

**Spring Symposium April 2, 2021**

**Interdisciplinary and Translational Research in Dyslexia and Cognitive Diversity**

***Speakers in order of appearance:***

**Welcome and Opening Remarks**



**Maria Luisa Gorno Tempini, M.D., Ph.D.** is a behavioral neurologist and holds the Charles Schwab Endowed Professorship in Dyslexia and Neurodevelopment at UCSF. She currently directs the Language Neurobiology Laboratory of the UCSF Memory and Aging Center and serves as Co-Director of the UCSF-UC Berkeley Schwab Dyslexia and Cognitive Diversity Center and Co-Director of the UCSF Dyslexia Center. Her research and clinical work concentrate on behavioral neurology across the lifespan, and her research investigates the neural basis of cognitive functions

such as language and memory. She applies her expertise in the cognitive neurosciences to language-based learning differences, such as dyslexia. As Co-Director of the UCSF Dyslexia Center she has enjoyed worked clinically with many families of children living with dyslexia and other learning differences. She looks forward to working with Schwab Clinic to develop the best most evidence-based ways of assessing people with learning differences and supporting families around the Bay Area and beyond to get the help they need to thrive. <https://memory.ucsf.edu/people/marilu-gorno-tempini-md-phd>



**Stephen Hinshaw, Ph.D.** is Professor of Psychology at UC Berkeley, where he was Department Chair from 2004-2011, and Professor of Psychiatry and Behavioral Sciences (and Vice-Chair for Child and Adolescent Psychology) at UC San Francisco. His work focuses on developmental psychopathology, clinical interventions with children and adolescents with attention deficits and hyperactivity (especially mechanisms underlying therapeutic change), and mental illness stigma. He has directed research programs and conducted clinical trials and longitudinal studies for boys and—more recently—for girls ADHD, having received over

\$20 million in NIH funding and an equal amount in foundation support. He has authored over 365 articles and chapters plus 12 books. His memoir, *Another Kind of Madness: A Journey through the Stigma and Hope of Mental Illness* (St. Martin's, 2017), was awarded Best Book in Autobiography/Memoir by the American BookFest in 2018. He is a fellow of the Association for Psychological Science, the American Psychological Association, and the American Association for the Advancement of Science (AAAS).

His international awards include the Distinguished Scientist Award from the Society for a Science of Clinical Psychology (2015); the James McKeen Cattell Award from the Association for Psychological Science (2016), the Distinguished Scientific Contributions to Child Development Award from the Society for Research in Child Development (2017); the Ruane Prize for Outstanding Achievement in Child and Adolescent Psychiatric

Research (2019); the Distinguished Scientific Contributions Award from the American Psychological Association (2020); and the Rhoda and Bernard Sarnat International Prize in Mental Health, from the National Academy of Medicine (2020). He is the only individual to have received all six. He is the co-director of the Schwab Dyslexia and Cognitive Diversity Center. <https://psychology.berkeley.edu/people/stephen-hinshaw>



**Matthew W. State.** MD, PhD, is a child psychiatrist and human geneticist studying pediatric neuropsychiatric syndromes. His lab focuses on gene discovery as a launching point for efforts to illuminate the biology of these conditions and to develop novel and more effective therapies. He is currently the Oberndorf Family Distinguished Professor and Chair of Psychiatry at UCSF and Director of the Langley Porter Psychiatric Institute and Hospital.

Dr. State's lab has played a leading role in demonstrating the contribution of rare and de novo variation to autism spectrum disorders (ASD), Tourette disorder (TD), and brain malformation syndromes. Recent work has contributed to the identification of dozens of ASD risk genes, the identification of the first high confidence TD genes, and has utilized systems biological approaches to characterize the spatial and temporal convergence of autism genes in developing human brain. Dr. State plays a leadership role in a number of national and international collaborative genomics studies of autism and Tourette disorder, including the Simons Simplex Collection Genomics Consortium, the Autism Sequencing Consortium, and the Tourette International Collaboration (TIC) on Genetics. <https://profiles.ucsf.edu/matthew.state>

### **Session 1: New Directions in Dyslexia Research**



**Silvia Bunge,** Ph.D. is a Professor in the Department of Psychology and the Helen Wills Neuroscience Institute at the University of California at Berkeley. Her other affiliations at UC Berkeley include the Institute of Human Development and the Research in Cognition and Mathematics Education program. Professor Bunge is also one of 11 members of the National Scientific Council on the Developing Child and a founding member of the Frontiers of Innovation initiative.

