The Wallace Research Symposium

on Talent Development

Honoring the Legacy of
Julian C. Stanley

April 29–May 1, 2018

Mt. Washington Conference Center
Johns Hopkins University
Baltimore, MD

Co-sponsored by the
University of Iowa
Belin-Blank Center,
Johns Hopkins Center
for Talented Youth, and
the Vanderbilt University
Study of Mathematically
Precocious Youth
H.B. and Jocelyn Wallace strongly believed that the future of America rested with its young people and that students of exceptional educational promise should have every opportunity to develop their talents and then use these talents to better society.

A generous endowment from the Wallace Research Foundation makes possible the Wallace Research Symposia on Talent Development. This twelfth symposium provides an opportunity for researchers from around the world to present their current work on talent development, creativity, and gifted education and serves as a catalyst to all for innovative programming and policy.

Henry B. (H.B.) Wallace was an exceptionally gifted individual and used his talents to enhance society. His talents led to extraordinary success in business. H.B. and his wife, Jocelyn, deeply cared about students and the future of American education and demonstrated this caring by their outstanding support of the Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development (Belin-Blank Center) at The University of Iowa.

H.B. and Jocelyn strongly believed that the future of America rested with its young people and that students of exceptional educational promise should have every opportunity to develop their talents and then use these talents to better society. The Wallace family also has supported the Belin-Blank Center Recognition Ceremony, which is held annually on The University of Iowa campus. This major event recognizes some of the very best students selected for Belin-Blank Center programs, including our talent search. At the Recognition Ceremony, each honored student can select for recognition a teacher who has had a profound impact on his/her life.

In addition to the Wallace Research Symposium, H.B. and Jocelyn's support also has established the Wallace Assessment and Counseling Clinic in the Belin-Blank Center. This clinic provides assessment for students, counseling for families, as well as consultations to schools. The Assessment and Counseling Clinic has earned an exceptional reputation for its work in the area of twice-exceptionality.
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and the Vanderbilt
University Study
of Mathematically
Precocious Youth
Dear Participant of the 12th Wallace Research Symposium,

Welcome to the 2018 Wallace Research Symposium on Gifted Education and Talent Development. The 2018 Wallace Symposium is located on the Mount Washington Campus of Johns Hopkins University and co-hosted by the University of Iowa, Johns Hopkins University, and Vanderbilt University.

The first 10 symposia, hosted by the University of Iowa Belin-Blank Center, were located on the University of Iowa campus in Iowa City, IA. We recognize that there is still considerable nostalgia associated with previous Wallace Symposia located on the UI campus. However, as education deans, we also know the benefits of expanding our approach, and we are delighted that our three universities have combined resources for this special symposium. Co-hosting in collaboration broadens the reach of any one institution and strengthens the bonds of collaboration.

The Wallace Symposium, initiated by the generosity of the H.B. and Jocelyn Wallace Research Symposium endowment, has expanded since it was first conceptualized in the early 90s through additional sponsorship from university colleagues. We thank all of the organizations that have helped with the sponsorship of the 12th Wallace Research Symposium on Talent Development.

The Wallace Symposium has evolved over the decades. However, the fundamental purpose of the symposium remains the same: to provide an intimate and intensive setting where research on talent development is the focus. Whether you are a participant, a presenter, or both, we feel confident that you will benefit tremendously from this experience, which will have an immediate and long-lasting impact on education.

As the deans of the three institutions that are hosting the symposium, we extend our warmest wishes for a successful event. We know that all of the planning and preparations have set the stage. We welcome your active participation and know that you will leave with a renewed sense of commitment to the research that is so critical to education.

Sincerely,
Daniel L. Clay, Dean
University of Iowa College of Education

Christopher Morphew, Dean
Johns Hopkins School of Education

Camilla P. Benbow
Patricia and Rodes Hart Dean of Education and Human Development
Peabody College
Vanderbilt University
Dear Participant of the 12th Wallace Research Symposium,

We are pleased that you have chosen to attend the 12th Wallace Research Symposium, co-hosted by the University of Iowa, Johns Hopkins University, and Vanderbilt University. Each Wallace symposium offers a special aura and leaves a unique impression. This 12th symposium is extraordinary because, for the first time, we have a theme associated with the Wallace Symposium: honoring the legacy of Julian C. Stanley. Given this theme, we can think of no better location than JHU to host the symposium, and we are delighted that you are joining us.

The faculty and staff of the UI Belin-Blank Center and JHU Center for Talented Youth have been planning for this event since 2016. The extensive planning and organization has resulted in a program that will laud the impact of Julian Stanley, founder of the Talent Search Model, while encouraging everyone to examine current research findings and explore new avenues for research and the implications for policy.

We are confident that the extensive planning by the staff of the Belin-Blank Center and the Center for Talented Youth will be rewarded by your active participation. We are grateful to our colleagues for their tireless dedication to the success of the Wallace Symposium. If you have attended any of the previous symposia, you know what awaits you. If you are a first-time attendee, you have likely heard about the impact and we are convinced that you will benefit tremendously.

The year 2018 marks the 100th anniversary of Julian C. Stanley’s birth. We hope that you will not only enjoy the reflections on the past efforts that brought us to this point in time, but will feel energized by the future possibilities. We welcome you to the 12th Wallace Symposium and to Baltimore.

Susan Assouline     Elaine Hansen
Director     Executive Director
University of Iowa Belin-Blank Center     Johns Hopkins Center for Talented Youth
Special thanks to the sponsors of the Wallace Research Symposium on Talent Development

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Jodie Mahony Center for Gifted Education

#WallaceSymposium
WI-FI

Select the SSID (wireless network) “JHGuestnet” or “ConferenceGuest” depending on your location in the facility. Agree to the terms of the use for the wireless network by entering an email address in the box provided at the bottom. Click Accept, and you will be connected.

Wi-Fi sponsored by Davidson Institute for Talent Development

PARKING

The Mt. Washington Conference Center is located at 5801 Smith Avenue, Baltimore, MD 21209. As you approach the area, turn left at the light onto Falls Road, left at the light onto Kelly Ave, veer right onto Greely Avenue. Head straight into the Mt. Washington Conference Center. Follow driveway; turn at the second left and park in guest parking lot. There is no charge for parking. Enter the building marked Mt. Washington Conference Center.

SHUTTLE BUS BETWEEN RADISSON CROSS KEYS AND THE MT. WASHINGTON CONFERENCE CENTER

A 42-passenger shuttle bus, provided by American Limousines, will be available to transport guests from the Radisson Cross Keys to the Mt. Washington Conference Center and back again during the following hours:

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REGISTRATION AND CHECK-IN

Symposium registration and check-in will be located at the built-in registration desk in the lobby of McAuley Hall.

Registration Fees

- Full Conference: $425 (includes scheduled receptions, two breakfasts, and lunch)
- Sunday Only: $125 (includes scheduled reception)
- Monday Only: $275 (includes breakfast, lunch, refreshment breaks, and scheduled reception)
- Tuesday Only: $125 (includes breakfast)

Registration/Check-In Hours

- Sunday, April 29: 2:00 PM – 3:30 PM
- Monday, April 30: 7:00 AM – 9:00 AM
- Tuesday, May 1: 7:00 AM – 9:00 AM

Special thanks to the Duke Talent Identification Program (TIP) for their sponsorship of graduate students attending the Wallace Symposium.

UNIVERSITY ACADEMIC CREDIT

Participants at the Wallace Research Symposium may enroll for one semester hour of academic credit through the University of Iowa and are eligible for a 50% tuition scholarship. Ask about this option at the registration desk. Details at belinblank.org/educators, then click on Schedule.

HOTELS

- Radisson Cross Keys Hotel phone: 1-410-532-6900
- Mt. Washington Conference Center Hotel phone: 1-410-735-7964

LUGGAGE STORAGE

On Tuesday, we recommend that anyone staying at the Radisson Cross Keys leave their bags at the Radisson. Those who bring their luggage with them to Mt. Washington can leave it with the Mt. Washington hotel desk.

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 contact the Office of Equal Opportunity and Diversity, (319) 335-0705. Questions? Contact Us.
SUNDAY, APRIL 29, 2018

Presentations, Panel, and Discussion will take place in Pullen Plaza

2:00 – 3:30 PM  Registration Open

3:30 – 4:00 PM  Wallace Symposium Opening Session and Welcome
Elaine Hansen, Johns Hopkins University
Chris Morphew, Johns Hopkins University
Camilla Benbow, Vanderbilt University
Dan Clay, University of Iowa
Susan Assouline, University of Iowa

4:00 – 4:45 PM  Julian C. Stanley Distinguished Lecture
Joyce VanTassel-Baska, William and Mary
Lecture sponsored by Vanderbilt University Study of Mathematically Precocious Youth

4:45 – 5:00 PM  Break

5:00 – 5:45 PM  Keynote Presentation
Ron Lake, Advisory Council, Center for Talented Youth

5:45 – 6:30 PM  Panel Presentation
Linda Brody, Moderator
Joseph Bates
Jason Eisner
Lynn Fox
Nancy Robinson

6:30 – 8:30 PM  Wallace Opening Reception, North and South Dining Terrace
Reception co-sponsored by University of Iowa College of Education, Johns Hopkins University College of Education and Peabody College of Vanderbilt University

MONDAY, APRIL 30, 2018

7:00 – 9:00 AM  Registration Open (Lobby of McAuley)

7:30 – 8:15 AM  Breakfast, Chesapeake Galley

8:30 – 9:15 AM  Keynote Presentation, Pullen Plaza
Camilla Benbow
David Lubinski

9:15 – 9:35 AM  Keynote Response
Matt Makel, Respondent followed by audience questions

9:45 – 10:00 AM  Break

10:00 – 10:45  Special Breakout Presentations (Rooms 18, 19, 200, 202)

10:45 – 11:15  Refreshment Break – Chesapeake Galley
MONDAY, APRIL 30, 2018 (CONTINUED)

11:15 AM – 12:00 PM  Keynote Presentation, Pullen Plaza
                     Jonathan Plucker

12:00 – 12:30 PM  Keynote Response
                     Myles Mendoza
                     Julia Link Roberts

12:30 – 1:30 PM  Lunch, North and South Dining Terrace

1:30 – 2:30 PM  Poster Presentations, Mt. Washington Room (3rd Floor)
                     Poster Session and Desserts Sponsored by the Jack Kent Cooke Foundation

2:45 – 3:30 PM  Special Breakout Presentations (Rooms 18, 19, 200, 202)

3:30 – 4:45 PM  Concurrent Presentations (Rooms 18, 19, 31, 33, 200, 202)

5:00 – 6:00 PM  Keynote Presentation, Pullen Plaza
                     Michele Root-Bernstein
                     Robert Root-Bernstein
                     Presentation sponsored by Johns Hopkins Center for Talented Youth

6:15 – 8:15 PM  Reception, North and South Dining Terrace

TUESDAY, MAY 1, 2018

7:30 – 8:30 AM  Breakfast, Chesapeake Galley

8:30 – 9:15 AM  Keynote Presentation, Pullen Plaza
                     Paula Olszewski-Kubilius
                     Rena Subotnik
                     Frank Worrell

9:45 – 10:30 AM  Special Breakout Presentations (Rooms 18, 19, 200, 202)

10:30 – 11:00 AM  Refreshment Break
                     Sponsored by the Jodie Mahony Center for Gifted Education,
                     University of Arkansas at Little Rock

11:00 – 11:45 AM  Keynote Presentation, Pullen Plaza
                     Joseph Renzulli

11:45 AM – 12:15 PM  Response to Keynote Presentation
                     Sally Reis
                     Joyce VanTassel-Baska
                     Nicholas Colangelo
2:00 PM – 3:30 PM  Registration (Lobby of McAuley) 
All Presentations, Panel, and Discussion on Sunday, 4/29/18, will take place in Pullen Plaza

3:30 PM – 4:00 PM  Wallace Symposium Opening General Session and Welcome
Elaine Hansen, Johns Hopkins University, Baltimore, MD
Chris Morphew, Johns Hopkins University, Baltimore, MD
Camilla Benbow, Vanderbilt University, Nashville, TN
Dan Clay, University of Iowa, Iowa City, IA
Susan Assouline, University of Iowa, Iowa City, IA

4:00 PM – 4:45 PM  Julian C. Stanley Distinguished Lecture
The Lasting Influence of Julian Stanley on Gifted Education from Research to Practice to Policy
Joyce VanTassel-Baska, William and Mary, Williamsburg, VA

Lecture sponsored by the Study of Mathematically Precious Youth at Vanderbilt University

This Julian C. Stanley lecture features the impact of the work Julian Stanley started in the early 1970s in talent search and development. Key research findings, policy initiatives, and practice innovations emanating from Stanley’s seminal work will be highlighted, with a special focus on research and development of differentiated curriculum and instruction in schools. The lecture concludes with a set of remaining challenges facing the field of gifted education.

THE JULIAN C. STANLEY DISTINGUISHED LECTURERS

2002  Professor David Lubinski, Vanderbilt University, Nashville, TN
2004  Professor Emeritus Arthur R. Jensen, University of California, Berkeley, CA
2006  Professor and Dean Camilla Persson Benbow, Vanderbilt University, Nashville, TN
2008  Professor Emeritus James J. Gallagher, University of North Carolina, Chapel Hill, NC
2010  Professor Emerita Nancy Robinson, University of Washington, Seattle, WA
2014  Professor and Director Emeritus, Dean Emeritus Nicholas Colangelo, University of Iowa, Iowa City, IA
2018  Smith Professor Emerita Joyce VanTassel-Baska, William and Mary, Williamsburg, VA
Dedication to Julian C. Stanley
The Life and Work of an Extraordinary Individual

Professor Julian C. Stanley enjoyed a stellar career in academe as an educational measurement specialist and research methodologist from 1949 to 2005. Motivated by the desire to help students with exceptional abilities in math and science achieve their potential, his pioneering efforts revolutionized the field of gifted education and impacted the lives of countless profoundly gifted young people in the United States and abroad. Dr. Stanley's contributions to the fields of educational psychology and gifted education, and more broadly, to humanity, were extraordinary.

