- Analyzed **sympathetic-parasympathetic ratio** prior to and post vagus nerve stimulation.

Research Assistant and Project Coordinator

Wayne State School of Medicine

Detroit Trauma Project

PI: Dr. Tanja Jovanovic PhD

Critical Periods Longitudinal Study

May 2022- May 2024

NIH Funding: R01-MH111682

Project lead position on Critical Periods longitudinal study, which investigates brain development and fear learning/extinction in children with trauma. Responsible for all parts of the study starting from participant recruitment and scheduling to data collection, data analysis, oral presentation and manuscript publication.

- Conducted **kids' mock and actual MRI scans**. Trained participants on using button box in mock scanner and coordinated fMRI tasks on computer in the scanner room while giving instructions to participants through microphone. Post data collection led the role of processing structural MRI data using Free Surfer.
- Conducted **child psychiatric interviews** regarding post-traumatic stress disorder (PTSD), anxiety symptoms, violence exposure and measured mobile SCR while participants answered subjective questions about trauma. Led the role of processing mobile SCR data and analyzing its association with trauma report and PTSD sys.

- Created **eSense mobile skin conductance standard operating procedures** and shared with other collaborators across Wayne State as well as associate Ukrainian researchers.
- Other roles included contacting participants, organizing data in Redcap, and helping with quality check for NIH IRB visits.
- For honors thesis, analyzed **kids' structural MRI** data using **FreeSurfer** application. White-grey matter segmentation was checked using ENIGMA scripts, and MATLAB was used to obtain cortical thickness and surface area stats for rACC, vmPFC and volume for amygdala and insula. Used R scripts to automate organizing individual subject folders.
- Organized and coordinated Brain's Day demonstration at Michigan Science Center for two years as part of a recruitment plan for the lab's kids study. Demonstrated mobile skin conductance at kid-friendly science fair.

Clinical Experience

Clinical Research Assistant

- Collected blood, saliva, urine from research participants
- Collected medical and medications history for A2CPS Pain Research Study
- Centrifuged and processed participant blood
- Administered neuropsychological assessment, Montreal Cognitive Assessment (MOCA), for neurocognitive deficits for taVNS SPARK Study.

Clinical Interviewer at Detroit Trauma Project

May 2022- Present

Wayne State University School of Medicine

3901 Chrysler Service Dr, Detroit, MI

- Administered UCLA Child/Adolescent PTSD Reaction Index (UCLA RI) to assess PTSD symptoms in children and adults for Critical Periods Study.
- Administered Mini International Neuropsychiatric Interview (MINI) to screen for psychiatric illness in kids for Critical Periods Study.
- Attended biweekly trauma case conferences and suicide safety training.

Crisis Text Line Counselor

April 2021- June 2022

NPO Mental Health texting service

225 West, 34th Street, Floor 9- PMB# 9135, New York, NY 10122

- Completed a 30-hour intensive training learning about self-harm crises and mental disorders.
- Developed active listening skills and good contact techniques to support people at elevated risk for suicide.
- Responded to texts from people in a mental crisis using active listening, a warm tone, and nonjudgmental stance to deescalate and aid relaxation.
- Experienced and trained in first aid mental health questioning and support. Crises included trauma, abuse, self-harm, suicidal ideation, depression, anxiety, bullying, and grief.
- Referred individuals to proper agencies and provided additional resources such as mindfulness, antidepressant workbooks, grounding techniques, and coping skills.
- Responded to a total of 500 texters and served 200 hours on the text line.

Behavioral Technician

May 2021- January 2022

Comprehensive Early Autism Services (EAS)

38219 Mound Rd #102, Sterling Heights, MI 48313

- Trained in 1 on 1 Applied Behavioral Analysis (ABA) therapy and worked with children on the autism spectrum.
- Recorded learning progress, maladaptive behavioral reduction, and target acquisition data for Board Certified Behavioral Analysis (BCBA). Collaborated with team members, including BCBA therapists, behavioral technicians, and guardians to discuss child's strengths and weaknesses and appropriately modify child's ABA session.
- Administered individual ABA protocols with high fidelity to improve child's receptive, expressive, social, emotional, cognitive, and motor skills using positive reinforcement strategies.

