

SUMMIT ON THE Neuroscience of Twice-Exceptionality

MAY 17-18, 2021

Co-hosted by the Belin-Blank Center and the Iowa Neuroscience Institute

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JOINT LETTER FROM UNIVERSITY LEADERS

Office of the Executive Vice President and Provost

University of Iowa 111 Jessup Hall 5 West Jefferson Street lowa City, lowa 52242-1316 319-335-3565 Fax 319-335-3560

Welcome to the University of Iowa's inaugural Summit on the Neuroscience of Twice-Exceptionality. Born out of the collaborative efforts of the College of Education's Belin-Blank Center for Gifted Education and Talent Development and the Carver College of Medicine's Iowa Neuroscience Institute, this summit is an opportunity for scientists, psychologists, educators, students, and parents, all who are deeply committed to better understanding twiceexceptionality, to learn from each other and promote a sense of community. Although we recognize that we will miss the dynamics of an in-person event, this loss is offset by the fact that the presentations are all recorded and will be available long after the summit has concluded. Furthermore, because the summit is virtual, we broaden our reach and welcome individuals from all over the United States as well as from around the world.

The paradox of twice-exceptionality has captured our attention because we recognize that individuals with high cognitive ability who also have a diagnosed learning, social-emotional, or behavioral disorder are at great risk from fully realizing their potential. This is a loss for the individual as well as for society. When researchers from the Belin-Blank Center started talking with researchers from the INI, they discovered that there were many possible intersections for research. Bringing together the disciplines of neuroscience, psychiatry, genetics, gifted education, special education, and psychology was a natural next step to addressing the parallel myths that individuals with high cognitive ability have no other cognitive problems or that individuals with a diagnosed disorder do not have high cognitive ability.

The Belin-Blank Center focuses on "Nurturing Potential: Developing Talent"; the Iowa Neuroscience Institute fosters research partnerships and promotes "The Best Ideas Come from Collaboration." Our wish for summit presenters and attendees is that you will be inspired to nurture the potential of twice-exceptional individuals through collaboration and partnership.

We are excited for all of you to learn from each other and we look forward to learning from you.

Warm wishes for a successful event,

Mail Ley J. Brooks Jackson

Dean and Professor College of Education

Daniel L. Clay, PhD, MBA J. Brooks Jackson, MD, MBA Vice President for Medical Affairs & the Tyrone D. Artz Dean **UI Carver College of Medicine**

Kevin C. Kregel, PhD **Executive Vice President and Provost**

INFORMATION

Accessing the Summit

The Summit will take place on CrowdCast, an online events platform. You'll receive an email directly from CrowdCast with instructions for logging in to the event. If you haven't received this as of the Wednesday before the event, please email summit@belinblank.org.

If you'd like captions as you're watching the sessions, here are two options for adding those captions live:

- **Google Chrome** users can enable captions through the browser's newly launched accessibility feature.
- Otter automatically captions the sound coming out of your computer speakers, either using a web browser or an app on your smartphone. Free transcriptions are available for up to 40 minutes per meeting/session.

All sessions will be professionally transcribed following the event, and these professional captions will be available once the videos are migrated to UI Learn, which all attendees will have access to.

Credit Option

A credit option is available to those who participate in the summit through **PSQF:4128:0WKA** – Neuroscientific Implications for Gifted Ed: Neuroscience of Twice-Exceptionality (May 20 – June 10).

Details at belinblank.org/educators.

Nondiscrimination Statement

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact the Director, Office of Equal Opportunity and Diversity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705 (voice), 319-335-0697 (TDD), diversity@uiowa.edu.