Dr. Stanley devoted his long professional life to helping students who reasoned extremely well mathematically. He employed what was then considered a radical approach—the use of challenging above-level tests to identify precocious reasoning ability and advanced achievement. The efficacy of using the SAT out-of-level prompted Dr. Stanley in 1972 to pioneer the concept of systematic annual academic talent searches. Today, regional talent searches based at Johns Hopkins, Duke, and Northwestern Universities, as well as at many additional sites including the University of Iowa, test tens of thousands of students annually in grades 2-9 to identify exceptional mathematical, verbal, and/or scientific reasoning abilities. Through his groundbreaking Study of Mathematically Precocious Youth (SMPY), started in 1971, and through the talent search programs he helped launch, Dr. Stanley and his colleagues have established a variety of programmatic efforts to serve gifted students and contributed vastly to our understanding of their needs through much research.

It is rare in our society that educational theory and practice come together in the work of one individual. Dr. Stanley developed the theories, but he also performed the hard work of translating theory into practice. Dr. Stanley was a distinguished faculty member at three major American universities. Over the years, he was recognized for his prolific achievements in many ways. Among the highlights of his career, he served as president of the American Educational Research Association, the National Council on Measurement in Education, and the Divisions of Educational Psychology and of Evaluation and Measurement of the American Psychological Association. He also earned numerous accolades, including membership in the National Academy of Education and the first Mensa Education and Research Foundation's Lifetime Achievement Award for his contributions to gifted education.

In 2002, in recognition of the outstanding contributions of this remarkable person, the Belin-Blank Center established the Julian C. Stanley Distinguished Lecture as a permanent part of the Wallace Research Symposium on Talent Development. The Distinguished Lecture is delivered by an internationally recognized scholar and serves as a tangible tribute to the lifelong work and dedication of Professor Stanley.
4:45 – 5:00 Break

5:00 PM – 5:45 PM  Keynote Presentation
Who was Julian Stanley before He Became Julian Stanley?
Ron Lake, Advisory Council, Center for Talented Youth, Baltimore, MD

Julian Stanley’s early years foreshadowed key concepts he applied in developing the Study of Mathematically Precocious Youth (SMPY): precocity, identification, acceleration, advocacy, testing, mentoring, and recognition. Stanley grew up in a small working class town outside Atlanta. Although the community was indifferent if not hostile towards academics, Stanley valued the straightforward curriculum of his elementary school. Stanley entered college at 16, where he discovered an interest in psychology and intelligence testing. At age 19, Stanley began teaching high school math and science to students not much younger. After serving in WWII, Stanley used the G.I. Bill to earn graduate degrees in experimental and educational psychology at Harvard. “Terrified” of Harvard’s aura, Stanley studied hard and was greatly surprised when he did better than a classmate with a prestigious pedigree. Thus, he learned that academic talent can come from anywhere. Performing extremely well on statistics exams at Harvard brought Stanley to the attention of Professor Kelley, a statistician who had worked with Terman, and Rulon, who specialized in testing and experimental design. Aside from rigorous training in statistical analysis, Stanley got something else at Harvard: recognition and mentoring, which became important facets of SMPY and the Study of Exceptional Talent (SET).

5:45 PM – 6:30 PM  Panel Presentation
Linda Brody, Moderator, Johns Hopkins University, Baltimore, MD
Joseph Bates, Singular Computing, LLC, Newton, MA
Jason Eisner, Johns Hopkins University, Baltimore, MD
Lynn Fox, Dean Emerita, School of Education, American University, Washington, DC
Nancy Robinson, Professor Emerita, University of Washington, Seattle, WA

6:30 PM – 8:30 PM  Wallace Opening Reception, North and South Dining Terrace
Co-Sponsored by University of Iowa College of Education, Johns Hopkins College of Education, and Vanderbilt University Peabody College of Education
7:00 AM – 9:00 AM  Registration Open, Lobby Area of McAuley
7:30 – 8:15 AM  Breakfast, Chesapeake Galley
8:30 AM – 9:15 AM  Pullen Plaza
                  Keynote Presentation
                  Finding and Nurturing Exceptional Intellectual Talent:
                  Its Long-Term Impact Over 45 Years
                  Camilla P. Benbow, Vanderbilt University, Nashville, TN
                  David Lubinski, Vanderbilt University, Nashville, TN

SMPY, now at Vanderbilt University, has been conducting a 50-year longitudinal study of a sample of over 3,000 individuals who participated, at around age 13, in the SMPY-conducted and pioneering talent searches in the 1970’s and early 1980’s at Johns Hopkins. Five of the most important findings for gifted education to have emerged from the SMPY study, which is now past its 45th year, will be presented. The top five include: no threshold effect for ability (more is better); pattern of specific abilities matter for education and career outcomes as do interests (no multi-potentiality); the talented and creative knowledge-workers needed by our conceptual economy can be identified at age 12 (overall the SMPY participants went on to achieve highly in life); gifted males and females weigh the importance of work, family, and personal priorities differently as they construct a satisfying life for themselves; and, educational interventions on behalf of gifted students have both short-term and long-term positive benefits.

9:15 AM – 9:35 AM  Pullen Plaza
                    Respondent to SMPY Keynote
                    Matthew Makel, Duke University, Durham, NC

9:45 AM – 10:00 AM  Break

10:00 AM – 10:45 AM  Room 33
                      Preparing for Psychological Heterogeneity by Identifying Gifted Students’ Confidence in STEM and non-STEM Disciplines
                      Colm O’Reilly, Centre for Talented Youth, Dublin City University, Dublin, Ireland

This study clustered gifted Irish Talent Search adolescents (N = 477) according to their self-reported confidence in learning in STEM and non-STEM disciplines. We conducted Hierarchical cluster analysis on responses to the questions “How well can you learn” for multiple subjects. A 3-cluster solution was selected. Well-Rounded Superstars (n = 219) had high self-efficacy in all academic topics. The Math Confident cluster (n=167) was confident in ability to learn math and algebra, but less confident in sciences and humanities. The Math Insecure cluster (n = 92) had low confidence in ability to learn math and algebra, but were confident in science and humanities. Well-Rounded Superstars were evenly divided among the genders and significantly more extraverted and conscientious. The distribution of females across the clusters indicates many have the potential to pursue occupations requiring STEM skills, especially in the Superstars cluster; however, Math Confident females may be at risk of losing interest. Identifying students’ confidence in their abilities may be a relatively simple way to support individual differences among learners.
Block Building as a Promising Tool for Early Spatial Cognitive Assessment

Amy Lynne Shelton, Johns Hopkins University, Baltimore, MD
Barbara Landau, Johns Hopkins University, Baltimore, MD
Gregory Hager, Johns Hopkins University, Baltimore, MD
Cathryn Cortesa, Johns Hopkins University, Baltimore, MD

Spatial reasoning skills allow us to think and reason about the relationships among entities in real or imagined spaces. These skills are critical to our daily interactions with the world, and there is considerable evidence that early-developing skills predict aspects of later academic and career achievement, especially in science, technology, engineering, and math or STEM-oriented fields. This suggests that we may be able to use our understanding of early-developing spatial skills to develop tools that assess a child’s potential academic ability, including alternative assessments for students coming from communities with more limited educational opportunities.

Our work focuses on fundamental research on one of the earliest windows into children’s spatial reasoning abilities—block building. Block building is an excellent candidate for assessing spatial skills in young children because it is familiar, readily available, and shows demonstrable individual differences—even young children seem to show a range from novice to expert builder. However, it is also a remarkably complex cognitive task, and its utility as an assessment tool rests in this complexity. Presenters highlight exciting preliminary results on adults and children and how they are offering rich new insights into the assessment of early spatial ability.

The Identification Gap: When Just as Good Isn’t Enough

Betsy McCoach, University of Connecticut, Storrs, CT
Del Siegle, University of Connecticut, Storrs, CT

Historically, the field of gifted education has failed to identify and serve culturally, linguistically, and economically diverse (CLED) students (Borland, 2005). Educational research has demonstrated the existence of achievement gaps between high and low SES students, between Black and White students, and between English learners and native English speakers. Major national focus has been placed on the development of programs and interventions to eliminate the achievement gap. Recently, Plucker and colleagues documented the existence of achievement gaps among high ability students. As part of our work at the National Center for Research on Gifted Education, we examined extant student-level data from three states to determine whether there exists another gap that further disadvantages traditionally underserved students: an identification gap. Unlike most prior studies, we controlled for prior math and reading achievement as well as demographic factors at the individual, school, and district levels. Our findings indicate that in 2 of the 3 states, traditionally underserved students are less likely to be identified as gifted, even after controlling for student achievement, free-lunch status, and school and district demographics. We also surveyed districts regarding their identification procedures and linked the survey data to the student achievement data. We
then examined whether district identification policies and practices appeared to moderate the identification gaps. Finally, we examined whether the distribution of gifted students across the district moderated identification gaps.

10:00 AM – 10:45 AM Room 200

**Competition’s Role in Developing Psychological Strength**

Rena Subotnik, Center for Gifted Education Policy, American Psychological Association, Washington, DC

Frank Worrell, University of California, Berkeley, CA

Jonathan Plucker, Johns Hopkins University, Baltimore, MD

Paula Olszewski-Kubilius, Northwestern University, Evanston, IL

Megan Foley-Nicpon, University of Iowa, Iowa City, IA

Does competition have a positive or negative influence on talent development and psychological well-being? Should competition have a role in preparing gifted children to achieve in adulthood, or should it be avoided? The presenters take on the challenge of exploring what is “good, bad, and ugly” about competition from the perspective of fostering both psychological strengths and high performance. They will make recommendations about ameliorating the negative effects of competition, and explore the position that helping children prepare for competition can be useful for promoting adaptive youth development. The presenters will draw on research from sport, organizational settings, and academic domains to demonstrate how competition has been linked to enhanced performance and illustrate how positive relationships to competition can be fostered with mentors and other interventions. They will explore competition’s relationship to creativity. A major component of the session will be to elicit ideas from a set of panelists and audience members on facilitating the implementation of constructive competition in gifted education and talent development settings. The goal is to provide a session that results in a more nuanced view of competition as an instructional tool.

10:00 AM – 10:45 AM Room 202

**Leadership Considerations to Improve Gifted Identification and Talent Development for Historically Marginalized Students in Rural Settings**

Norma Hafenstein, University of Denver, Denver, CO

Kristina Hesbol, University of Denver, Denver, CO

Rachel E. Taylor, University of Denver, Denver, CO

Right4Rural, an ongoing, Javits-funded research study, aims to increase identification of and service to traditionally underrepresented gifted students in rural remote areas of a Western state. Rural Administrative Units (AU’s) identify gifted students at a lower rate than urban districts while the state faces challenges in identifying traditionally underrepresented groups. Right4Rural addresses this problem of practice through analysis of how school-based leadership support can foster talent development. Using both quantitative and qualitative research methods, we examined the primary research question, “What factors influence the identification of racially, culturally, and linguistically diverse gifted students in rural contexts?” Survey data indicated positive shifts in leadership attitudes and qualitative data suggests a positive change in identification, leadership qualities and cultural proficiency. Empirical evidence demonstrates Right4Rural’s impact with implications for practice and policy.
10:45 AM – 11:15 AM  Refreshment Break, Chesapeake Galley

11:15 AM – 12:00 PM  Pullen Plaza  
Keynote Presentation:  
The Current Status and Necessary Future of Gifted Education Policy  
Jonathan Plucker, Johns Hopkins University, Baltimore, MD

The field of gifted education has experienced significant gains in our understanding of how policy works, how it can be crafted to benefit advanced learners, and how attempts to influence the creation of helpful policy can be structured and implemented. However, the field’s policy research is still early in its development, and we have much work yet to do. This talk will review our recent progress and corresponding lessons learned, and then note specific areas where the field needs urgent policy research and advocacy to strengthen our efforts to meet the needs of advanced students.

12:00 – 12:30  Pullen Plaza  
Respondents to Keynote  
Myles Mendoza, One Chance Illinois, Chicago, IL  
Julia Link Roberts, Western Kentucky University, Bowling Green, KY

12:30-1:30 PM  Luncheon  
North and South Dining Terrace (Food in Chesapeake Galley)

1:30 PM – 2:30 PM  Poster Presentations and Dessert, Mt. Washington Room  
3nd Floor of McAuley — Use elevator or stairs  
Poster presentations and dessert sponsored by the Jack Kent Cooke Foundation  

Poster Number 1  
Psychological Constellations Foreshadowing Eminence:  
A Four-Decade Longitudinal Study  
Brian Bernstein, Vanderbilt University, Nashville, TN  
David Lubinski, Vanderbilt University, Nashville, TN  
Camilla Benbow, Vanderbilt University, Nashville, TN

How early can different types of potential intellectual leaders be identified? Previous work on intellectually talented youth has used discriminant functions to predict college degrees and occupations in different domains, but do these early assessments and functions apply to genuine eminence in their careers? More specifically, can we capture early antecedents of intellectual eminence by validating them against ultimate criteria (Thorndike, 1949)? Examples of the ultimate outcomes used in this study include full professorships in the humanities, social sciences, and STEM at R1 universities; leadership roles in medicine; and executive roles in Fortune 500 companies.
Discriminant functions developed in earlier research were used on two different samples to test whether abilities and interests were distinctive enough at an early age to hold prophesy across different creative/leadership domains. One sample of 677 intellectually precocious youth was measured on abilities and interests in adolescence, and their discriminant functions were used to predict leadership and creative accomplishments 35 years later. Another sample of 599 top STEM graduate students was similarly assessed during their first two years of graduate school. The discriminant functions developed on young adolescents maintained predictive validity in this sample by differentiating leaders in STEM from their graduate student peers who are pursuing other endeavors 25 years later.

002 From McClelland to Mindset: Status of Research on Motivation and Gifted Students
Pamela Clinkenbeard, University of Wisconsin-Whitewater, Whitewater, WI

In a chapter on intellectual precocity, Julian Stanley (1974) urged parents to demand from their gifted children’s schools that they “…do feasible, sensible things to prevent [the] atrophy of intellectual motivation.” What are some of those feasible and sensible things, and what is the status of the research base on gifted students and motivation?

An understanding of how motivation theory and research applies to gifted students’ development and learning can help us construct appropriate classroom and home environments to optimize their learning, and design strategies to enhance their intrinsic desire to understand (Clinkenbeard, 2014). An overview of the psychological and educational research on motivation is followed by implications and research-based strategy recommendations for supporting motivation and for preventing underachievement and “atrophy of intellectual motivation” in gifted students.