Shadowing Experience

Neurology Clinic

March 2025- July 2025

DMC Detroit Receiving Hospital

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Dr. Rohit Marawar

- Shadowed the attending doctor, resident and medical students on clinical rotations 3 hours per week.
- Observed neurological exams, cognitive testing, EEG and MRI abnormalities, and clinical decision making.
- Discussed patient outcomes and medication complications following differential seizures.

Clinical Psychology Assessment/ Therapy

August 2023- Dec 31 2023

Wayne Health Psychiatric Center in Livonia/ Detroit

Dr. Danielle Taylor

- Shadowed biopsychosocial assessments, cognitive behavioral therapy, trauma focused assessment, cognitive processing therapy, and mindfulness training with patients.
- Attended case conferences to discuss weekly cases from social workers, psychologists, and psychiatrists.

Neuropsychology Assessment

August 2023- Dec 31, 2023

Corewell Health/ Beaumont Hospital in Dearborn/ Taylor

Dr. Tyler Roskos

- Shadowed neuropsychological assessments in neurorehabilitation in-patient and outpatient clinics.
- Assessments measured working memory, visuospatial memory, attention, psychomotor and executive functioning tasks to predict psychological recovery in epileptic, neurodegenerative, and stroke patients.
- Discussed patient neurological history and how neuropsychological assessments are used to track cognitive progress in rehab.

Interventional Psychiatry Transcranial Magnetic Stimulation (TMS)/Ketamine Center Volunteer

June- July 2022

Greenbrook TMS NeuroHealth Center

Dr. Nicholas Mischel

- Shadowed during administration of TMS to treatment resistant depression (TRD) patients.
- Volunteered and trained to set up Neuro-Star equipment prior to each TMS session.
- Aided blood pressure measurement during nasal spray esketamine infusions.
- Interacted with patients during TMS treatment to build rapport and complete regular questionnaires.
- Learned about NMDA-assisted psychotherapy.

Volunteering and Community Outreach

Henry Ford Hospital Volunteer/Clerk

March 2021- July 2021

Henry Ford Hospital Detroit, MI

- Volunteered at the Henry Ford Hospital MICU unit, assisting nursing staff via restocking, communicating workflow, completing administrative duties, and escorting/talking with patient families.

Neuroscience Brains 101 Summer Camp Coordinator

July 2022, July 2023

Wayne State University Summer Camp

C2Pipeline and WSU NuRhoPsi (Honors National Society of Neuroscience)

- Coordinated a neuroscience camp schedule for high school students and invited guest faculty members to talk about their research/ demonstrate their equipment.
- Assisted in demonstrating TMS and motor twitches, Human Brain Anatomy, Psychophysiology measures EMG, electroencephalography (EEG), and SCR, and sheep brain dissections to high school students.
- Demonstrated and lead a research project on rubber hand illusion and emotional processing with skin conductance.

Neuroscience Summer Middle School Outreach

July 2023- September 2023

Metro Detroit schools: Crowell Recreation Center, Heilmann Recreation Center, Butzel Family Center, Kemeny Recreation Center, Brennan Recreation Center

- Volunteered at Detroit Public schools' summer camps and lead hands-on activities involving human brain specimens, EEG devices, and SCR demonstrations that increased learning about neuroscience, research, and the brain.

Professional Service

MindMeditate WSU Founder and President

December 2020- December 2023

Wayne State University Student Organization

www.mindmeditatewsu.webnode.page

- Initiated new WSU organization that provides students with mindfulness and relaxation techniques to balance with

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busy school life.