AT-A-GLANCE SCHEDULE

Monday, May 17

8:30-9:45 AM	Keynote Presentation, Ted Abel
9:45-10:00 AM	Break
10:00-10:45 AM	Invited Presentation, Dorit Kliemann
10:00-10:45 AM	Invited Presentation, Gregory Wallace
10:45-11:00 AM	Break
11:00 AM-12:00 PM	Research Panel: Alissa Doobay, Duhita Mahatmya, Megan Foley-Nicpon
12:00-1:00 PM	Lunch Break
1:00-2:00 PM	Keynote Presentation, Thomas Nickl-Jockschat
2:00-2:15 PM	Break
2:15-3:00 PM	Invited Presentation, Seth King
2:15-3:00 PM	Invited Presentation, Marjorie Solomon
3:00-3:15 PM	Break
3:15-4:15 PM	Keynote Presentation, Sally Reis
4:15-5:00 PM	Discussion Panels

Tuesday, May 18

8:30-9:45 AM	Keynote Presentation, Jake Michaelson
9:45-10:15 AM	Parent Panel: Kate Boonstra, Amanda Freese, Amanda Weaver
10:15-10:45 AM	Student Panel: Alex Schiesher, Martika Theis, Noah Egge
10:45-11:00 AM	Break
11:00 AM-12:00 PM	Keynote Presentation, Hanna Stevens
12:00-1:00 PM	Lunch Break
1:00-2:00 PM	Research Panel: Susan Assouline, Brandon LeBeau, Katie Schabilion
2:00-2:15 PM	Break
2:15-3:00 PM	Invited Presentation, James Booth
2:15-3:00 PM	Invited Presentation, Jason Wolff
3:00-3:15 PM	Break
3:15-4:15 PM	Keynote Presentation, Lane Strathearn

8:30-9:45 AM KEYNOTE PRESENTATION **Ted Abel, Molecular Mechanisms of Memory Storage**



Ted will discuss his recent work on the molecular mechanisms underlying memory storage, with a focus on how our knowledge of neuroscience can help us identify molecular and cellular approaches to enhance cognition.

9:45-10:00 AM BREAK

10:00-10:45 AM INVITED PRESENTATION Dorit Kliemann, Brain Networks in Autism



Networks defined by correlations in brain activity ("functional connectivity") characterize how different brain regions communicate with one another and underlie our thoughts, emotions, and behaviors. How do these functional networks produce impaired cognition and behavior — or compensate for it — in individuals with psychiatric conditions, such as Autism Spectrum Disorder? In this talk I will discuss challenges in studying the neurobiological basis of social difficulties in ASD. I will outline our approach to overcome these challenges and showcase preliminary results from an ongoing collaborative study on functional connectivity in ASD.

10:00-10:45 AM INVITED PRESENTATION Gregory Wallace, The Autism and Talent Connection: A Window Into Twice-Exceptionality



Autism, from its earliest descriptions (Kanner, 1943; Asperger, 1944), has been linked with surprising skills and exceptional abilities - ranging from intra-individual strengths, such as noticing tiny changes in the environment or facility with jigsaw puzzles, to prodigious strengths in domains such as art, music, memory, and calendar calculation (Treffert, 2006). Although not all people with autism exhibit these talents, there is a clear over-representation of these abilities in autism compared to other neurodevelopmental conditions – for example, Howlin et al. (2009) found that 30% of autistic adults had special abilities. This talk will review evidence linking autism (at both clinical and subclinical levels) and talent and how this association might inform twice-exceptionality.

10:45-11:00 AM BREAK

FULL SCHEDULE MONDAY, MAY 17



11:00 AM-12:00 PM RESEARCH PANEL Alissa Doobay, Duhita Mahatmya, Megan Foley-Nicpon, From Data to Diagnosis: Complexity of Understanding 2e Students with ASD



Conceptualization, diagnosis, and treatment of Autism Spectrum Disorder (ASD) in the high ability population is a complex and nuanced practice that should be grounded in scientific knowledge. Yet there is limited empirical research on which to base clinical decisions for this population. At the Belin-Blank Center Assessment and Counseling Clinic, we are expanding our understanding of the neuroscience of twice-exceptionality through collaboration between clinicians and researchers. In this presentation, we will include a brief overview of the existing literature on ASD among high ability youth, describe the clinical processes to understand and differentially diagnose ASD among this population, and outline methods we are employing to bridge research and clinical work in novel and meaningful ways.