From McClelland and colleagues in the 1950’s (1958) to cognitive science and affective neuroscience questions today, research on student motivation is an important foundation on which to build as we work to help gifted students reach their promise. The emphasis is less on “how to motivate gifted students,” and more on providing a psychological research perspective on how to structure teaching and learning to enhance gifted students’ motivation to learn. Motivation concepts and theories to be addressed include achievement motivation, intrinsic vs. extrinsic motivation, pros and cons of competitions and reward, perfectionism and attribution theory, Csikzentmihalyi’s concept of flow, Dweck’s mindset (goal-orientation) research, and self-regulation. In each case, unique results and implications for gifted participants will be highlighted. Where data are available, specific strategies for uncovering and enhancing gifted students’ passion for learning will be presented. In addition, emerging research connections between educational neuroscience and motivation of the gifted will be presented, particularly with respect to brain plasticity and the need for appropriate challenge in the development of executive function skills in young children (Clinkenbeard, 2012).
004 Radical Acceleration: A Success Story
Jason Gorgia, Loudoun County Public Schools, Ashburn, VA

This is the story of a student whose extraordinary abilities and needs, uncommon even in a large school district that has served over 1 million students, were eventually matched at the county and school level by appropriate responses that facilitated great personal and academic success, including recent early entrance to the elite university of his choice. Decision-makers employed multiple forms of academic acceleration almost as if they felt compelled to do so, in addressing such a remarkably atypical situation. The boy enrolled in a highly popular math camp for the best young math students in a large suburban area. His story illustrates an important question: How do you use both research and instinct to meet the needs of a once-in-a-career student for whom traditional schooling and even many gifted programs are entirely ill-suited? This experience turned out to be a model of what can happen when parents, teachers, and administrators work together and are willing to engage in out-of-the-box thinking in a genuine attempt to support a student’s profound intellectual and social-emotional needs.

005 Einstein or Columbine: Impact of School Environment on Gifted Students’ Socio-Affective Development
Rebekah Granger Ellis, University of New Orleans, New Orleans, LA
Richard Speaker, Jr., University of New Orleans, New Orleans, LA
Pat Austin, University of New Orleans, New Orleans, LA

The spotlight on violence by bright individuals questions why some gifted minds thrive in life and others fail to fulfill their potential. Unique characteristics distinguish gifted individuals; these may appear as strengths, but there is the potential for problems to accompany them. Although many thrive in their school environments, some struggle rather than flourish. Therefore, it is important to examine the long-term effects of participation in various programs on the socio-affective development of gifted adolescents. Also of interest is whether socio-affective characteristics of gifted students are similarly as advanced as their intellectual capabilities.

Results of this longitudinal study provide insight into whether a particular school environment or curriculum can lead to differences in gifted adolescents’ developmental profiles. Examining development in these socio-affective domains can provide insight into why some gifted children are not always successful in adulthood despite advanced IQ scores. Particularly whether nonintellectual development of gifted individuals, such as emotional, social and moral capabilities, are as advanced as their intellectual abilities and how these relate to each other. This longitudinal study examines several gifted education programs (school for creative and talented arts, inner-city and urban charter, and public rural and suburban) for socio-affective psychological development and whether a particular program encourages developmental growth. This research study incorporates a quantitative component: pre-, mid-, and post-tests.
for socio-affective development and a qualitative component: interviews and school culture artifacts. Understanding socio-affective development patterns is fundamental to curriculum design. Examining how they acquire nonintellectual abilities, such as ethical decision making, intrapersonal abilities, interpersonal abilities, adaptability, stress management, and positive impression within a variety of school contexts and environments can help stakeholders (researchers, policymakers, curriculum developers, school districts, administrators, teachers, and parents) make decisions to best support gifted socio-affective development.

006 How Ability Grouping Impacts K-12 Students’ Academic Achievement and Psychosocial Development: A Meta-Analysis of Current Research
Saiying Steenbergen-Hu, Northwestern University, Evanston, IL
Paula Olszewski-Kubilius, Northwestern University, Evanston, IL

Ability grouping is an educational practice that involves placing students into different schools, classrooms or small groups, based on their initial achievement levels, skills, readiness, or abilities (Slavin, 1990). Ability grouping affects many aspects of students’ experiences in school including the curricula they receive, the peers with whom they learn, and how teachers deliver instruction (Domina et al., 2016). Steenbergen-Hu, Makel, and Olszewski-Kubilius (2016) conducted a second-order meta-analysis on 13 meta-analyses on the academic impact of ability grouping between the 1980s and 2016 (e.g., Slavin, 1987, 1990, 1993). They found that there is an imminent need for a new meta-analysis as existing meta-analyses of the academic effects of ability grouping are outdated and evidence on psychosocial impacts of ability grouping has not been reviewed meta-analytically. In addition, a growing body of new research has appeared in recent years as ability grouping regained favor from the early 2000s. We have preliminarily identified 73 eligible studies. These studies include 7 randomized experimental, 37 quasi-experimental longitudinal, 22 quasi-experimental cross-sectional, and 7 other studies.

The new meta-analysis on ability grouping will address the following questions:

1. Does ability grouping promote or hinder children and adolescents’ academic achievement and psychosocial development?

2. Does ability grouping have differential impacts on students of varied initial achievement or ability levels?

3. How do different types of ability grouping differ in their effectiveness?

4. How does ability grouping relate to children and adolescents’ academic learning and psychosocial development in conjunction with confounding factors such as course differentiation, content coverage, instruction time, peer effects, class size, teacher experience, and school characteristics?
Tension in Career Decision-Making for Rural Adolescents with Gifts and Talents
Kristen Seward, Purdue University, West Lafayette, IN

Few would argue that the career awareness, career exploration, and career preparation activities undertaken by K-12 students are meaningful and important in preparing students for life after high school. Even high school students themselves value career planning (Bloxom et al., 2008), often finding that this task makes their education more relevant and personal (Dunkle, 1985). Career education, conducted by guidance counselors and teachers, encourages students to value occupations of all kinds, to remain open-minded regarding occupational choices, and to pursue their passions. However, tension between rural students and contemporary career education exacerbates a general trend showing that rural students’ college and career goals do not aspire to the heights of their non-rural peers (Howley, Harmon, & Leopold, 1996). College and Career Readiness Standards or 21st Century Skills promoted by state-sponsored career education materials and, therefore, our schools, denigrate rural values of family, sense of place, and community by “privileging mobility, acquisitiveness, and status,… valorizing greed, and undermining the generosity and care that functional communities require” (Howley et al., 1996, p. 150). Rural community members and parents magnify this conflict by encouraging youth to pursue their college and career dreams elsewhere, inadvertently contributing to rural brain drain and squelching their gifted youths’ hopes for returning to their home communities (Azano, 2014). Few studies highlight the lived experiences and voices of gifted rural youth as they negotiate the college and career decision-making process. Eighteen gifted juniors and seniors from two rural Midwest schools identified key influences, set career goals, and explored the role of values in career decision-making in a university-based Career Counseling Laboratory (CCL; Kerr & Ghrist-Priebe, 1988). This mixed methods study confirmed that these students hold traditional rural values, such as honesty/integrity, helping others, hard work, commitment, and quality. Overall, 72% indicated that the CCL was helpful: 61% slightly changed their college/career plans. Discussing college major and career opportunities with a Purdue professor or graduate student and discussing interest inventory results during individual career counseling sessions were two most influential CCL activities.
This presentation will provide an overview of the current state of gifted education research and practice in Australia. Both presenters have worked in gifted education in Australia and the US, and the presentation will draw some international comparisons between the nature and trajectory of the field in each context, with a focus on how local sociocultural and political forces have shaped both research and practice. Our analysis will draw from a number of sources in which one or both presenters have been involved, including: (a) a recent text co-edited by both presenters, which reviewed research in gifted education from Australia and New Zealand; (b) an analysis of articles published in the Australasian Journal of Gifted Education; (c) a presentation to the Australian Association for the Education of the Gifted and Talented (AAEGT) on models and conceptions of giftedness for the Australian context; (d) a study of school-based gifted education practices in one Australian state; and (e) other relevant data from the literature.

Peters and Engerrand (2016) discuss the challenge of achieving an ideal balance between equity and excellence in programs for gifted learners. In Australia, the perceived tension between issues of equity and excellence in the education of gifted learners is similarly pertinent, and negotiating that balance is paramount to the identity and survival of gifted education as a field in this context. Additional contextual factors include a recent enhanced focus on accountability for students’ literacy and numeracy performance against minimum benchmarks, the recent introduction of a national curriculum, a trend towards selective schooling in several states, the educational opportunities for rural and remote students presented by new technologies, and the disproportionate representation of indigenous students in advanced academic opportunities. While some of these considerations have a distinctively local flavour, many are characteristic of other settings. It is hoped that our analysis of the Australian case may prompt broader reflection about the challenges and possibilities of developing culturally-embedded, sustainable approaches to gifted education.
009 Exploring Teacher Efficacy in Advanced Placement Classrooms for Gifted Learners
Kyle Jones, Sacred Heart Academy, Louisville, KY

It is often assumed that in an Advanced Placement environment, gifted students are challenged and fulfilled. Several studies have shown that a worthwhile and/or fulfilling experience for gifted learners is not occurring. Gifted learners may describe the AP experience as boring, listless, and intellectually bland. The assumed positive correlation between Advanced Placement and gifted learner achievement needs vetting. What does the AP classroom that maximizes a gifted learner's potential look like? The focus is on the role of the teacher as one capable of unlocking aspects of a demanding course that are necessary for more fully engaging a gifted learner.

The research study is in three parts. The first section details an experience wherein the author invited students to sit for the AP Comparative Government exam without having taken the formal/traditional class. The group met with the author once per week for a total of seventeen hours over the course of eleven weeks. The students were not assessed beyond the AP exam itself. The study group was absent of assignments. While previously unknown concepts were introduced via traditional models for instruction, much of the assessed material was taught and mastered by students. Each of the students passed the exam with an average score of 4.4/5. The second part of the study includes reflections on the author’s experience of leading the study group. Finally, the discussion explores the confluence of pertinent factors inherent to the central question concerning teacher efficacy in the AP classroom. Factors included in the discussion: gifted education, talent identification, advanced placement paradigms, teacher methodology, pedagogical techniques, socialization amongst gifted learners, and assessment. The conclusion offers suggestions for further research on the efficacy of teachers in Advanced Placement classrooms for gifted learners. A goal is to prod practitioners to question the extent to which teachers are necessary for bringing about success on AP exams.
010 Learning Preferences Related to Working Alone and In Groups: A Comparison of High-Ability Students and Their Peers
Lannie Kanevsky, Simon Fraser University, Burnaby, BC, Canada

For many years, students with high ability have been characterized as preferring to learn alone. However, recent studies indicate that the preference for learning alone is context-dependent. Our study further investigated the conditions that influenced students’ preferences and potential ability-related differences in them. Students (N=328) enrolled in grades 6-8 in a suburban Canadian school district completed a survey of their preferences for 56 conditions related to working on projects alone (15 items) and with others (41 items). They rated each condition on a 5-point Likert scale. They also completed the CogAT (Form 7), earning composite percentile ranks ranging from 1 to 99 (M=56.7, s.d.=29.2). Principal Component Analysis with Varimax rotation was performed on students’ responses. Items related to working alone and with others were analyzed separately.

Four factors related to working alone emerged: optimizing the learning process, conflict avoidance, real-world connections, and quality control. Six factors related to collaborating emerged: trust and reliability, intra-group acceptance, group composition, intra-group scaffolding, grading practices, and the nature of the task. Generally speaking, students wanted to work alone when they felt it would enable them to optimize their learning, avoid conflict, control the quality of their work, and when the project addressed a real problem and audience. They wanted to collaborate when there were scaffolding opportunities, as well as trust, familiarity, and acceptance in their group. Students also prefer to collaborate when they had little interest in the topic and expected it to be difficult. Mean factor scores of students with cognitive reasoning scores above and below the 90th percentile were compared with non-parametric tests. The groups differed on all four factors related to working alone and three of the six for working with others. These findings indicate specific features of the task and context vary in their importance to more and less capable learners. Reasoning ability is only one of many student characteristics interacting with task characteristics and influencing students’ eagerness to work alone or with others. Future investigations of the academic, social and other outcomes of matching instruction to students’ preferences are essential.
011 Serious Play and Elegant Problems: Acknowledging J. Stanley
Sandra Kay, Nyack, NY

“Start as early as possible in helping intellectually talented boys and girls. Capitalize on their already-developed and fast developing predispositions.” – J. C. Stanley

Julian Stanley’s mathematical talent search program defined a unique way to assist extremely advanced seventh and eighth graders through a mentoring program, forever changing their lives. With his treasured post-docs he expanded the work to include finding a five year old who was doing number-theory research. That is some “serious play!” In this Internet age, the term “Serious Play” appears to be associated with game design. LEGO has copyrighted the term for a consultant service using a methodology for developing innovation and performance in business using their blocks. If one continues to peruse the online list of options, we also find that The Academy of American Poets reminds us that Robert Frost defined poetry as “serious play” and there is an improvisational theater group by that name.

Despite the fact that the term “serious play” has and continues to be one of the many paradoxes associated with the creative process, no reference to this is found electronically. To refresh or inspire anew: the “ability to toy with elements and concepts” is one of three conditions of creativity identified (Rogers, 1954, p.14). Creators in every field describe their work as play, explaining or excusing its importance. Early childhood educators know how important serious play is to advancing thought in young children. Instruction after kindergarten tends toward replacing play with rote skill practice. Yet, where the instruction in an area of interest combines skills and play, creative magic emerges…at any age and in any discipline.

Introducing elegant problems invites students to find their serious play. Three potential outcomes of providing elegant problems to students are that they: 1) serve as inspiration to flame curiosity and wonder, 2) offer exposure to problem defining and its opportunity to invite the practice of seeking elegant solutions which fuels advanced interest, and 3) provide opportunities to develop personal aesthetic preferences. Discussing characteristics and examples will lead to the roles of personal aesthetic preferences in guiding “predispositions” or interest.