- Lead an informal online (Palouse) mindfulness-based stress reduction course (MBSR) for 2 semesters where members did yoga, body scan, mindfulness exercises while eating and walking.
- Conducted weekly meditation sessions teaching breathing exercises, introspective awareness meditation, and guided meditations with positive affirmations.
- Oversee administrative roles and assign board members assignments.
- Raised over \$1000 in charity for the EGBP (essential gift bag project). Funds were used to make a total of 70 bags with daily essential items (i.e., hygiene/ menstrual products, ponchos, reusable bottle) to hand out to the homeless population in Detroit. Served as a main lead on the project and coordinated with NuRhoPsi (Honors neuroscience org), Dharma Gate Zen Center and Alumni Association of Wayne State. Event Details [here](#)
- Other events include thanksgiving loving kindness meditation, reading, and watching documentaries on Buddhist and Stoic philosophy, and engaging in conversations where students talk about application of mindfulness, gratitude, awareness, and daily schedule.

NuRhoPsi Director of Research

Wayne State University Student Organization

September 2022- December 2023

www.wsunurhopsi.org

Advisor: Dr. Tom Fischer

- Developed plans for students to get involved with research opportunities and developed professional competencies.
- Coordinated outreach to WSU professors to create a directory of faculty research for students to match with professors with similar research interests. Coordinated with students to improve professional email writing.
- Conducted several journal club meetings where faculty discussed their research in neuroscience.
- Coordinated a graduate PhD student panel that presented translational neuroscience research about learning and memory to students.

Non-Peer Reviewed Publications

1. **Basarkod, S.** (2025, April). The way of the monk, samurai, and servant. [Medium Magazine.](#)
2. **Basarkod, S.** (2024, January). Neural Basis of Meditative Practices. *Medium Magazine.*
- Basarkod, S.** (2023, May). Mind, Brain, and Self. *Medium Magazine.*
3. **Basarkod, S.** (2022, December). Flow of Mind and Consciousness. *Medium Magazine.*
4. **Basarkod, S.** (2022, July). Meditation and Brain's Reward Circuitry. *Medium Magazine.*
5. **Basarkod, S.** (2022, June). Meditation and Neuropsychiatry. *Medium Magazine.*
6. **Basarkod, S.** (2022, May). Neurobiology of PTSD: How Trauma Affects Body and Mind. *Medium Magazine.*

Neuroscience Writer for Detroit Trauma Project Lab.

<https://www.detroittraumaproject.com/blog>

1. **Basarkod, S, George, S, Jovanovic, T.** (2024, December). Using biomarkers to assess trauma and vulnerability for post-traumatic stress disorder (PTSD). *DTP Blog.*
2. **Basarkod, S, George, S, Jovanovic, T.** (2023, July). Community Violence and Alterations in Brain's Default Mode Network. *DTP Blog.*
3. **Basarkod, S, George, S, Jovanovic, T.** (2023, May). Findings on Anxiety Symptoms and Amygdala Activation in Trauma Exposed Children. *DTP Blog.*
4. **Basarkod, S, George, S, Jovanovic, T.** (2023, March). Neuroscience of Fear Circuitry. *DTP Blog.*
5. **Basarkod, S, George, S, Jovanovic, T.** (2022, November). Overview of Critical Periods Study. *DTP Blog.*

Certifications/Skills

- Medical Terminology
- MRI Facility Safety Certification
- Basic Life Support (BLS) Certification – Expires November 2025
- CITI Good Clinical Practice
- CITI Vulnerable Populations- Children and Students
- Online Mindfulness Based Stress Reduction (MBSR) Palouse Training
- Mental Health First Aid USA (MHFA)- Expires 2027

- Experience in Redcap and SPSS for longitudinal data analysis

Professional Memberships

- NuRhoPsi: National Honor Society of Neuroscience, **December 2021- Present.**
- Phi Beta Keppa: Liberal Arts and Sciences Academic Honors Society, **May 2024- Present.**
- Society of Biological Psychiatry (SOBP), **December 2023- Present.**