Dr. Bunge directs the Building Blocks of Cognition Laboratory, which draws from the fields of cognitive neuroscience, developmental psychology, and education research. Researchers in the laboratory examine developmental changes and neural plasticity in cognitive control and reasoning skills in healthy and neurologically impaired children and adults. The laboratory seeks to better understand both negative and positive environmental influences on brain and cognitive development.

Through her research and public service, Prof. Bunge seeks to promote academic readiness among children at risk for school failure. She and colleagues at UC Berkeley and the Children's Hospital Oakland have recently established the UC Berkeley &

Children's Hospital Oakland C.H.I.L.D. Research Center. A full 70% of the children at Children's Hospital Oakland (CHO) are on Medicaid. Further, CHO treats many patients with Pediatric Acquired Brain Injury (PABI). PABI is said to be the leading cause of death and disability for children and young adults in the United States (ref: Sarah Jane Brain Project). Thus, the overarching aim of this UCB-CHO partnership is to study how the course of brain development is altered, for the better or for the worse, by environmental factors and/or by early brain injury.

<http://bungelab.berkeley.edu/silvia-bunge/>



**Christa Watson**, Psy.D graduated from the Pacific Graduate School of Psychology-Stanford PsyD Consortium in 2014. She has a background in psychology, developmental biology, neuroimaging and neuropsychology. Her research interests include brain development across the lifespan. She is currently working on dyslexia in the ALBA Language Neurobiology Lab and a pediatric HIV brain imaging study with Dr. Victor Valcour.

<https://memory.ucsf.edu/people/christa-pereira-psyd>

## Plenary Lecture



**John Gabrieli**, PhD, is a neuroscientist at MIT, and an associate member of the [McGovern Institute for Brain Research](#). He is the Grover Hermann Professor of Health Sciences and Technology and Cognitive Neuroscience in the department of Brain and Cognitive Sciences at MIT and director of the [Athinoula A. Martinos Imaging Center](#), part of the McGovern Institute. Dr. Gabrieli is an expert on the brain mechanisms of human cognition, including memory, thought and emotion. His work includes neuroimaging studies on

healthy adults and children as well as clinical patients with many different brain disorders, including schizophrenia, depression, Alzheimer's disease, autism and dyslexia. One of his major current interests is dyslexia, in particular the use of brain imaging to identify children who are at risk for reading difficulties and to understand how reading instruction affects the brain.

## Session 2: New Directions in Dyslexia Research



**Zachary Miller**, M.D. was born in Seattle, and grew up in the East Coast, DC metro area. He obtained an undergraduate degree from Haverford College, double majoring in Molecular Biology and Fine Arts. Following this, he spent two years as a research assistant at MIT's Whitehead Institutes for Biomedical Research in Dr. Harvey Lodish's lab. He received his medical degree from the University of Pittsburgh and pursued medical internship as well as neurology residency training at the University of Washington.

Dr. Miller came to the UCSF Memory and Aging Center in 2009 as a behavioral and cognitive neurology fellow, to study under Dr. Bruce Miller, pursuing particular interests in the enhanced creativity that sometimes occurs in the setting of select neurodegenerative diseases of the language network. His earliest findings included the observations of increased prevalence of left-handedness as well as non-thyroid autoimmune disease within semantic variant primary progressive aphasia. Under the mentorship of Dr. Maria-Luisa Gorno Tempini, Dr. Miller uncovered an association between developmental dyslexia and logopenic variant primary progressive aphasia. In recognition of his early findings, he was awarded the American Academy of Neurology's Norman Geschwind Prize in Behavioral Neurology, an exceptionally personal recognition as his work takes direct inspiration from Dr. Geschwind's theories. He has gone on to discover broader associations between neurodevelopmental disorders and degenerative conditions, demonstrating associations between dyscalculia, developmental stuttering, and autism spectrum disorder with neurodegenerative diseases posterior cortical atrophy, corticobasal syndrome, and frontotemporal dementia, respectively. An active member of the UCSF Dyslexia Center since its creation, he is now an Associate Professor of Neurology in the UCSF Memory and Aging Center. <https://memory.ucsf.edu/people/zachary-miller-md>