012 Gifted Kids and High-Achievers Stay Fresh: Health Outcomes of Four SMPY Cohorts at Age 50
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Camilla P. Benbow, Vanderbilt University, Nashville, TN

Over a century of research has demonstrated intelligence is associated with positive health outcomes. Nonetheless, some doubt whether gifted children grow up to be (on average) healthy, well-adjusted adults. This study compares medical and psychological health outcomes of middle-aged adults from the general population (N = 3,652) to three SMPY cohorts. Cohort 1 (N = 1,159) scores in the top 1% of ability and Cohort 2 (N = 491) scores in the top 0.5% of ability. Four decades after identification, both cohorts were administered a comprehensive biographical survey. Across 23 items, gifted males evinced more positive outcomes than males of average intelligence on 22 (96%). The
mean odds ratio (OR) was 5.32, meaning males of average intelligence were over five times more likely to experience a negative health outcome than those in the top 1%. Gifted females evinced more positive outcomes in 65% of the categories, with a mean odds ratio of 2.52. Comparisons of health outcomes within the top 1% are complicated by the higher mean age of Cohort 1 (53) relative to Cohort 2 (48). Only two statistically significant differences emerged between gifted females: Those in the top 1% were more likely than those in the 0.5% to have felt calm and peaceful and less likely to have had emotional or physical problems interfere with their activities recently (average $d = .12$). Results were less consistent for males. Males in the top 1% were significantly more likely to experience chest pains, hypertension, and arthritis (OR = 2.23), while males in the top 0.5% were more likely to experience asthma, depression, and non-depressive psychiatric problems (OR = 1.2). As a replication, another SMPY cohort was administered the same survey: It consists of young adolescents identified as being in the top 0.01% in the early 1980s (anticipated N > 300). Health outcomes of this cohort will be compared to those of the general population and those of the top 1% and 0.5%. The size, scope, and quality of these data represent an unprecedented opportunity for examining the well-being of intellectually talented adults.

013 Measurement and Diagnostic Issues with Twice-Exceptionality (Gifted and Talented/ADHD) and How to Overcome Them
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Richard Olenchak, Purdue University, West Lafayette, IN

Twice-exceptionality is a label for students who possess both a strength (e.g., academically gifted or artistically talented) and a disability (e.g., Attention-Deficit/Hyperactivity Disorder [ADHD]; Foley-Nicpon, Allmon, Sieck, & Stinson, 2011; Lee & Olenchak, 2014). Twice-exceptionality with ADHD (GT/ADHD) in particular poses a unique constellation of characteristics and academic challenges. Similar symptoms of inattentiveness, impulsivity, and high activity levels exist for those both gifted and talented and who are diagnosed with ADHD, although the etiologies of the symptoms are distinct (Latimer & Webb, 1993). Students who possess both of these diagnoses may need additional help academically to foster growth and accommodate challenges.

While research in this area is growing, there is a lack of empirical studies with fully encompassed comparison groups. This is due, in part, to measurement barriers of identifying and gathering samples of groups such as GT/ADHD, GT-only, ADHD-only, and non-GT/non-ADHD. Indeed, a 2003 study concluded that while certain subtests on the Test of Variables of Attention (TOVA) hold some efficacy for identification of the GT/ADHD population, the sample studied was marginally generalizable (Chae, Kim, & Noh, 2003). A more recent study offered similar cautions in relying on psychometric data for diagnosing GT/ADHD and noted that professional expertise with both groups separately was critical for forming a conclusive diagnosis of these two exceptionalities interactively (Benito & Guerra, 2012). Relying on the expertise of individual diagnosticians provides considerable source for error in empirical investigations, not to mention the implications for both clinical and educational practice. We present measurement barriers for this particular research scope, including definition, identification, and sampling issues. The conclusions offer concrete steps researchers can implement to address measurement problems pertaining to this population.
014 The Effects of Two Interventions on High-ability Underachievers
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Adrienne Erwin, Inaburra School, New South Wales, Australia

The research reports on a school-based action research project, IGNITE. For this project, we studied the effects of using biographies as bibliotherapy and differentiation techniques using the Maker Model, to counter underachievement in a group of identified high-ability underachievers at an independent school. The project uses the Achievement Orientation Model (Siegle & McCoach, 2005) as the framework and foundation that guides the experimentation with the two strategies chosen. IGNITE will report on the results of a group of Year 7 and Year 9 students over the last two years.

015 Academic Acceleration of Gifted Black Students: K-12 Experiences and Implications for Enrollment at Historically Black Colleges and Universities
Jessa Luckey, University of Georgia, Athens, GA

As a result of current identification practices in gifted education, African-American students often go underrepresented in gifted education programs across the country. However, for those students whose abilities are recognized, the door is opened for them to be served in a variety of ways. One of these ways is academic acceleration, which has historically been used with students from a variety of racial backgrounds. Accelerated students experience their K-12 education in unique ways in comparison with unaccelerated students, whether they are formally identified as gifted or not. For African-American students, these experiences are further compounded by racial factors. This research details an in-depth interview study with African-American emerging adults (ages 18-30) who experienced early entrance and/or whole-grade acceleration between kindergarten and 12th grade. Through a lens of critical race theory, the participants in this research study use their personal stories to tell counter-narratives of life as an African-American, gifted, and accelerated student. Along with these exceptional schooling experiences, all research participants subsequently attended and graduated from Historically Black Colleges and Universities (HBCUs). These institutions situate their students in unique cultural environments designed to cultivate Black excellence and prepare students for productive lives. The participants in this study discuss the intersectionality between age, intelligence, and race as it impacted their K-12 experiences and sculpted their college choice decisions. Common themes are seen across participants; however, the highly individualized nature of their stories speaks to the complexities of academic acceleration in an equally impactful way. These students navigated a number of academic, cultural, religious, and familial factors as they prepared to attend college at the age of seventeen or younger. The results of this study ultimately provide insight on the experiences of accelerated African-American students, help shape how K-12 educators approach the process of acceleration, and inform colleges and universities on how best to support accelerated students from underrepresented backgrounds.
This study examined the impact of five-week accelerated summer math classes on advanced students’ interests, skills, and perceived success. Students’ collaboration and peer relationships during the program were also explored. A total of 23 students, 46 parents, and 2 teachers from Robinson Center’s math classes during 2014-2016 Summer Challenge (grades 5-6) or Summer Stretch (Grades 7-10) completed Qualtrics online questionnaires consisting of seven sections of items rated on Likert scales. In addition, eight open-ended questions provided opportunities for participants to further elaborate and clarify their responses.

The vast majority of responses from all participants were strongly positive. According to the students, summer classes increased their enjoyment (86%) of and interest (87%) in mathematics. They understood the material better after attending the summer program (96%), and felt more prepared for their classes at school (66%). The content of classes was appropriately challenging (96%) for students to advance their learning. In open-ended responses, students reported that they were encouraged to use abstract reasoning, construct viable arguments to justify their reasoning, think creatively about problem solving, and collaborate with each other. Appropriate challenge and a positive classroom environment were two critical components in students’ enjoyment of their classes. The students were encouraged to work on appropriately challenging high-level activities and engage in higher-order thinking. The students reported more autonomy and support from their teachers and noted that they were treated as young adults and experts.

One of the most promising findings in the study was that the summer math classes helped build communication and collaboration among students who shared similar interests and readiness for accelerated math. Communication is one of the five process standards developed by National Council of Teachers of Mathematics (NCTM). According to NCTM (2000), teachers must build a community in which students feel free to share their ideas. The findings suggested that the program was successful in providing participants with a sense of community.
017 Who Are the Best Among the Brightest?: A 25-Year Longitudinal Study of Elite STEM Graduate Students
Kira McCabe, Vanderbilt University, Nashville, TN
David Lubinski, Vanderbilt University, Nashville, TN
Camilla P. Benbow, Vanderbilt University, Nashville, TN

In 1992, the Study of Mathematically Precocious Youth (SMPY) surveyed 714 first- and second-year graduate students attending U.S. universities ranked in the top 20 for graduate training in STEM. Women were over-sampled for commensurate representation (48.5% female). Participants completed an extensive biographical survey, including measures of personality, educational-vocational interests, and lifestyle preferences; additionally, we obtained their GRE scores. Now, 25 years later, we investigated which of these early assessments distinguish those who ultimately became STEM leaders (e.g., full professors at R1 universities, Fortune 500 executives, and senior government officials; n = 153) versus their graduate student peers who pursued other occupational and life paths. STEM leaders differed from their peers in small ways on personality and interests, but STEM leaders had higher GRE-V and GRE-Q scores than non-leaders. Larger differences were found in lifestyle and work preferences: STEM leaders preferred to work, and did work, more hours; they also craved more challenging careers. Non-leaders wanted more time for leisure. These psychological findings inform the development of excellence in STEM.

018 Trajectories of Eminence among Brazilian Gifted Females in Leadership Positions
Renata Muniz Prado, University of Brasilia, Brasilia, Federal District, Brazil
Denise Souza Fleith, University of Brasilia, Brasilia, Federal District, Brazil

Academic researchers, government managers and policy makers have highlighted the need to invest in developing the potential of women toward greater power and leadership posts. They have been discussing the impact on the global economy of talent waste in more than half the world’s population. However, greater than the impact on economy is the effect on health, well-being and quality of life of gifted women who wish to devote themselves to a career and to develop professionally without having to give up other life dimensions. The development of talent has different trajectories and the demands are different in every life stage, besides the multiple factors that influence its manifestation, such as personality traits, skills and cognitive styles, motivation and engagement, environmental conditions and the characteristics of the particular career field. The limited knowledge on the process of talent development, especially in women, has been reflected in professional unpreparedness and lack of services that would strengthen women’s experience. This work presents preliminary findings from a study investigating the trajectory of eminent Brazilian gifted women who brought major contributions to their fields. This research examined the relationship between individual, contextual, and interpersonal dimensions in the career of participants and identified the challenges and strategies used to overcome them. The qualitative study was based on the Grounded Theory, in which interviews were conducted with five women who are at the top of their careers, and are nationally recognized for having contributed significantly to and excelled in their fields. Findings have important implications for the development of programs or assistant services to
gifted young women, and provide guidelines for the implementation of public policies in favor of greater female participation in leadership positions. Also the results can inform parents and educators on how best to nurture early talent.

019 Gifted and Unserved: Evaluating the Effectiveness of the Promise Scholar Program on Reducing the Racial Segregation of Gifted Education
Reby Parsley, University of Washington, Tacoma, WA

Gifted programs across the nation are disproportionately identifying and servicing middle-class White and Asian students while systematically ignoring minority students. For decades, there has been an ongoing argument in the field of gifted education about the root of this disproportionality. Under-referral, use of biased identification tools, and the presence of the opportunity gap are research-based factors that all contribute to the underrepresentation of minority students in gifted education through the theoretical frame of Critical Race Theory.

While there has been much research on the root of the under-representation of minority students in gifted education, limited research has been conducted on current elementary school programs that are addressing this issue. This research presents findings from an evaluation of a district-wide elementary school talent development model in a large school district in Washington State. The researcher evaluated the effects of the talent development program on increasing the number of African American and Hispanic students identified for gifted education and the impacts on participants’ academic achievement. Findings indicate accelerated academic growth for minority students who participated in the talent development program. Replicable, practice-based solutions used in the talent development program, which increase identification of minority students in gifted education, are presented so that they can inform similarly focused efforts across the nation.
Online Talent Search in the Hungarian Templeton Program Supporting Exceptional Cognitive Talents

Szilvia Péter-Szarka, University of Debrecen, Debrecen, Hungary

The Hungarian Templeton Program (March 2015–February 2017) was a pilot program aimed to identify, nurture and support exceptional Hungarian cognitive talents aged between 10 and 29. In the program, 314 exceptional (1 in 10,000) cognitively talented individuals (Hungarian Junior Templeton Fellows) were identified and offered personalized talent development possibilities. In the identification phase an innovative, large scale, cost-effective identification procedure was carried out using unsupervised online ability tests, a complex motivational assessment, an online measure of divergent thinking and a personal interview at the end of the process in the 10-19 year-old age group.

The principles of identification were (a) a developmental perspective of giftedness from potential to productivity/achievement by the increase of age, (b) the complex measurement of cognitive skills, (c) the focus on strengths, (d) the necessity of online measurement and (e) to provide comparable test-results in the different age groups. In the first round, cognitive skills were measured by 4 tests: an online, adaptive intelligence and vocabulary test; a test measuring complex problem solving; and one measuring working memory (N=17,007). In the second round, motivation and divergent thinking were measured online (N=2,100), and applicants were also invited to a final interview (N=230). Out of the target population of 1,000,000 Hungarian children between ages 10-19, there were about 68,000 visitors to the Templeton website. From these, 17,007 children registered and took at least one of the tests. The IRT adaptive instruments measuring fluid and crystallized intelligence proved to be the most useful for our purposes. They gave reliable ability estimates for a wide ability range in different age groups. Test-retest correlation of the tests were comparable to the fixed versions. A complex, strength-based talent search system was set up. The whole program, including the identification and the supporting phases, was enriched by the power of networking.
021 Academic Acceleration Policies in Florida Elementary Schools
Keri Guilbault, Johns Hopkins University, Baltimore, MD

The focus of this study was to provide descriptive information about local education agency acceleration policies and practices in Florida elementary schools prior to state adoption of an acceleration policy. The Academically Challenging Curriculum to Enhance Learning (ACCEL) statute was adopted in 2012 (1002.3105, Florida Statutes) establishing minimum requirements for local education agencies to provide challenging or accelerated curriculum to eligible public school students in grades K-12. School district policies were examined to determine which types of research-based acceleration options were used most frequently and what procedures guided the decision-making process. Results indicated that extant acceleration policies included grade skipping and limited procedures for referral, screening, and decision making in the schools prior to the adoption of a state acceleration policy. The most common types of acceleration offered in elementary schools were subject acceleration in language arts and mathematics provided outside of the regular classroom, continuous progress, and curriculum compacting. No relationship was found between school demographics or principals’ personal demographic variables and types of acceleration offered. No relationship was found between elementary school principals’ knowledge of gifted learners and the types of acceleration implemented in their schools. The secondary purpose of this study was to investigate the impact that the ACCEL statute had on local Florida school district acceleration policies by comparing survey results and written policy documents from the 2008-2009 and 2017-2018 school years.

022 The Julia Robinson Mathematics Festival: An Alternative to Competition
Mark Saul, Julia Robinson Mathematics Festival, New York, NY

The Julia Robinson Mathematics Festival is a nation-wide organization that supports local extra-curricular mathematics events. The content is at the same level as competitions, from elementary school through Olympiad-level material. The Festivals attract groups of students that are often left out of competition: girls, minority students, and twice-gifted students. The emphasis is on cooperative enjoyment of mathematical investigation with a facilitator and without time limits. To date, JRMF has run more than 100 festivals in 20 US states and 12 foreign countries. We seek partners in communities not yet served as well as researchers interested in documenting and investigating our work.
023 We Know It When We See It: Educator Beliefs Regarding Artistic Giftedness
Stephen Schroth, Towson University, Towson, MD
Jason A. Helfer, Illinois State Board of Education, Springfield, IL

For nearly 45 years, the United States Department of Education has recognized exceptional talent in the arts as an indicator of giftedness. Arts educators, including those specializing in music and the visual arts, often serve as a determining factor in which children receive additional services related to their artistic giftedness. Which talents and skills are most likely to trigger services? Which children are seen as most deserving of these services? Are these beliefs aligned with the views of experts from the disciplines of art and music regarding those talents and skills seen as exceptional?