12:00-1:00 PM LUNCH BREAK

1:00-2:00 PM KEYNOTE PRESENTATION **Thomas Nickl-Jockschat, Disrupted Brain Growth Patterns -A Key Mechanism Underlying Autism**



Brain maturation requires precisely honed growth patterns of different cerebral regions. Disrupted growth trajectories of a set of distinct brain regions, including neural hubs required for the processing of rewards and faces, might be a core mechanism underlying autism. This talk will give an overview over evidence for altered brain growth trajectories in autism and their potential relevance for changes in brain function.

2:00-2:15 PM BREAK

2:15-3:00 PM INVITED PRESENTATION Seth King, Interdisciplinary Collaboration in Research for Individuals with Multiple Exceptionalities



Twice exceptional children nominally receive services from professionals associated with special education. However, services associated with areas in which children demonstrate accelerated ability are rarely coordinated with supports administered through formal individualized education programs. This presentation describes the benefits of coordinated services for twice exceptional children and provides suggestions for future research and practice.

2:15-3:00 PM INVITED PRESENTATION Marjorie Solomon, Autistic Individuals: Dimensions of Exceptionality



Individuals with autism spectrum disorders display a unique set of strengths and challenges. In this talk, I will highlight recent behavioral and neuroimaging work from my laboratory that examines higher cognition (cognitive control and memory) in autistic persons with average or better levels of intellectual functioning. These studies illustrate that autistic individuals often perform comparably to neurotypical controls when engaging in tasks assessing higher cognition, that they utilize different strategies for task completion, and that their unique style can confer both benefits and challenges for functioning. I will conclude with a discussion of how this information processing style may impact their functioning in the work world when they are young adults.

3:00-3:15 PM BREAK

3:15-4:15 PM KEYNOTE PRESENTATION Sally Reis, Using Strength-Based Pedagogy to Engage and Challenge 2E Students' Development



This keynote will provide an overview of exciting and positive new research about students who are both academically talented and have disabilities, focusing on recent research on students with ASD. The focus of this work is how we can use strengths and interests to help develop talents in a broad range of students who are 2e, that is twice exceptional. Specific recent research results will be shared about how we can support the academic strengths and interests of this group of students and help them realize their potential.

4:15-5:00 PM Discussion Panels

We'll be moving into Zoom for discussions on topics chosen by attendees! We will post a link to the Zoom rooms in CrowdCast.

8:30-9:45 AM KEYNOTE PRESENTATION Jake Michaelson, Genetic Signatures of Twice-Exceptionality



While intelligence has been demonstrated as one of the most heritable traits in the general population, less is understood about the genetics of high cognitive ability when it co-occurs with a neurodevelopmental condition. We recruited over 1,500 high-ability families with autism to take online self- and parent-report surveys covering ability, creativity, and indices of mental illness. We then compared genetic profiles of these families to their scores on these surveys to uncover relationships between brain development, cognition, and creativity.

9:45-10:15 AM PARENT PANEL: Kate Boonstra, Amanda Freese, Amanda Weaver

10:15-10:45 AM

STUDENT PANEL: Alex Schiesher, Coe College, Martika Theis, University of Iowa, Noah Egge, Iowa City Community School District

10:45-11:00 AM BREAK

11:00 AM-12:00 PM KEYNOTE PRESENTATION Hanna Stevens, Neurodevelopmental Disabilities and Striatum: Insights from Mentoring Smart Trainees



Neuroscientific advances have revealed multiple connections between the striatum and neurodevelopmental disabilities. Here, I will discuss studies from my lab that implicate early striatal growth with autism spectrum disorder and attention deficit hyperactivity disorder. I will also highlight the importance of personal insights into ability and disability of those who do work in this field and make the case for mentoring individuals from twice-exceptional backgrounds for the sake of reaching new research horizons.