### Video Stories of Dyslexia



**Emily Monforte**, BA, is a queer dyslexic photographer and LD activist born and raised in Berkeley, California. She graduated from Wesleyan University in 2018 with a dual degree in Sociology and Fine Arts. Her photography has been exhibited by Cluster London, and published by i-D magazine as well as stop.gap journal. Her work can be seen on Instagram @emily.monforte.photo and [emilymonfortephotography.myportfolio.com](http://emilymonfortephotography.myportfolio.com).



**Michelle V. Porche**, Ed.D. is Associate Adjunct Professor at UCSF Department of Psychiatry and Associate Director of Community Outreach for the Schwab Dyslexia and Cognitive Diversity Center. Throughout her career she has studied the impact of adversity on academic achievement for young children and adolescents, primarily using mixed-methods approaches. Her early research studies included investigation of the impact of parent involvement and life circumstances of families on the language and literacy development of children and adolescents. Recent work has included the study of early and ongoing adversity and trauma on risk of high school dropout, school engagement, and retention in grade. Working with interdisciplinary teams she has also studied the association between trauma and substance use for adolescents, related to mental health and academic outcomes, as well as focus on immigrant children and families, with specific attention to the impact of trauma for resettled refugee youth. As a Co-Investigator of the Kids FACE FEARS study she investigated patient, clinician, and stakeholder engagement for a large clinical trial

comparing evidence-based face-to-face and online CBT treatment, in English and Spanish, for childhood anxiety. <https://profiles.ucsf.edu/michelle.porche>

### **Interview with Charles Schwab**



**Charles "Chuck" R. Schwab**, MBA, started the San Francisco–based The Charles Schwab Corporation in 1971 as a traditional brokerage company, and in 1974 became a pioneer in the discount brokerage business. Mr. Schwab took an early lead in the industry, offering a combination of low prices and fast, efficient order executions, and soon became the nation's largest discount broker. Today, the company is the nation's largest publicly traded investment services firm, with around \$4.0 trillion in client assets. Often credited with "democratizing" investment, Chuck Schwab has driven countless innovations in the investment services industry designed to help individuals make the most of saving and investing, including 24/7 access to services, the one-stop mutual fund supermarket providing access to thousands of no-load, no-transaction-fee mutual funds, custodial services for independent registered investment advisors, online trading, and many others. Today, the company has expanded from its roots as a discount brokerage and provides a full-service investing and banking experience to clients domestically and abroad, serving around 14.0 million accounts. In addition to his professional commitments, Mr. Schwab takes an active interest in a variety of volunteer and non-profit activities. Along with his wife, Helen, he is the co-founder and chairman of The Charles and Helen Schwab Foundation, a private foundation that supports entrepreneurial organizations working in education, poverty prevention, human services, and health. Mr. Schwab also serves on the board of the San Francisco Museum of Modern Art and was its chairman for 10 years ending in 2018.

### **Session 3: New Directions in Research on Cognitive Diversity**



**Laura Henry**, B.S., is a doctoral student in the Clinical Science program at UC Berkeley. She received her B.S. from Northwestern University in Psychology and Communication Sciences and Disorders and then completed a post-baccalaureate research fellowship at the National Institute of Mental Health. Laura is interested in better understanding the development of cognitive and learning difficulties among children with neurodevelopmental disorders such as ADHD and how these difficulties might be linked to emotional well-being and daily life functioning, with the goal of identifying potential transdiagnostic treatment targets. Her research is generously supported by a National Science Foundation Graduate Research Fellowship.