The current study surveyed art and music specialists from all 50 states and the District of Columbia regarding how they conceptualize and perceive artistic giftedness. For over five decades, we have known that perceptions of academic giftedness are intrinsically tied to behaviors that are associated with high achievement and opinions regarding the personal attributes of the child in question. As a result, those children whose behaviors and personalities do not comply with teachers’ and administrators’ perceptions of giftedness are less likely to receive enrichment services than are those students who do.

Administrators, art specialists, and music specialists believe art and music education services should be provided to most children, especially those who show talent and are good students. Those children who demonstrated specific talents in the visual arts or music were felt to be the most deserving of such services, with over 91% of educators favoring this for those demonstrating artistic abilities and over 93% supporting this for those showing musical talent. Interestingly, a significant number of educators were unconcerned if certain students failed to receive instruction in the visual arts or music. Some children were deemed “less worthy” of art and music instruction. These included children who did not make good grades in the regular education classroom (with over 35% finding it unimportant or very unimportant), those who are not well behaved (over 53%), and children enrolled below the third grade (over 29%).
024 The Future of Work as it Relates to Schooling for Gifted and Talented Students
Sara Ratner, University of New South Wales, Paddington NSW, AU

Education systems are currently preparing students for forms of work that are disappearing (KPMG, 2017; Powley, 2017; Foundation for Young Australians, 2015, 2017; Singhal, 2017). Major corporations such as Deloitte, KPMG, Mitchell Institute and the Foundation for Young Australians are investing significant time and money into researching the future world of work. Through their work, and the work of others, it has become apparent that our schools are not currently producing the work force needed for this new world.

This research contributes to the debate by examining the relationship between the future of work and the purpose of schooling. The aim of this research is to examine how the visualised future of work relates to schooling. What is the purpose of schooling as it relates to the future of work? How do our education systems need to change in order to meet the needs of our new way of working? What does this mean for our gifted children? How will the new ways provide for greater individualised learning journeys?

2:45 AM – 3:30 PM  Special Breakout Presentations, Rooms 18, 19, 200, 202

2:45 PM – 3:30 PM  Room 18
Actualizing Potential Across Talent Domains: Notable Artists, Athletes, Scientists, and Writers
Susan Paik, Claremont Graduate University, Claremont, CA
Shirlie Mae Mamaril Choe, Claremont Graduate University, Claremont, CA
Anais Janoyan, Claremont Graduate University, Claremont, CA
Christine W. Kang, Claremont Graduate University, Claremont, CA
Kenya R. Marshall-Harper, Claremont Graduate University, Claremont, CA

Why is it that some talented individuals succeed and reach the highest levels of distinction, while others never fulfill their potential? The session will present biographical case studies of highly notable people across four talent domains to identify the individual, school, and environmental factors that shape and support “productive giftedness” (e.g., achievements, accomplishments, and eminence). The studies featured in this presentation apply the Productive Giftedness Model (PGM), an effort-ability model that supports high achievement and ability across various talent domains (Paik, 2013; 2015). The model offers a theoretical lens for understanding the multiple factors that may influence learning and productive outcomes. PGM emphasizes the role of early learning, time and skill investments, and other supportive conditions in maximizing potential. Key findings include the critical roles that learning environments (e.g., homes, schools) and significant relationships (e.g., parents, teachers, or mentors) played in the development of these prominent individuals. Common traits such as “focused motivation,” positive work attitudes, and persistence were also identified.
2:45 PM – 3:30 PM  Room 19
**Challenging Talented Readers**
Sally Reis, University of Connecticut, Storrs, CT

Little research has been conducted on talented readers. This session will summarize research on talented readers and focus on their special needs as well as specific differentiated reading strategies. The session will also introduce the Schoolwide Enrichment Model in Reading (SEM-R), an enrichment-based approach based on both acceleration and enrichment, which focuses on enabling advanced readers to make continuous progress in reading. SEM-R is designed to: stimulate interest in and enjoyment of reading, promote and develop higher reading achievement, improve self-regulation and automaticity in reading, encourage students to select high-interest books that are slightly to moderately above their current reading levels, and create independent, lifelong readers.

Several reading strategies for challenging talented readers were identified in the SEM-R research. These strategies include modification of the regular curriculum to eliminate skills and work that talented readers have already mastered, acceleration of reading content, substitution of regular reading material with more advanced trade books, challenging group novels assigned for discussion to two or more talented readers, independent and differentiated reading and writing choices, and independent study opportunities in areas of interest. Researchers found that talented readers benefit from the intervention. In several different research studies on the SEM-R, statistically significant differences favored the SEM-R group, as compared to a control group using regular reading instruction on measures of attitudes toward reading, reading comprehension, and reading fluency. Results have consistently demonstrated that an enrichment reading approach, with differentiated instruction and less whole group instruction was as effective as, or more effective, than a traditional whole-group basal reading approach.

2:45 PM – 3:30 PM  Room 200
**Early Entrance to University Research**
Nancy Hertzog, Moderator, University of Washington, Seattle, WA

**Early College Entrants’ Perceptions of Their College Experiences: Lessons in Hindsight**
David Dai, University at Albany, SUNY, Albany, NY

**Early Entrance to College and Self-Determination**
Sakhavat Mammadov, University of Washington, Seattle, WA
Nancy Hertzog, University of Washington, Seattle, WA

**Early University Entrance in Ireland**
Catriona Ledwith, Dublin City University, Dublin, Ireland

The first research program reports on a phenomenological study of 47 graduates of a prestigious early college entrance STEM program. Researchers interviewed participants regarding their early college experience, the nature of their selection/placement in the early college entrance program, the nature
and characteristics of curriculum and instruction in the program, their social
and emotional experiences, and their retrospective insights concerning pluses
and minuses of the program. Twelve essential categories of information were
generated regarding how the participants view their early college experiences
and program effectiveness. Conclusions are drawn as to what we can learn
from hindsight of graduates of an early college entrance program regarding
how to set up an early college program to optimize early entrants’ educational
experiences and personal growth.

The second part of the session will highlight the findings from a mixed-methods
study that investigated the outcomes of graduates who entered college early
from a self-determination theory (SDT) perspective. SDT conceptualizes three
innate psychological needs necessary for motivation and positive human
development: a need for autonomy, competence, and relatedness (Ryan &
Deci, 2000). A person’s success in self-determination results in more meaningful,
enjoyable, and productive activities. Because early college entrants make the
transition from high school to postsecondary life one or more years earlier than
their age-peers, it is crucial to understand how the early entrance program
promotes a college environment that satisfies these basic needs.

The final part of the early college entrance session reports on the CTY-Ireland
Early University Entrance Programme (EUE) in Ireland. With a backdrop of Irish
educators typically opposed to acceleration due to concerns about socialization,
CTY-Ireland established the EUE based on the dual enrolment model, where
students at 15 years are afforded an opportunity to study university level courses
on a college campus. Students can opt for modules in Engineering, Business
Studies, Aviation Studies, Politics & Law, Mathematical Science or Psychology.
Ireland is unique in that at the 4th year of second level education, students
can enter a transition year, which focuses on “personal, social, educational
and vocational development of pupils…to prepare them for their role as
autonomous, participative and responsible members of society.” EUE is a
relatively new programme in Ireland, with the first group of participants having
recently finished their second level school and entered full-time university. This
paper documents the impact the programme has had on the college course
choices of EUE students, the university they ultimately selected, their attitude
toward university and their experience of completing the final two school years
of traditional schooling after the EUE programme concluded.
Room 202
Equalizing Opportunities in Rural Schools through Research-Based Assessment and Programming
Duhita Mahatmya, University of Iowa, Iowa City, IA
Lori Ihrig, University of Iowa, Iowa City, IA
Ann Lupkowski-Shoplik, University of Iowa, Iowa City, IA

High-potential students living in rural communities are at risk for underachievement. Early programming is often promoted as a way to equalize access to advanced academic opportunities among at risk populations. Questions remain regarding inclusive identification, alignment of identification and programs, and the level of professional development necessary to ensure effective program implementation in rural communities. The purpose of this panel presentation is to present a comprehensive model for discovering and developing the talent of high-potential, rural middle school students through a mixed-methods approach linking talent identification, programming, and teacher preparation.

Above-level testing offers a model for schoolwide excellence and reveals a specific process to broaden the talent identification and development of high-potential, rural students. For decades, university-based above-level testing programs have implemented the talent development model outside of the school setting to discover hundreds of thousands of talented students. However, this Talent Search model is underutilized within schools, and rural students still lack access. This presentation will investigate questions of test difficulty for a broadened talent pool. Building upon Classical Test Theory, Item Response Theory (IRT) offers a framework for understanding above-level testing data. An IRT case study uses above-level testing data to create an ability profile to allow for comparison of high-potential students across grade levels. In the context of above-level testing, the parameters for gifted individuals can be compared to other groups to broaden understanding of how performance may differ at the item and test level. Finally, the application of above-level testing as an identification system in a rural talent development program presents a comprehensive look at one STEM out-of-school program designed to align above-level testing in STEM with advanced STEM curriculum and professional development.

3:30 PM – 3:45 PM Refreshment Break (Located Near Presentation Rooms)
Concurrent Presentations (3:45 to 4:10) will occur in Rooms 18, 19, 31, 33, 200, and 202
Thirty-five years ago, Drs. Julian Stanley and Camilla Benbow published a seminal study of gender differences in mathematical reasoning ability among academically talented middle school students. For three years, they studied U.S. 7th graders who scored in the top 3% on in-grade-level tests by giving them an above-grade-level test, the Scholastic Aptitude Test (SAT), designed for 12th graders. Their goal was to “raise the ceiling” of the assessment tool: by using a more difficult test, they hoped to survey the full range of mathematical reasoning abilities among students in the top 3%. Within their sample of nearly 40,000 7th graders, they found 158 individuals who scored at least 700 on the SAT-Math before age 13—a score achieved by only 5% of college-bound high school seniors, and which they estimated was achieved by only 1 in 10,000 middle school students. Within this rarified population, the gender ratio in their sample was 13:1 favoring males, demonstrating a large sex difference in mathematical reasoning ability among the most mathematically able students tested. At the time, gender differences in math and science achievement was a growing concern, and publication of this large difference attracted much publicity and commentary and encouraged additional research.

This study looks at gender and ethnic differences among comparable mathematically talented middle school students over the 35 years since then. During this time, there has been an increase in the percentage of Asian-American students scoring at the highest levels compared to Caucasian students; and, while gender differences persist to some extent, they have been smaller for Asian-American students than Caucasian students. Historically underrepresented minority students remain very rare among these exceptional achievers. These results are consistent with gender and ethnic differences in the performance of 12th-grade students on the SAT, but are observed four to five years earlier, when students are still in middle school.
Concurrent Presentation, Room 19

The School Imagination, Creativity, and Innovation (ICI) Index

Joseph Renzulli, University of Connecticut, Storrs, CT

An axiom in all areas of human performance and in anything having to do with schooling is “that which is evaluated gets done!” A stream of articles in the school improvement literature and in state department of education requirements for their “school accountability report cards” discuss manners of the role that data plays in district-level decision making, and how districts use data to develop policy and create solutions to make changes their schools.

Development of ICI Index based on pilot results. The ICI index uses a student and teacher assessment to measure ideal, predicted, and actual (student reported) ICI opportunities provided to students. We collected data in grades 3 – 8 from students (n = 5020) and teachers (n = 270) representing 42 schools in 4 districts in 3 states. We examined 15 ICI items with exploratory factor analysis (EFA), using maximum likelihood analysis with promax rotation. Results indicate a three-factor solution. The three factors accounted for 53.3% of the variance.

Scale scores were constructed for each of the three constructs (Imagination, $\alpha = .77$; creativity, $\alpha = .81$; and innovation, $\alpha = .73$) by averaging the responses to the items. Results of paired sample t-tests indicate that, on average, students reported significantly more opportunities for creativity ($M = 3.8$, $SD = .86$, $n = 5,020$) as compared to Imagination ($M = 3.3$, $SD = .87$, $n = 5,020$) or Innovation ($M = 3.0$, $SD = .91$, $n = 5,020$). We also examined the 15 ICI ideal and 15 ICI predicted items with exploratory factor analysis (EFA), using maximum likelihood analysis with promax rotation. Results for both ideal and predicted items indicated a two-factor solution (accounting for 60.6% and 56% of the variance respectively), but with a different pattern of results. Both quantitative and qualitative data gathered will also be reported. This work provides a way for researchers to test and empirically explore the posited relationship amongst ICI and provides ways for researchers to link material artifacts with constructs that otherwise seem abstract.

Concurrent Presentation, Room 31

Highly Gifted Young Students’ Attitudes towards Competition and the Perception of the Role of Contests in Their Professional Development

Marta Fulop, Institute of Cognitive Neuroscience and Psychology, Hungarian Academy of Sciences, Budapest, Hungary

There has been a debate in the gifted literature but also among teachers and parents if competition and participation in contests is beneficial or detrimental for the gifted (e.g. Campbell, Wagner, & Walberg, 2000; Campbell & Walberg, 2011; Ozturk & Debelek, 2008; Kohn, 1986). The present study is part of a more complex research design to reveal the role of competition and contests in the development of giftedness. This is the qualitative part of the research applying semi-structured interviews and this was followed by a quantitative extensive survey investigation. Altogether, 32 gifted young persons participated in the interview study, 16 women and 16 men. The criteria to be involved in this part of the research was to have at least one or more outstanding contest result (Olympics, highly prestigious national or international contests) during their high school years. The average age was 23.9 years (SD=4.18).
The interview aimed to reveal the experiences of the participants with contests, their personal attitude towards competition, the attitudes of their teachers and parents towards competition in general and contests specifically. We were also interested in coping with winning and losing and their socialization in the family and school related to them. We also asked about the role they attribute to contests in their professional and personal life, judgment of achievements, satisfaction with what they have achieved and also about their future plans. The average length of the interviews was 81 minutes. The interviews were transcribed and content analyzed.

The interviews revealed an elaborated and almost exclusively positive view of the role of contests in their professional life while presenting a few concerns. There was a clear relationship between personal competitiveness, participation in contests, teachers’ and parents’ support of taking the initiative and take challenges in the form of contests. The participants also demonstrated an adaptive coping both emotionally and behaviorally with winnings and also with losing and an ability to make use of their experiences in contests in a variety and highly complex ways. (The study was supported by MATEHETSZ and OTKA K-111 789.)