12:00-1:00 PM LUNCH BREAK

FULL SCHEDULE **TUESDAY, MAY 18**



1:00-2:00 PM RESEARCH PANEL Susan Assouline, Brandon LeBeau, Katie Schabilion Integration of the Medical Model and Talent Development Model in Understanding 2e Students



Through the decades of research conducted by professionals at the Belin-Blank Center, findings have consistently demonstrated the importance of understanding both the strengths and the difficulties that co-occur for twice-exceptional students. Dr. Assouline will share the history and progression of research on twice-exceptionality at the Belin-Blank Center, including novel findings that have dispelled myths regarding twice-exceptionality. Dr. LeBeau will elaborate on the makeup of the current dataset, and share his investigations related to early development of high-ability and twice-exceptional students. Dr. Schabilion will explore the relative strengths and weaknesses among twice-exceptional students with a specific learning disability in writing.

2:00-2:15 PM BREAK

2:15-3:00 PM INVITED PRESENTATION James Booth, How Does the Brain Learn to Do Arithmetic?



This seminar will begin with an outline of a neuro-cognitive model of math processing that includes both verbal and spatial components. Our neuroimaging work shows that reliance on these components changes developmentally when solving arithmetic problems, suggesting increases in specialization. Our individual differences work further suggests that increases in working memory and precision of the mental number line are tightly related to these developmental changes in reliance on the verbal and spatial components. However, the reliance on these components during arithmetic appears to also depend on environmental variables, such as the culture that one grows up in and also one's socio-economic status. Our research reveals a complex pattern in which the components of the neuro-cognitive network engaged depends on the nature of the task, the age and ability of the child, and the environment in which the child grows up.

2:15-3:00 PM INVITED PRESENTATION Jason Wolff, Autism in Early Childhood: Understanding the Interplay of Sensory Responsivity and Repetitive Behavior



Restricted and repetitive behaviors and differences in sensory responsivity are defining features of autism. However, we know very little about how these develop, in terms of both brain and behavior, in babies and toddlers who are later diagnosed. In this presentation, I will describe what we have learned about these aspects of autism in the first years of life and discuss the implications of "experiencing the world differently" on development through early childhood and beyond.

3:00-3:15 PM BREAK

3:15-4:15 PM

KEYNOTE PRESENTATION Lane Strathearn, Epigenetics and Social Experience in Autism: Discovering Modifiable Pathways for Intervention



Although the etiology of autism spectrum disorder (ASD) has been strongly linked to genetic factors, early social experience may also contribute to its development, potentially via epigenetic mechanisms. Oxytocin and its receptor OXTR are epigenetically altered by early social experience, play crucial roles in mammalian social and cognitive development, and are associated with both genetic and epigenetic risk for autism. Our lab's goal is to discover modifiable pathways for intervention in children at risk for autism, by measuring how social experience is correlated with epigenetic change in autism.

SPEAKER BIOGRAPHIES



Edwin G. Abel, Ph.D.

Edwin G. (Ted) Abel, Ph.D. is the founding director of the Iowa Neuroscience Institute, an interdisciplinary center at the University of Iowa focused on the causes, treatments, and prevention of diseases that affect the brain and nervous system. He serves as Chair of the Department of Neuroscience and Pharmacology in the Carver College of Medicine. Dr. Abel is recognized as a pioneer in defining the molecular mechanisms of long-term memory storage, and identifying how these processes go awry in neurodevelopmental and psychiatric disorders. He is a member of the National Academy of Medicine and a Fellow of the American Association for the Advancement of Science.



Susan G. Assouline, Ph.D.

Susan G. Assouline, professor of school psychology and director of the Belin-Blank Center, holds the Myron and Jacqueline N. Blank Endowed Chair in Gifted Education. Dr. Assouline collaborates with Dr. Megan Foley Nicpon and Dr. Alissa Doobay on the center's twice-exceptional research agenda, conducted through the center's Assessment and Counseling clinic. The twice-exceptional research started in 2005 with a three-year Javits Grant awarded to investigate the characteristics of twice-exceptional students. With Drs. Nicholas Colangelo and Ann Lupkowski-Shoplik, she co-developed the Iowa Acceleration Scale, a tool designed to guide educators and parents through decisions about grade-skipping students. In 2015, she co-edited with Nicholas Colangelo, Joyce Van Tassel-Baska, and Ann Lupkowski-Shoplik, *A Nation Empowered: Evidence Trumps the Excuses Holding Back America's Brightest Students*. She received the National Association for Gifted Children (NAGC) 2016 Distinguished Scholar Award, the 2018 University of Iowa Award for Faculty Excellence, the 2019 University of Iowa Leadership in Research Award, and in 2019 was inducted into the 2E Hall of Fame.



