Srikanth Reddy Damera

111 Michigan Avenue
Washington, DC 20010
E-mail: sdamera@cnmc.org

CLINICAL INTERESTS: Neonatology
RESEARCH INTERESTS: Fetal and infant brain development

EDUCATION:

- 2023-present: Pediatric Residency, Children's National Hospital, Washington, DC
  Track: Integrated Research Pathway
- 2014-2023: MD/PhD program, Georgetown University School of Medicine, Washington, DC
  Degrees: 2021, PhD in Neuroscience; 2023, MD
- 2008-2012: Columbia University School of Engineering and Applied Mathematics, New York, NY
  Degree: B.S., Applied Mathematics

RESEARCH EXPERIENCES:

- Developing Brain Institute, Children's National, DC
  Dates: 2024-2026
  Position: R38 Scholar
  Mentor: Dr. Catherine Limperopoulos
  Topic: Investigating the Role of Subplate Dysmaturity in Patients with Congenital Heart Disease.
- Developing Brain Institute, Children's National, DC
  Dates: 2022-2024
  Position: Researcher
  Mentor: Dr. Catherine Limperopoulos
  Topic: Investigating the development of sensory systems during infancy
- Laboratory for Computational Cognitive Neuroscience, Georgetown University
  Dates: 2016-2021
  Position: Doctoral Graduate Student
  Mentor: Dr. Maximilian Riesenhuber
  Topic: Investigating architecture of adult cortical sensory hierarchies and their interactions
- Functional and Restorative Neurosurgery Unit, National Institutes of Health
  Dates: 2012-2014
  Position: Intramural Research Training Award Fellow
  Mentor: Dr. Kareem Zaghloul
  Topic: Investigating the neural correlates of memory and decision-making in humans using intracranial electroencephalography recordings.
- Frontier Laboratories, University of Rochester
  Dates: 2010
  Position: Research Experience for Undergraduates Fellow
  Mentor: Dr. Allison Frontier
  Topic: Investigating the synthesis of new classes of bioactive molecules via the Nazarov Cyclization reaction.
- Stojanovic Laboratories, Columbia University Medical Center
  Dates: 2006-2007
  Position: Research Assistant

Mentor: Dr. Milan Stojanovic
Topic: Investigating the development of novel DNA aptamer constructs for use in non-invasive drug delivery and monitoring systems

PUBLICATIONS:

- Damera, S. R., et al., Fetal Subplate Dysmaturation Predicts Early Motor Outcomes in Congenital Heart Disease. (2026). *Under Review*.
- Damera, S. R., et al., Fetal Subplate Dysmaturation Predicts Atypical Neonatal Brain Network Organization at Term Age in Patient's With Congenital Heart Disease. (2026). *In Preparation*.
- Damera, S. R., et al., Fetal Brain Shape Predicts Gestational Age and Early Dysmaturation in Congenital Heart Disease. (2026). *In Preparation*.
- Banerjee, S. et al., Evidence for hierarchical representations of written and spoken words from an open-science human neuroimaging dataset. (2025) *Under Review*
- Chang, L. et al., et al., Evidence for Hierarchical Representations of Written and Spoken Words from an Open-Science Human Neuroimaging Dataset**.** (2025). *Under Review.*
- Damera, S. R. et al., Altered Brain State Dynamics Between Preterm and Term-born Infants**.** *Imaging Neuroscience (2025).*
- Damera, S. R. et al., Regional Homogeneity as a Marker of Sensory Cortex Dysmaturity in Preterm Infants. *iScience.* 109662 (2024) doi:10.1016/j.isci.2024.109662.
- Damera, S. R. et al., Evidence for a Spoken Word Lexicon in the Auditory Ventral Stream**.** *Neurobiology Lang* 1–40 (2023) doi:10.1162/nol_a_00108.
- Damera, S. R. et al., Metamodal Coupling of Vibrotactile and Auditory Speech Processing Systems Through Matched Stimulus Representations. *J. Neurosci.* 43, JN-RM-1710-22 (2023).
- Jiang, X. *et al.,* Cingulate transcranial direct current stimulation in adults with HIV. *Plos One* 17, e0269491 (2022).
- Damera, S.R. et al., From Shape to Meaning: Evidence for Multiple Fast Feedforward Hierarchies of Concept Processing in the Human Brain. *Neuroimage* 117148 (2020) doi:10.1016/j.neuroimage. 2020.117148.
- Trotta, M. S. et al., Surface based electrode localization and standardized regions of interest for intracranial EEG. *Hum Brain Mapp* 39, 709–721 (2018).
- Zavala, B. et al., Human Subthalamic Nucleus Theta and Beta Oscillations Entrain Neuronal Firing During Sensorimotor Conflict. *Cerebral Cortex* 27, 496–508 (2017).
- Haque, R. U. et al., Cortical Low-Frequency Power and Progressive Phase Synchrony Precede Successful Memory Encoding. *The Journal of Neuroscience* 35, 13577–13586 (2015).
- Yaffe, R. B. et al., Reinstatement of distributed cortical oscillations occurs with precise spatiotemporal dynamics during successful memory retrieval. *Proceedings of the National Academy of Sciences* 111, 18727–18732 (2014).
- Taylor, S. K. et al., Triggered Release of an Active Peptide Conjugate from a DNA Device by an Orally Administrable Small Molecule. *Angewandte Chemie International Edition* 48, 4394–4397 (2009).