3:45 PM – 4:10 PM  Concurrent Presentation, Room 33
A Study of Teacher Differentiation Practices
Joyce VanTassel-Baska, College of William and Mary, Williamsburg, VA
Gail Hubbard, Centreville, VA

This presentation focuses on research findings from multiple evaluation studies that have implications for best practice in gifted education nationally. Research questions centered on what specific differentiation practices were employed with gifted learners and distinctions found between levels of teaching and content areas. Using the Classroom Observation Scale-Revised (COS-R) with 325 teachers in six different school districts in four states, we report data on differentiation practices that suggest that teachers of the gifted as well as regular classroom teachers under-utilize these practices, do not match them to instructional purposes, and fail to implement them as effectively as needed to have impact on gifted student learning. Moreover, the lack of consistent use of flexible grouping practices to support instructional goals was apparent in the majority of regular classroom contexts. Implications from the study suggest that more careful attention needs to be paid to the use of specific differentiation practices, found in the research literature and used in model university-based curriculum projects, in a grouping context that is supportive of gifted student learning. A model of classroom organization and delivery is presented that might affect the practices observed.
Using ROC Curve Analysis to Assess the Diagnostic Capabilities of SAAS-R (School Attitudes Assessment Survey), the SEQC (Self-Efficacy Questionnaire for Children) and the SCQ (Social Coping Questionnaire)

Ruth Phillips, Wollongong University, Mittagong, NSW, Australia

This presentation will introduce the use of ROC curve analysis into the field of gifted education. Additionally, it will present some of the benefits of cross-disciplinary quantitative approaches to the field of education through an examination of the researchers’ doctoral study examining the diagnostic suitability of surveys to identify students at risk of underachievement, prior to entry into a gifted program. The research investigated potential of using the School Attitude Assessment Survey- Revised (SAAS-R), the Self-Efficacy Scale for children, the Social Coping Questionnaire as a tool to diagnostically identify students at risk of underachievement. The study investigated the veracity of this approach using logistic regression analyses techniques and ROC curve analysis. The researcher concluded that the variables motivation/self-regulation and social self-efficacy and gender and school type were predictor variables that could identify students at risk of underachievement. To gain a better understanding of the profile of gifted underachievers this study investigated whether gifted achievers and gifted underachievers differ in their attitudes, self-efficacy and the social coping strategies, as well as the relationships between these factors, as well as examining the relationship between the factors measured by the instruments. The sample included 595 identified gifted students with 477 gifted achievers and 118 gifted underachievers in years 7, 8 & 9 from 8 high schools, with academically selective or self-contained gifted classes in NSW Australia. The study found statistically significant mean differences between the gifted achievers’ and underachievers for goal-valuation, motivation/self-regulation, attitudes to teachers, academic self-perception, academic self-efficacy and denying giftedness and use of humour. Correlational analysis found that underachievers and achievers differed in the relationships between goal valuation and attitudes to teachers and school, Motivation/self-regulation and denying giftedness and Social self-efficacy and attitudes to teachers. Results support and extend existing research regarding our understanding of the differences between achieving and underachieving gifted students, as well as providing a possible approach to proactively identifying gifted students vulnerable to underachievement in an academically selective context.
as an academic option for gifted students. The study took place in a medium-sized suburban school district and included all of its elementary principals. Research findings will be discussed reflecting the influence of two institutions on principals – university schools of education and the elementary school setting. In 2004, the landmark publication, A Nation Deceived, was published in order to begin a national conversation on the then available accelerative options – both grade-based and subject-based. Its follow-up two volume publication, A Nation Empowered, sought to provide an update on the landscape of using accelerative options in our schools. It suggested there was a more pervasive common language and understanding about acceleration. This study provides timely and nuanced results that can add to the conversation and provide implications for practice and policy. The findings contribute to a gap in the research on the influence of elementary principals’ knowledge, perceptions, and beliefs about grade skipping.

**Concurrent Presentations (4:20 to 4:45) will occur in Rooms 18, 19, 31, 33, 200, and 202**

**4:20 PM – 4:45 PM**

**Concurrent Presentation, Room 18**, combined with “Gender and Ethnicity Differences Among Mathematically Talented” (see page 39).

**Sex Differences in Ability Tilt in the Right Tail of Cognitive Abilities: A 35-year Examination**

Jaret Hodges, Duke University, Durham, NC  
Matt Makel, Duke University, Durham, NC  
Linda Brody, Moderator, CTY, Johns Hopkins University, Baltimore, MD

An area that has received substantial attention that may contribute to explaining female underrepresentation in STEM fields are differences in representation in the extreme right tail or top 5% to 0.01% of the distribution of math ability, which may be linked to greater male variability in various aspects. Representation differences at these select ability levels may matter because even within the top 1% of math ability, higher scores at age 13 are related to significantly higher STEM educational and occupational outcomes decades later, including earning a STEM Ph.D., STEM publication, STEM patent, STEM university tenure, and having a job in a STEM field (e.g., Park, Lubinski, & Benbow, 2007; Wai, Lubinski, & Benbow, 2005). The present study examines cognitive ability tilt across the last 35 years in 2,053,221 academically talented students in the U.S. (SAT, ACT, EXPLORE) and 7,118 students in India (ASSET) who were in the top 5% to 0.01% of cognitive ability, populations that largely feed high level STEM and other occupations. Across all measures and samples, sex differences in ability tilt were uncovered, favoring males for math > verbal and favoring females for verbal > math. As ability tilt increased, so did sex differences in ability tilt. Additionally, sex differences in tilt increased as ability selectivity increased. Broadly, sex differences in ability tilt remained fairly stable over time, were consistent across most measures, and replicated across the U.S. and India. Across time, exceptions to the general trend were females increased their verbal tilt advantage over males, on the EXPLORE, males increased their math tilt advantage over females, and in the top 0.01% of ability on the SAT, the male math tilt advantage decreased over time. The magnitude of ability pattern varies across tests and cultures. However, the “pattern of ability patterns” (Steen, 1988) remains relatively consistent across tests and time.
Students from backgrounds of poverty represent an increasing population in schools and tend to be under-identified and, thus, underserved in gifted education programs (Hamilton et al., 2016). Less than 20% of school districts reported close alignment between the percentages of students of poverty in the district overall and in gifted programs at the elementary level (Callahan, Moon, & Oh, 2014). State-level policies disadvantage students of high potential from low-income backgrounds (Plucker, Giancola, Healey, Arndt, & Wang, 2015), and there are significant gaps at high levels of achievement based on racial/ethnic backgrounds and income (Plucker, Hardesty, & Burroughs, 2013). This session reports on ongoing research regarding an approach to recognizing and responding to high potential in underserved populations in the early grades as an effort to promote longer-term access to advanced opportunities. The purpose of Project SPARK, which scales up the Young Scholars Model (Horn, 2014), is to promote diversity in gifted program identification and student success in advanced academic experiences through early attention to high potential. The project involves a quasi-experimental design with similar schools within districts in treatment and comparison groups. The project includes 22 schools from four districts in a Northeastern state with no requirements regarding services for gifted students. K-2 teachers in both groups participate in professional development (PD) to support student referral to the project. Interventions include additional PD, summer programs with advanced mathematics curriculum, and cluster grouping. We are examining how the project affects reading and mathematics growth rates and the identification rate for local gifted programs. Data sources include the Naglieri Nonverbal Ability Test (NNAT-2; Naglieri, 2011), the Measures of Academic Progress (MAP; Northwest Evaluation Association) 2-3 times annually, and teacher referral forms (Shaklee, 2002). At the project midpoint, with over 950 student participants so far, some notable results include mathematics gains for students who participated in the summer program after the first summer; positive achievement effects for students who participated in two summer programs over those who only engaged in one; and similar gains for students receiving and not receiving free/reduced lunch. Additional results indicate increasing diversity in the school districts’ gifted programs.
EF components include inhibition, working memory, and cognitive flexibility (Miyake et al., 2000). EF have been linked to children and adolescents’ academic achievement, self-regulation, social-emotional, and behavioral development (Best, Miller, & Naglieri, 2011). One of the current definitions of giftedness imply that both intelligence and academic performance are key characteristics of gifted individuals (NAGC, 2010; Subotnik, Olszewski-Kubilius, & Worrell, 2011). However, are EF and intelligence/giftedness the same thing? Do different domains of intelligence, such as general intelligence, mathematical or verbal intelligence, relate to EF differently? Does the cognitive strength of higher IQ individuals lead to any advantages on EF in comparison with their less intelligent peers? A number of longitudinal studies and studies with national representative samples have found that early EF skills predict growth in academic achievement over time (Best et al., 2011). Factors commonly associated with underachievement of gifted students include EF deficits or impairment such as impulsive or inattentive and other ADHD symptoms and low self-regulatory or metacognitive skills (Rubenstein, Reis, McCoach, & Burton, 2012). In this session we will present findings of a meta-analysis of current empirical research on EF across multiple disciplines including medical science, neuroscience, neuropsychology, psychiatry, psychology, and education. The meta-analysis addresses a series of questions including: 1. What are the relationships between EF and giftedness/intelligence? 2. Are gifted children advanced in their EF skills compared to non-gifted children? Do they exhibit patterns of advanced performance in some skills and not in others? 3. How are EF related to children and adolescents’ academic achievement? 4. What school-based EF interventions work best in helping promoting the academic achievement, social-emotional, and behavioral performance of children and adolescents? Participants of this session will come away with an increased understanding of EF, how they relate to giftedness, intelligence, and academic performance, and what they can do to promote children and adolescents’ EF skills.

**4:20 PM – 4:45 PM  Concurrent Presentation, room 33
Talent Development and Social Inclusion in Low-Income, Ethnic-Linguistic Diverse Young Scholars
Sheyla Blumen, Crea Talentum Research Group/Pontificia Universidad Católica del Perú**

The status of low-income ethnic-linguistic diverse young scholars in Peru is presented, underlining the advocacy efforts towards the indigenous population facing socioeconomic inequity. Study 1 presents the descriptive-correlational mixed-method, involving a three-phase identification process including integrity, motivation, well-being, and cognitive measures. Participants involved 3,000 native Peruvian senior high schoolers from the 22 nationwide boarding academies for the high achievers of Peru. In Study 2, an intervention program that aims to promote talent development towards excellence is analyzed. The program monitors 150 low-income, ethnic-linguistic diverse young scholars during their college years and constitutes an example of a promising attempt with results that will be worth monitoring in the near future. The challenges for the indigenous young scholars in the future are also discussed, taking into consideration the needs of a multicultural society.
4:20 PM – 4:45 PM Concurrent Presentation, Room 200

A Total Space of Mathematics: Living in and for Mathematics as it Unfolds in the Narrative of the Former Class Members of the Very First Hungarian Special Math Class in the 1960s

Janos Gyori, Eotvos Lorand University Faculty of Education and Psychology Institute, Budapest, Hungary

In 1966, 32 students graduated the very first Hungarian special math class for gifted secondary school students. A number of them became highly acclaimed mathematicians, while many others followed different professional paths. In our research, we focused on the individual experiences of the members of this class, i.e. how they reconstruct these experiences, reflect on, and analyze them 50 years later. We carried out 1 ½ - 3 hour-long semi-structured interviews with 26 of the total 28 living members of the class and then content analyzed them. Many of them had been tutored by some of the leading Hungarian academicians of mathematics of the time. These exceptional students were preparing for various and numerous math competitions at diverse levels (school, KÖMAL, national competition, Math Olympiad, competitions run by the national TV broadcast, etc.). Just for fun, some of them gave challenging math tasks to one another, and they had long informal conversations about the different possible solutions to them. There were other forms of “living in a total space of mathematics.” This very intensive “total space” of mathematics was built up partly by the students, but also designed and offered for them by their social/professional environment in which there was an appreciation for mathematics as a highly valuable human activity. This strong positive feedback and the support that came from the outside world served as a solid and effective reinforcement and motivating factor for these young talents by way of suggesting that it is held in high social esteem to achieve at a high level in mathematics.

4:20 PM – 4:45 PM Concurrent Presentation, Room 202

An Exploration of Attitudes toward Diversity at Kentucky’s Governor’s Scholars Program

Caroline Hamilton, Governor’s Scholars Program, Louisville, KY
Peter Guthrie, Governor’s Scholars Program, Louisville, KY
Susan Rahimzadeh, Governor’s Scholars Program, Louisville, KY

The most prestigious gifted education program in Kentucky, the Governor’s Scholars Program (GSP), over-represents white, affluent students who already have significant access to high quality education and extracurricular activities. While consistently lauded for its scholars’ geographic and socioeconomic diversity, the program tends to be insulated from larger discussions of diversity, especially in the context of gifted education. Conversations regarding diversity are restricted to board meetings, quiet discussions among faculty members, and more socially conscious scholars. Little thought has been given to the underlying causes of socioeconomic and racial homogeneity on the GSP campus, its impact on scholars, or the program’s goal of fostering academic and intellectual excellence among Kentucky’s high-achieving high school students. This paper explores scholars’ attitudes towards the current level of diversity at GSP, as well as the strength of the program administration’s commitment to promoting diversity. The authors organized a panel of scholars from a range of racial, geographic, and socioeconomic backgrounds to discuss topics surrounding
diversity and also surveyed attitudes from the larger GSP community about their satisfaction with the current level of diversity within the program. Additionally, they interviewed GSP’s executive director to discuss the role that the promotion of racial, economic, and geographic diversity plays in the program’s mission. Administrators and scholars tend to view the lack of diversity as an untroubling product of its selective nature, largely ignoring systemic causes restricting its accessibility for black, Latino, poor, and rural students. Together, acceptance of the status quo and an unquestioned commitment to “merit” prevent gifted education programs from becoming more inclusive.