James Booth, Ph.D.

Dr. James Booth is a Patricia and Rodes Hart Professor of Educational Neuroscience in the Department of Psychology and Human Development at Vanderbilt University. Dr. Booth's research examines brain mechanisms behind the development of language, reading, and mathematics in typical and atypical populations. We are excited to have Dr. Booth speak about his work on neuroimaging related to individual and developmental differences in mathematics.



Alissa Doobay, Ph.D.

Dr. Alissa Doobay received her PhD in Counseling Psychology from The University of Iowa in 2010. She is currently a Licensed Psychologist and Supervisor of Psychological Services at the Belin-Blank Center for Gifted Education and Talent Development at The University of Iowa where she provides clinical assessment, therapy, and consultation services. Her clinical expertise is in the area of twiceexceptionality, particularly students who have Autism Spectrum Disorder, Learning Disorders, ADHD, anxiety, and mood disorders. In addition to direct clinical service, Dr. Doobay provides training and clinical supervision to doctoral and postdoctoral trainees at the Belin-Blank Center; engages in outreach to healthcare providers, teachers, and parents on the topic of twice-exceptionality; is a member of the University of Iowa Autism Spectrum Disorder Committee; and conducts research on twice-exceptionality. Currently, Dr. Doobay is involved in a collaborative research project between the Belin-Blank Center and the UI Neuroscience Institute investigating the Neuroscience of Twice-Exceptionality.

SPEAKER BIOGRAPHIES



Megan Foley-Nicpon, Ph.D.

Megan Foley-Nicpon is a professor in Counseling Psychology and Department Executive Officer for Psychological and Quantitative Foundations at the University of Iowa. She also serves as the Associate Director for Research and Clinic at the Belin-Blank Center for Gifted Education and Talent Development. Dr. Foley-Nicpon is a licensed psychologist whose research and clinical interests include assessment and intervention with high ability students with disabilities, and the social and emotional development of talented and diverse students. She regularly writes and presents about high ability, counseling psychology, and twice-exceptionality.



Seth King, Ph.D.

Dr. Seth King is an Assistant Professor in Special Education within the College of Education at the University of Iowa. Dr. King's research focuses on applied behavioral analysis and special education. We look forward to Dr. King's presentation on crossovers between special education, applied behavior analysis, gifted education, and neuroscience.



Dorit Kliemann, Ph.D.

Dorit Kliemann studied Psychology at the University of Bremen in Germany. During her doctoral studies at the Freie Universitaet Berlin she started to study the neurobiological basis of social cognition in ASD with behavioral and neuroimaging methods. Dr. Kliemann continued to investigate the social brain with an emphasis on atypical social information processing in ASD using advanced imaging methods during her postdoctoral studies at the Massachusetts Institute of Technology. Before starting her own lab at the University of Iowa, Dr. Kliemann focused on functional brain networks in Autism and brain lesions patients at the California Institute of Technology. At the University of Iowa, the Kliemann Lab studies how the brain compensates and re-organizes. How does variation in brain structure and function lead to intact or impaired social cognition? How can insights from neuroimaging be used to better understand the psychological mechanisms? Her lab uses a multimodal approach (including behavioral, eye-tracking, lesion studies, structural and functional MRI) to study brain-cognition-behavior relations that ultimately produce complex social cognition.



Brandon LeBeau, Ph.D.