TALKS:

- Damera, S. R. et al., (2026, April 24- April 27). Fetal Subplate Dysmaturation Predicts Early Motor Outcomes in Congenital Heart Disease. [Oral Abstract]. *Pediatric Academic Societies*.
- Damera, S. R. et al., (2023, April 27- May 1). Regional Homogeneity as a Marker of Sensory Cortex Dysmaturity in Premature Infants. [Oral Abstract]. *Pediatric Academic Societies*.
- Riesenhuber, M. et al., (2022, November 12–16). Experience-dependent metamodal coupling of vibrotactile and auditory speech processing systems through matched stimulus representations. [Nanosymposium]. *Neuroscience.*

- Damera, S. R. et al., (2021, October 5-8). Evidence for Multiple Fast Feedforward Hierarchies of Concept Processing in the Human Brain**.** In Persichetti, A.S. and Martin, A. (Chairs), Semantic Knowledge Representations in the Anterior Temporal Lobe and Beyond [Symposium]. *Society for the Neurobiology of Language Annual Meeting.*

CONFERENCE ABSTRACTS:

- Damera, S. R. et al., Tensor-Based Morphometry Identifies Impaired Growth of Novel Brain Areas in Fetuses with Congenital Heart Disease. *Pediatric Academic Societies. 2025.*
- Damera, S. R. et al., Regional Homogeneity Tracks Sensory Cortex Dysmaturity and Predicts Future Risk of Autism in Preterm Infants. *Children's National Hospital Research, Education, and Innovation Week. 2024.*
- Damera, S. R. et al., Evidence for a Spoken Word Lexicon in the Auditory Ventral Stream. *Neuroscience 2022.*
- Nikolov, P. et al., Architecture of Speech Production and Speech Perception Pathways. *Neuroscience 2022.*
- Chang, L. et al., Visual Speech Processing Interfaces with Areas Selective for Spoken Words in Ventral and Dorsal Speech Pathways. *Neuroscience 2022.*
- Chang, L. et al., Evidence for Selective and Modality-Dependent Functional Connectivity and Cross-Modal Activation Between the AWFA and VWFA. *Cognitive Neuroscience Society 2022.*
- Damera, S. R et al., A Lexicon in the Anterior Auditory Ventral Stream: Preliminary Evidence From an fMRI-RA Study. *Society for the Neurobiology of Language 2019.*
- Damera, S. R. et al., EEG MVPA Provides Evidence for Short Latency Semantic Representations in Temporal and Parietal Areas Compatible with a Feedforward Simple-to-Complex Hierarchy. *Neuroscience 2017.*
- Yaffe, R. B., et al., Reinstatement of Distributed Spatiotemporal Patterns of Oscillatory Power During Associative Memory Recall. *Neuroscience 2014.*
- Damera, S. R. et al., Oscillatory Power Distinguishes Different Levels of Linguistic Context. *Neuroscience 2013.*

TEACHING EXPERIENCE:

- Computational Neuroscience NSCI 526
  Role: Teaching Assistant
- Drugs, Brain and Behavior ICOS 325
  Role: Guest Lecturer
- Medical Neuroscience IMSC 533
  Role: Teaching Assistant