5:00 PM – 6:00 PM  
Pullen Plaza  
Keynote Presentation  
Polymathy, Problem-Finding, Integrating, Playing: Four Strategies for Creative Talent Development  
Michele Root-Bernstein and Robert Root-Bernstein, Michigan State University, Lansing, MI  
Sponsored by Johns Hopkins Center for Talented Youth

Research demonstrates that people can be talented without being creative and, conversely, that creative people may not be initially identified as talented. How, then, can we help the talented also achieve creative success and, perhaps, define new ways of identifying creative promise? Talent, understood as mastery of a well-defined discipline, can be developed by intensive, circumscribed practice. Creative behaviors, in contrast, are inherently combinatorial, involving the reformulation of ideas and processes within and across disciplines. Creativity therefore requires the development of focused breadth and integrative ability. Our studies of creative people suggest four strategies that might be harnessed effectively for gifted education. First, polymathy is the purposeful development of knowledge and skills in more than one discipline, or the development of unusual breadth and depth within a single discipline. Second, development of problem finding skills. Creativity involves not only “effective surprise,” but also the articulation of problems that lead to those surprises. A polymathic range of skill and knowledge may enhance problem finding, but only if conventionally disparate knowledge is integrated. Thus, our third strategy, integrating, links vocational and avocational activity into a larger, idiosyncratic whole. Finally, playing, the uninhibited exploration of ideas and materials for the fun of it provides a permissive space for subverting received knowledge, recombining ideas, and transferring techniques to novel effect. We will illustrate our thesis with exemplars from our ongoing studies of Nobel Prize winners in the sciences, economics, literature and peace as well as our work on MacArthur Fellows.

6:15 PM – 8:15PM  
Reception, North and South Dining Terrace
7:00 AM – 8:30 AM  
Registration Open, Lobby Area of McAuley Registration Desk

7:30 AM – 8:30 AM  
Breakfast, Chesapeake Galley

8:30 AM – 9:15 AM  
Pullen Plaza  
Keynote Presentation  
Moving Childhood Potential to Adult Creative Achievement: The Psychology of High Performance  
Paula Olszewski-Kubilius, Center for Talent Development, Northwestern University, Evanston, IL  
Rena Subotnik, Center for Education Policy, American Psychological Association, Washington, DC  
Frank Worrell, University of California, Berkeley, Berkeley, CA

The presenters will discuss findings from their forthcoming book, The Handbook of High Performance: Developing Human Potential into Domain Specific Talent. Drawing on psychological science research, interviews with key gatekeepers, and best practice, we explore talent development in five domains: sport (golf and team sports), art performance (dance and acting), art production (culinary arts and drawing), academics (psychology and mathematics), and the professions (software engineering/medicine and professional teams across domains). For each domain, we address early manifestations of talent for the domain; psychosocial skills that are essential for transitioning through developmental trajectories of the domain; benchmarks that demonstrate critical transitions to a next stage of talent development; and inhibiting factors that can derail a promising trajectory. We also address the proportion of knowledge about talent development within the domain that is based on research versus professional judgment and/or tradition. The presenters will highlight the unique aspects of talent development in each domain as well as commonalities across domains.

9:30 AM – 9:45 AM  
Break

9:45 AM – 10:30 AM  
Special Breakout Presentations, Rooms 18, 19, 200, and 202

9:45 AM – 10:30 AM  
Room 18  
Gifted Students’ Views of Teacher Efficacy  
Laurie Croft, University of Iowa, Iowa City, IA

The Gifted Children’s Bill of Rights asserts the right to learn something new every day. Teacher quality is acknowledged as a critical factor in student learning and achievement; teachers need to provide effective learning experiences, and students need to perceive that they are receiving challenging educational opportunities. Student’s perceptions of teacher effectiveness can contribute to our understanding of how educators can meet gifted students’ needs. This study explores gifted students’ perspectives about teacher efficacy by examining Talent Search participants’ comments about the educators who have had a profound impact on them. More specifically, this qualitative study seeks to understand what characteristics and behaviors make a “good teacher” in gifted students’ views. Study participants were recognized as the highest-scoring students on the Belin-Blank Exceptional Student Talent Search above-level testing for students in grades 4 – 12. Each student invited to an annual
recognition ceremony was given the opportunity to honor an educator who has had a profound impact on the student, and students were invited to leave comments regarding their selected teacher and why that teacher has been so effective. Using qualitative analysis, we explored students’ comments to identify themes among the responses.

Following open coding, we engaged in second-level coding using a priori codes from the Tripod Project (the 7 C’s of Teacher Effectiveness) adopted by some school districts to solicit general education student perspectives about their teachers. Through careful analysis of the coding, we identified themes important to gifted learners—themes that were sometimes distinct from those identified as essential in general education classrooms. This research contributes to our understanding of what characteristics and behaviors are perceived by gifted learners as significant in their learning and in their lives. Teachers of the gifted can be more successful with this population by understanding the students’ sophisticated awareness of what effective teachers can do: “His emphasis on non-traditional teaching methods…as well as his ability to genuinely connect with students, made him a highly effective teacher.”

9:45 AM – 10:30 AM
Room 19
Twice Exceptional: Flexible Definitions, Diagnosis, and Instruction
Virginia Berninger, University of Washington, Seattle, WA
Ruby Dawn Lyman, Hillsboro, OR
Nancy Robinson, Discussant, University of Washington, Seattle, WA
Megan Foley-Nicpon, Moderator, University of Iowa, Iowa City, IA

This panel presentation offers an overview of the impact of early research method coursework (with Professor Stanley), groundbreaking research on gifted students with reading disabilities (Linda Brody and Lynn Fox), and program development for radical acceleration through the University of Washington Early Entrance Program (Nancy Robinson, founding director). The panelists continue with a review of recent twice-exceptional research with the emphasis on gifted individuals with specific learning disabilities (SLDs). The focus will be on findings that identified math disabilities with and without co-occurring reading, writing, and/or oral language SLDs, including ongoing research comparing characteristics of gifted students with and without SLDs—WL (in reading and/or writing), and nongifted students with and without SLDs-WL. Previous research, which demonstrated that gifted and nongifted with SLDs-WL differed in reading and writing achievement but not in phenotypes (behavioral markers of genetic variables associated with SLDs), was replicated in a recent study that also showed the expected higher reading and writing achievement by gifted students without SLDs-WL than gifted students with SLDs-WL, and differences in the two nongifted groups as well – but not necessarily the same differences as in the gifted. A case is made for replacing discrepancy formulas or response to instruction with evidence-based flexible approaches to definition and identification of SLDs that mask neither giftedness nor SLDs and guide appropriate instruction. The significance of this work for the field of giftedness is addressed.
9:45-10:30 AM  Room 200  
**Age and Grade as Factors in Academic Talent Identification**  
Stuart Gluck, Johns Hopkins University, Baltimore, MD  
Frank Williams, Johns Hopkins University, Baltimore, MD  
Saiying Steenbergen-Hu, Northwestern University, Evanston, IL  
Matthew Makel, Duke University, Durham, NC

Above-grade-level tests are often used for identifying academically talented students. A crucial question is whether candidates should be judged relative to others of similar age or relative to others in the same grade. This presentation, by researchers from CTY, CTD, and TIP, explores this and related questions using test score data, comprising millions of scores across several tests, from the Johns Hopkins University Center for Talented Youth (CTY), Northwestern University Center for Talent Development (CTD), Duke University Talent Identification Program (TIP), and Center for Bright Kids (CBK). By reporting on a dataset of test scores across the talent searches, the presentation offers increased understanding of the factors different above-grade level tests are effectively measuring and how the tests function in the context of academic talent identification. Presenters provide guidance on whether eligibility cutoff scores for educational programs should be set by age or by grade.

The research focuses on an analysis of covariance and the development of regression models for test score dependent upon age and grade as independent variables. By comparing how much variation is due to each of age and grade, the analysis addresses how best to set eligibility cutoff scores. Thinking about how much variation is explained by these factors leads naturally into a further exploration of what these tests are effectively measuring and how they function within a talent search or as qualifying tests for programs.

9:45 AM – 10:30 AM  Room 202  
**Creating Structures for the Development of Early STEM Talents: Pipelines, Pigs, and Pumping Stations**  
Ann Robinson, University of Arkansas at Little Rock, Little Rock, AR

An international outcry over the lack of engineers and scientists sends U.S. communities and schools scrambling to encourage students to pursue STEM careers. Advanced learners are an obvious STEM talent pool, but schools and families often wait until at least middle school to engage students systematically in the STEM disciplines, particularly engineering and science. Any engineer will tell us that if we don’t see a healthy flow from a pipeline, check the source first. In schools, the source is found in primary classrooms. How teachers engage young students in domains like engineering and science when early grades concentrate on literacy and numeracy matters. How we address the possible stereotype threats that affect the STEM interests, confidence, and accomplishment of children is a challenge. Furthermore, families and out-of-school providers must sort through commercial “pitches” for experiential STEM opportunities at home or in informal learning environments to evaluate them against the criteria of effectiveness, engagement, and affordability.
This session focuses on the design, programmatic structures, and research results from multiple studies, and lessons learned from a program that addresses the constraints of poverty, engages young learners in engineering, reports reduced excellence gaps between advantaged children and children from low-income households, and scales up successfully in schools. The linkages between Julian Stanley’s conceptualizations of Discovery as crucial to talent development and his pioneering work on above-level testing inform this presentation. The research was supported across eight years of Jacob K. Javits research and demonstration projects. The programs are sustainable and transportable to in-school and out-of-school setting.

10:30 AM – 11:00 AM  Refreshment Break, Chesapeake Galley
Sponsored by the Jodie Mahony Center for Gifted Education, University of Arkansas at Little Rock

11:00 AM – 11:45 PM  Pullen Plaza
Keynote Presentation
Tracing Our Roots: A History of Theorists, Thinkers, Action People, And Major Events In Gifted Education
Joseph Renzulli, University of Connecticut, Storrs, CT

Following a brief overview of historically influential events and contributors from ancient times and the 18th Century pioneers such as Galton and Binet, this presentation will focus on 20th Century developments in America. Topics will include the work of early contributors such as Terman, Guilford, and Hollingworth and more recent luminaries such as Torrance, Stanley, Gallagher, and Feldhusen. “Genealogical Charts” about who influenced these contributors and who they, in turn influenced will be presented. We will cover what I call the Five Turning Points In The 1950s and the evolution of what I call The Golden Age of Gifted Education. This period covers the White House Task Force that led to the Marland Report, The Education Professions Development Act, the formation of the Office of Gifted and Talented at what was then the Office (now Department) of Education, The National/State Leadership Training Institute, and The Javits Act. Brief coverage will be given to the “evolution” of The National Association for Gifted Children. A few personal anecdotes and some photos from the early lives of our academic ancestors will be presented. The session concludes with suggestions for what, hopefully, will create a new golden age.

11:45-12:15  Panel respondents to Keynote Presentation
Sally Reis, University of Connecticut, Storrs, CT
Joyce VanTassel-Baska, College of William and Mary, Williamsburg, VA
Nicholas Colangelo, University of Iowa, Iowa City, IA

Closing Remarks
Nicholas Colangelo, University of Iowa, Iowa City, IA

Let us know what you think of the Wallace Symposium: www.belinblank.org/wallace/eval
Susan G. Assouline is the director of the Belin-Blank Center, holds the Myron and Jacqueline N. Blank Endowed Chair in Gifted Education, and is a professor of school psychology. Upon completion of her doctorate, she was awarded a two-year post-doctoral fellowship at the Study of Mathematically Precocious Youth (SMPY) at Johns Hopkins University. Throughout her career, she has been especially interested in identification of academic talent in elementary students. She is a co-developer (with Nicholas Colangelo and Ann Shoplik) of 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 NAGC 2016 Distinguished Scholar Award.

Joseph Bates is a computer scientist and entrepreneur. Currently he leads Singular Computing LLC, developing approximate computers with computational capacity similar to the brain. His technical work has been varied, including theoretical computer science, artificial intelligence, automated mathematics and philosophy, and computational drama. He was a professor and scientist for 20 years at Carnegie Mellon, MIT, and Cornell, and entered Johns Hopkins as an undergraduate at age 13.

Camilla Persson Benbow is Patricia and Rodes Hart Dean of Education and Human Development at Vanderbilt University’s Peabody College. She has led Peabody, one of the nation’s leading colleges of education and human development, since 1998. Benbow also co-directs the Study of Mathematically Precocious Youth, a longitudinal study examining the developmental trajectories of more than 5,000 individuals now past its 45th year. She began her academic career at Johns Hopkins University following completion of her doctorate (1981) under Julian C. Stanley and Lynn Fox. She has received the David Imig Award from the American Association of Colleges for Teacher Education (2010), the President’s Award from the National Association for Gifted Children (2009), and the Distinguished Alumna Award from Johns Hopkins University (2008). In 2004, she received the Lifetime Achievement Award from the MENSA Education and Research Foundation. Recently, the International Society for Intelligence Research awarded her its highest honor: the Lifetime Achievement Award: For Outstanding Contributions to the Field of Intelligence (2018).

Virginia Wise Berninger, Ph.D. Psychology, Johns Hopkins University, is an experimental and licensed clinical psychologist who has been on faculty at Harvard and Tuft Medical Schools and the University of Washington. She was a Principal Investigator on NIH grants for typical oral and written language learning (1989-2008) and multidisciplinary learning disability center (1995-2006, 2011-2016) and Co-Principal Investigator with Nancy Robinson of a Department Education Grant on Math Talent (1993-1996). She supervised Dr. Lyman’s dissertation research on twice exceptional language learners. She recently retired, but as a Professor Emerita is active in professional development and consultation and research with colleagues.

Linda Brody directs the Study of Exceptional Talent (SET) and the Diagnostic and Counseling Center (DCC) at the Johns Hopkins Center for Talented Youth. She earned her doctorate at Johns Hopkins and worked with Julian Stanley as Associate Director of SMPY. SET continues SMPY’s work of counseling exceptionally advanced students, studies their progress over time, and publishes Imagine magazine for students and their parents, while the DCC provides psycho-educational assessments and recommendations to twice-exceptional students. Linda’s research has focused primarily on evaluating accelerative strategies, and on studying special populations including exceptionally gifted students, gifted females, and twice-exceptional students.

Shirille Mae Mamaril Choe is a Ph.D. candidate in education at Claremont Graduate University. Her research focuses on creativity and talent development of diverse populations, including Asian American and Pacific Islander students. She is currently working on her dissertation examining the path to creative accomplishments of comics artists. Choe has presented her work at several national conferences including the American Educational Research Association (AERA) and the Association for the Study of Higher Education (ASHE). She co-authored a publication on notable Asian American women in an upcoming issue of the Journal for the Education of the Gifted (2018).