Brandon LeBeau is an Assistant Professor of Educational Measurement and Statistics at the University of Iowa. His work promotes strong statistical practice through the evaluation of statistical methodology and development of statistical research software. He also performs quantitative program evaluation, with a focus on evaluating programs for high-achieving students.



Duhita Mahatmya, Ph.D.

Duhita Mahatmya, Ph.D., is currently an Assistant Research Scientist in the College of Education at the University of Iowa. As a research methodologist, Dr. Mahatmya provides conceptual and analytical support to projects that examine equity issues in K-12 and higher education. Her research interests focus on examining how family, school, and community environments shape the attainment of developmental milestones from early childhood to young adulthood.



Jake Michaelson, Ph.D.

Dr. Jake Michaelson is a Roy J. Carver associate professor in psychiatry and neuroscience and the division director of computational and molecular psychiatry at the University of Iowa. His lab uses advanced computational approaches to study the effect of genetic variations on the development of the brain, with specific applications in autism and language impairment. He earned his B.S. and M.S. in biological engineering at Utah State University before earning his PhD in computational biology at the Technische Universität Dresden in Germany in 2010. After his time in Germany, he joined the lab of psychiatric geneticist Jonathan Sebat at UC San Diego, where he completed his postdoctoral training and published several of the earliest papers dealing with whole genome sequencing in autism. In 2013 he joined the faculty at the University of Iowa, and his current research is supported by NIMH, NIDCD, the Simons Foundation, and the Brain and Behavior Research Foundation.



Thomas Nickl-Jockschat, Ph.D.

Dr. Thomas Nickl-Jockschat's research focuses on genetic variation associated with neurodevelopmental and psychiatric disorders and their impact on brain structure and function. Consequently, his lab uses translational approaches, including neuroimaging, in humans and animals to identify neuroanatomical and functional changes and their molecular underpinnings. A special focus lies upon the joint analysis of gene expression patterns and whole-brain neuroimaging findings in rodents and humans.



Sally Reis, Ph.D.

Sally M. Reis holds the Letitia Neag Chair in Educational Psychology, is a Board of Trustees Distinguished Professor, and the former Vice Provost for Academic Affairs at the Neag School of Education at University of Connecticut. She was a classroom teacher in public education as well as an administrator before her work at UConn. She has authored and co-authored more than 270 articles, books, book chapters, monographs and technical reports, and worked in a research team that has generated over 100 million dollars in grants in the last 15 years. Her scholarship is diverse and broad, as summarized by her numerous articles, books, book chapters, monographs, and technical reports. Her specialized research interests are related to diverse populations of gifted and talented students, including students with learning disabilities, gifted females, and culturally and linguistically diverse talented students.

She is a Distinguished Scholar of the National Association for Gifted Children and a fellow of Division 15 of The American Psychological Association. Her research interests are related to gifted education and talent development, as well as special populations of gifted and talented students, including: students with learning disabilities, gifted girls and women, and diverse groups of talented students who are often underserved. Among her proudest accomplishments, besides her family, is her work on the Schoolwide Enrichment Model and her leadership of Confratute, with her partner and husband, Joseph Renzulli for over four decades.



Katie Schabilion, Ph.D.

Dr. Katie Schabilion is a licensed psychologist at the Belin-Blank Center Assessment and Counseling Clinic and a graduate of the University of Iowa School Psychology program. Dr. Schabilion's clinical interests include assessment of high-ability and twice-exceptional students and advocacy for appropriate identification and services for these students in schools. Dr. Schabilion's dissertation considered the cognitive and psychosocial variables related to a diagnosis of Specific Learning Disorder with impairment in written expression.



Marjorie Solomon, Ph.D.

Dr. Marjorie Solomon is a Professor of Psychiatry at the Department of Psychiatry and Behavioral Sciences at the University of California-Davis, and a faculty of the UC Davis MIND Institute and the Imaging Research Center. Dr. Solomon's laboratory studies cognitive development in autistic children, adolescents, and young adults, and especially those with intellectual abilities in the average or better range. Her work utilizes neuropsychological and cognitive neuroscience methods including fMRI. We look forward to having Dr. Solomon present an overview of work that highlights the unique cognitive and other strengths found in persons with Autism Spectrum Disorder.



Hanna Stevens, Ph.D.

Hanna Stevens is the Director of Child and Adolescent Psychiatry and runs the Psychiatry and Early Neurobiological Development Lab (PENDL) at the University of Iowa Carver College of Medicine. Her research seeks to understand molecular and cellular aspects of early brain development and their relevance to psychiatric disorders. Her work is particularly focused on understanding how prenatal stress, environmental exposures and genes that play a role in early development have an impact on childhood behavior and act as risk factors for multiple psychiatric disorders. The goal of her lab is to advance mental health diagnosis and treatment of disorders across the lifespan, particularly focusing on the high-risk times of pregnancy and early development.



Lane Strathearn, Ph.D.

Dr. Lane Strathearn is a Professor of Pediatrics, Psychiatry, Psychological and Brain Sciences, and Neuroscience and Pharmacology, at the University of Iowa. He is also the Director of the Division of Developmental and Behavioral Pediatrics, and Physician Director of the Center for Disabilities and Development (CDD). His research focuses on the neurobiology of mother-infant attachment, including longitudinal studies of parents and infants, examining maternal brain and oxytocin responses to infant face and cry cues, using functional MRI and behavioral observation. As co-director of the new Intellectual and Developmental Disabilities Research Center (IDDRC), he is also interested in developmental, behavioral and epigenetic risk markers for autism.



Gregory Wallace, Ph.D.

Dr. Gregory L. Wallace is an Associate Professor at The George Washington University. His research focuses on neuropsychological (e.g., executive function) and brain (e.g., cortical structural) development in autism spectrum disorder and other neurodevelopmental disorders across the lifespan and their impacts on real-world outcomes. He is also particularly interested in eating-related behaviors and their cognitive and neural correlates in autism spectrum disorder and other populations. Finally, Dr. Wallace has a strong interest in better understanding and elucidating behavioral and cognitive strengths in autism spectrum disorder, including savant skills. He has published and presented widely on these and related topics.



Jason Wolff, Ph.D.

Jason Wolff is a McKnight Presidential Fellow, an Associate Professor, and the Autism Spectrum Disorder certificate coordinator at the University of Minnesota. His work is focused upon the intersection of brain, behavior, and intervention as it pertains to sensorimotor development and restricted and repetitive behaviors in the first years of life. His current goals for his lab, funded inpart by the National Institute of Mental Health, are to leverage behavioral and brain imaging data to characterize factors associated with the early emergence of core features of autism. The ultimate goal of this work is to inform novel approaches to very early intervention.

SUMMIT ORGANIZERS

The Summit on the Neuroscience of Twice-Exceptionality is a collaboration between the Belin-Blank Center for Gifted Education and the Iowa Neuroscience Institute, which includes the Michaelson Lab.

The Roy J. Carver Charitable Trust has committed a transformational \$45 million grant to the University of Iowa that allowed for the creation of a comprehensive and cross-disciplinary neuroscience center within the Carver College of Medicine. Led by Ted Abel, PhD, the Iowa Neuroscience Institute conducts research to find the causes of — and preventions, treatments, and cures for — the many diseases that affect the brain and nervous system.

The Michaelson Lab is interested in the use of computing to improve the understanding, diagnosis, monitoring, and treatment of neuropsychiatric and neurodevelopmental conditions. To do this, they build predictive models that draw on a wide variety of data types: including genomics, medical records, imaging, body movement, and standardized test scores, among many others. The lab has extramurally-supported research programs involving computational methodology, human subjects research, and animal models. For more on the lab, please visit 2e.devgenes.org.

- Jake Michaelson, PhD
- Lucas Casten
- Sydney Kramer

The mission of the Belin-Blank Center is to empower and serve the international gifted community through exemplary leadership in programs, research, and advocacy. The Belin-Blank Center:

- Identifies gifted, talented, and artistic learners;
- · Offers specialized educational opportunities for students;
- Increases awareness and use of acceleration to enhance learning;
- Provides assessment, counseling, and consultation services;
- · Develops curriculum resources and materials;
- · Facilitates the professional development of educators;
- Disseminates information through conferences and publications;
- · Enhances educational opportunities through technology;
- · Collaborates with the worldwide gifted community;
- Promotes access, diversity, and equity in developing talent in accordance with the University of Iowa's Diversity, Equity, and Inclusion plan.

The Belin-Blank Center Staff

Directors

Susan Assouline, Ph.D., Endowed Chair in Gifted Education, Director

Laurie Croft, Ph.D., Clinical Professor, Associate Director for Professional Development

Brian Douglas, M.B.A., Assistant Director, Finance, Operations & Technology

Megan Foley-Nicpon, Ph.D., Professor & DEO, Associate Director for Research and Clinic

Jan Warren, M.A., Assistant Director, Student Services

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Ann Lupkowski-Shoplik, Ph.D., Administrator for Acceleration Institute

Duhita Mahatmya, Ph.D., Associate Research Scientist

Katie Schabilion, Ed.S., Ph.D., Licensed Psychologist

Administrative Associates

Stephanie Lynch, Ph.D., Research Assistant Noah Doershuk, B.S., Programmer Intern **Belin-Blank Center for Gifted Education and Talent Development**

The Belin-Blank Center is one of the most comprehensive gifted and talented centers in the world.



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- Courses and Workshops •
- Iowa Licensure Renewal Units
 - Chautauqua •
 - Belin Fellowship •
 - AP Summer Institute •

Much more!

For more information \rightarrow belinblank.org/educators



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Where bright minds are home

IN-PERSON AND ONLINE

You're not the average student. <u>We're not the average summer program.</u>

We offer: Art Writing STEM Social Sciences



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Your DNA could help us better understand the genetics of cognitive and intellectual abilities, like giftedness.

If you or your child is in a gifted and talented program, we invite you to join our genetic research study! Please contact us at info@devgenes.org.

All gifted individuals are eligible for our study, particularly if you have also been diagnosed with one of the following neurodevelopmental conditions:

- Autism (including Asperger syndrome)
- Language impairment
- Learning disability

Learn more!

Visit www.devgenes.org





INVITING APPLICATIONS FOR THE ACADEMY FOR TWICE-EXCEPTIONALITY

A newly designed program for neurodiverse students with very high academic potential (twiceexceptional) who will enter the University of lowa in the Fall of 2021. 10 WA

Who is eligible?

Entering first-year students who are eligible for the Honors Program.

Is there a focus on a specific type of neurodiversity?

Yes, college-bound students with Autism Spectrum Disorder (ASD) or who identify as Autistic.

What office administers the Academy for Twice-Exceptionality?

The Belin-Blank Center (B-BC), in collaboration with other UI offices, including Student Disability Services, is the administrative home. The B-BC is renowned for its expertise in talent development, psychoeducational support, and advocacy of high ability and twice-exceptional students through the administration of a broad range of student talent development programs, clinical services, professional development, and research.

What is the primary goal of the Academy for Twice-Exceptionality?

To contribute to a positive and fulfilling college experience through a focus on nurturing students' talents while also creating a sense of community and helping students connect with resources from the Belin-Blank Center, the University of Iowa, and the broader community.

What are the main features of the Academy for Twice-Exceptionality?

Fostering independence and success across academic, social, emotional, career, and community engagement aspects of life. This includes:

- A designated living community with its own Resident Assistant (RA) in Daum Residence Hall, the Honors Residence Hall.
- · Weekly seminars on self-efficacy and adjusting to university life.
- Opportunities to build adaptive functioning skills.
- Individualized support in navigating the university, facilitating access to support services on campus including mental health services and career counseling, organizing social activities, and maintaining regular communication between the Academy and parents.



How do I apply?

Email: 2e-academy@belinblank.org Phone: 319-335-6148 or 800-336-6463

More info 🔶 belinblank.org /2eacademy/