Nicholas Colangelo is Dean Emeritus of the University of Iowa College of Education, the Myron & Jacqueline Blank Professor of Gifted Education Emeritus, and Director Emeritus of The Connie Belin & Jacqueline N. Blank International Center for Gifted Education and Talent Development. His areas of research in gifted education focus on counseling issues, affective development, and the academic and social effect of acceleration. He co-edited (with Susan Assouline and Miraca Gross) A
Nation Deceived: How Schools Hold Back America's Brightest Students, the watershed publication concerning the academic and social-emotional benefits of academic acceleration. He is the recipient of numerous awards from NAGC, including the Distinguished Scholar Award and the Ann Isaacs Founders Award.

Cathryn Cortesa is a postdoctoral fellow in the department of Cognitive Science and the School of Education at the Johns Hopkins University. She earned her Ph.D. in Developmental Psychology in 2016 from the University of Nebraska-Lincoln. Cortesa’s research investigates the cognitive processes and neural mechanisms that underlie development, including neonatal speech processing, as well as spatial cognition in childhood. Her current work includes coordination of an interdisciplinary research project to characterize the cognitive processes that underlie children’s block building skills, which blends traditional spatial cognitive assessment with current technology and machine learning techniques.

Laurie J. Croft, Ph.D., is a Clinical Professor of Gifted Education and is the Associate Director for Professional Development at the Belin-Blank Center. She presents at state, national, and international conferences, and to parent groups, teachers, and school boards. She facilitates professional learning in gifted education for educators from around the world. Serving as the College of Education Honors Advisor, she encourages undergraduates to earn endorsements in gifted education. Currently, Laurie is the Network Representative on the NAGC Board of Directors. Her research interests include the conceptual foundations of gifted education and professional development/learning for teachers of the gifted.

David Yun Dai is a Professor of Educational Psychology and Methodology at University at Albany, State University of New York. Dr. Dai was the recipient of the Early Scholar Award in 2006 and the Distinguished Scholar Award in 2017 conferred by the National Association for Gifted Children in the United States, and he was a Fulbright Scholar to China during 2008-2009 and to Germany during 2015-2016. He currently serves on the editorial boards of Gifted Child Quarterly, Journal for the Education of the Gifted, and Roeper Review, and Journal of Special Education (Taiwan). Dr. Dai has published 8 authored or edited books, and over 100 journal articles and book chapters in psychology, educational psychology, and gifted education. His current focus is talent development and creativity.

Jason Eisner is Professor of Computer Science at Johns Hopkins University, where he is also affiliated with the Center for Language and Speech Processing, the Machine Learning Group, the Cognitive Science Department, and the national Center of Excellence in Human Language Technology. His goal is to develop the probabilistic modeling, inference, and learning techniques needed for a unified model of all kinds of linguistic structure. His 100+ papers have presented various algorithms for parsing, machine translation, and weighted finite-state machines; formalizations, algorithms, theorems, and empirical results in computational phonology; and unsupervised or semi-supervised learning methods for syntax, morphology, and word-sense disambiguation. He is also the lead designer of Dyna, a new declarative programming language that provides an infrastructure for AI research.

Megan Foley-Nicpon is a Professor of Counseling Psychology and Associate Director for Research and Clinic at the Belin-Blank Center for Gifted Education and Talent Development, both at the University of Iowa. 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 has written one edited book and over 50 referred articles and book chapters in the areas of gifted, counseling psychology, and twice-exceptionality, and given over 100 presentations at international, national, and state professional meetings.

Lynn H. Fox is an educational psychologist and former Dean of the School of Education at American University. Her Ph.D. is in psychology from the Johns Hopkins University where she was an associate director of the Study of Mathematically Precocious Youth and later head of the Intellectually Gifted Child Study Group and Professor of Education until 1985. Throughout her career her focus has been on the following: gender differences; gifted and “at risk” learners; testing and program evaluation. She is the author of numerous books, book chapters and journal articles. Her most recent chapter is in Arts Integration in Education published 2016 by Intellect.
Stuart Gluck is the Director of Institutional Research at the Johns Hopkins Center for Talented Youth (CTY). Stuart received his Ph.D. in philosophy, specializing in logic and philosophy of science, from Johns Hopkins University. His philosophical research focused on the mathematical and conceptual foundations of quantum physics, including quantum logic, and on scientific methodology. At CTY, his efforts have centered on the application of quantitative analytics to a broad range of topics, ranging from program evaluation to above-grade-level testing.

Norma Hafenstein, Ph.D., is the Daniel L. Ritchie Endowed Chair in Gifted Education at the Morgridge College of Education at the University of Denver. She is co-principal investigator for the Right4Rural Project, a Jacob K. Javits federally-funded initiative to identify and serve giftedness in traditionally underrepresented groups in rural Colorado. Dr. Hafenstein’s research interests include information processing styles, social and emotional development in gifted populations, program effectiveness and adult and generational giftedness. She advises graduate students and teaches courses including Psychological Aspects of the Gifted, Program Development, Leadership and Communication and Research as Problem Identification, Intervention, Application and Defense.

Gregory Hager is the Mandell Bellmore Professor of Computer Science, and the Director of the Malone Center for Engineering in Healthcare at the Johns Hopkins University. Hager’s research interests include computer vision, vision-based robotics, and time-series analysis of video and motion data. His work has focused on applications in healthcare, including skill analysis of surgeons, and on collaborative robotics in both healthcare and manufacturing. He has published over 300 refereed articles on these topics during his career. He is a Fellow of the ACM, the IEEE, the AIMBE, and the MICCAI society.

Elaine Tuttle Hansen is the executive director of the Johns Hopkins Center for Talented Youth. Prior to her arrival at CTY in 2011, Hansen served for nine years as president of Bates College in Maine. She also served as provost at Haverford College in Pennsylvania from 1995 to 2002 and professor of English beginning in 1980. A specialist in Middle English literature and the author of numerous scholarly articles and three books, she has taught a wide variety of courses in Middle English literature and contemporary women’s writing. In her current position, she is frequently called upon to speak and write about issues pertaining to education, including the need to engage and challenge bright students from all backgrounds and the benefits of a broad interdisciplinary education.

Nancy B. Hertzog is a Professor of Educational Psychology and the Director of the Robinson Center for Young Scholars at the University of Washington. In addition to studying the outcomes of Robinson Center alumni, her research focuses on teaching strategies designed to differentiate instruction and challenge children with diverse abilities. She has studied teachers’ implementation of the Project Approach in classrooms with both high-achieving and low-achieving children. She directed University Primary School, an early childhood gifted program, at the University of Illinois at Urbana-Champaign for fifteen years giving her experience that has spanned from preschool to college. She has published three books and several chapters on early childhood gifted education.

Kristina Hesbol, Ph.D., is an assistant professor in the Educational Leadership and Policy Studies Department at the University of Denver. Her professional work examines the impact of values and beliefs of school and district leaders, filtered through the intersecting issues of disrupting systemic inequity and leading sustainable improvement. As an investigator on a Jacob K. Javits Gifted and Talented Students Education Grant, she is studying the underrepresentation of traditionally marginalized gifted students in rural contexts across the state of Colorado. She recently launched a Rural Innovative School Leadership Networked Improvement Community, in which university faculty and rural/remote practitioners collaborate, using improvement science tools, to accelerate improvement.

Lori Ihrig, Ph.D., is the Supervisor for Curriculum and Instruction in the Belin-Blank Center for Gifted Education and Talent Development at the University of Iowa. She received her Ph.D. in Curriculum and Instruction from Iowa State University. Dr. Ihrig’s research examines STEM talent development in high-ability students. She has a specialized interest in talented students and their teachers who attend schools in under-resourced rural communities.
Anais Janoyan is a doctoral candidate in education at Claremont Graduate University. She has been teaching elementary, middle, and high school students for over 11 years. Her research interests include talent development and creativity of diverse populations, especially Armenian-American student success. As an educator and graduate student, she has earned numerous grants and scholarships for her work. She has presented at AERA and co-authored a book chapter entitled Nurturing Creativity and Productive Giftedness in High Ability Students (2018). Her dissertation focuses on the creativity and talent development of film directors, producers, and screen writers.

Christine W. Kang is a Ph.D. candidate at Claremont Graduate University. She has worked in higher education and student affairs for over 16 years, currently employed at the Claremont School of Theology. Her research includes successful pathways for higher education students and female faculty of color. Kang has presented at numerous regional, national and international conferences on access and equity in higher education, talent development, and international education. She has recently co-authored Nurturing Creativity and Productive Giftedness (2018) and Teaching Excellence: International Teachers’ Perspectives on Access, Equity, and Quality (2017). Her dissertation focuses on the productive giftedness of Asian American faculty.

Ron Lake is a member of the Advisory Council of the Center for Talented Youth, which he first joined in 2000 and served as its Chair from 2005 to 2008. He is President of Lake Partners, Inc., an investment advisory firm based in Stamford, CT. Ron earned a Bachelor's degree, magna cum laude, from Harvard College in 1976, and a Master's degree in public policy (MCRP) from Harvard University in 1978.

Barbara Landau is the Dick and Lydia Todd Professor of Cognitive Science, and the Director of the Science of Learning Institute at the Johns Hopkins University. Landau is interested in human knowledge of language and space, and the relationships between these two foundational systems of knowledge in typical and atypical development. She is a Fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, the Cognitive Science Society, and several other organizations. She was named a Guggenheim Fellow in 2009, and recently was Chair of the Psychology Section of the AAAS.

Catriona Ledwith is Academic Coordinator at the Centre for Talented Youth, Ireland, which caters for over 3000 gifted students every year. Catriona is a qualified chemistry teacher, with a Masters in education management and a Ph.D. in gifted education. Her area of focus was acceleration, with a particular focus on dual enrolment. Her Ph.D. saw her develop a programme for 4th year secondary school students called Early University Entrance. The programme has continued since she completed her Ph.D. in 2013, with over 850 participants, and remains a central focus in her role at CTY Ireland. Catriona has presented at numerous gifted conferences, and has published chapters in two books.

David Lubinski received both his B.A. (1981) and Ph.D. (1987) in psychology from the University of Minnesota. From 1987-1990, he was a Postdoctoral Fellow, Quantitative Methods Training Program, Department of Psychology, University of Illinois (Champaign). He is currently Professor of Psychology at Vanderbilt University, where he co-directs the Study of Mathematically Precocious Youth (SMPY), a planned 50-year longitudinal study of over 5,000 intellectually talented participants, begun in 1971. He has served as President for the International Society for Intelligence Research, a trustee for the Society for Multivariate Experimental Psychology, and Associate Editor for the Journal of Personality and Social Psychology. He received APA's 1996 Early Career Award (psychometrics/applied individual differences); and he has received APA's George A. Miller Outstanding Article in General Psychology Award twice: 1996 and 2016. In 2006, he received the Distinguished Scholar Award from the National Association for Gifted Children; and in 2015, the MENSa Research Foundation’s Lifetime Achievement Award. Recently, the International Society for Intelligence Research awarded him its highest honor: the Lifetime Achievement Award: For Outstanding Contributions to the Field of Intelligence (2018).

Ann Lupkowski-Shoplik, Ph.D., is the Administrator, Acceleration Institute and Research at the University of Iowa Belin-Blank Center. She founded and directed the Carnegie Mellon Institute for Talented Elementary Students (C-MITES) at Carnegie Mellon University for 22 years. She co-authored Developing Math Talent: A Comprehensive Guide to Math Education for Gifted Students and the Iowa Acceleration Scale, and co-edited the 2015 publication on academic acceleration, A Nation Empowered: Evidence Trumps the Excuses Holding Back America’s Brightest Students.
Ruby Dawn Lyman, Ph.D., Learning Sciences and Human Development, University of Washington, specialized in gifted education and learning disabilities as a graduate student. She served as Vice Principal for summer programs at the Robinson Center for Young Scholars and lead teacher for computerized instruction for oral and written language learning in the Multidisciplinary Learning Disabilities Center. Since 2013, she has been involved in teacher education. Currently she is an Elementary Math and Science Specialist in the Hillsboro Oregon School District, but in summer 2018 will become Coordinator for the Talented and Gifted Certification Program at Pacific University.

Duhita Mahatmya, Ph.D., received her B.S. in Psychology from Drake University and her M.S. and Ph.D. in Human Development and Family Studies from Iowa State University. She is currently an Assistant Research Scientist in the College of Education at the University of Iowa. She serves as the research methodologist on several multidisciplinary research teams evaluating K-12 and college student academic and social emotional development. Dr. Mahatmya's research examines how family, school, and community environments shape the attainment of developmental milestones from early childhood to young adulthood.

Matthew C. Makel is the Director of Research for Duke University's Talent Identification Program. His research focuses on academic talent development and research methods. Matt earned his Ph.D. in Educational Psychology from Indiana University, an MA in Developmental Psychology from Cornell University, and his BA in Psychology from Duke University, where he first started working with academically talented students while an undergraduate. With Jonathan Plucker, he co-edited the book Toward a More Perfect Psychology: Improving Trust, Accuracy, and Transparency in Research and is the co-editor with Plucker and Anne Rinn of From Giftedness to Gifted Education: Reflecting Theory in Practice.

Sakhavat Mammadov, Ph.D., is a Post-Doctoral Research Associate at the Robinson Center for Young Scholars at the University of Washington. Dr. Mammadov received his Ph.D. in Educational Policy, Planning, and Leadership with an emphasis in Gifted Education from the College of William & Mary. His research interests focus on the social-emotional lives of gifted children, personality, motivation, creativity and administrative and policy issues in gifted education. He is the recipient of the 2015 National Association for Gifted Children (NAGC) Doctoral Student Award, NAGC Doctoral Dissertation Award (2nd Place), Mensa Foundation Award for Excellence in Research, and the Armand J. & Mary Faust Galfo Education Research Fellowship.

Kenya R. Marshall-Harper is a PhD candidate in education at Claremont Graduate University. Her research interests include K-12 education, early preparation of gifted and talented students, and underserved populations. As a secondary English and English Language Development teacher, she has worked with diverse students for over 14 years. She has received national and international awards including the Tae Han Kim Award and the Chancellor's Doctoral Incentive Award for high achievement. She has co-presented at AERA on successful women of color. Her dissertation focuses on the talent development and productivity of African-American female faculty.

D. Betsy McCoach, Ph.D., is a professor in the Research Methods, Measurement, Evaluation program in the Educational Psychology department at the University of Connecticut. Dr. McCoach has co-authored over 100 peer-reviewed journal articles, book chapters, and books, including Beyond Gifted Education (with Peters, Matthews, and McBee), and Instrument Design in the Affective Domain. Dr. McCoach founded the Modern Modeling Methods conference, held annually at UCONN. Dr. McCoach is co-Principal Investigator for the National Center for Research on Gifted Education and has served as Principal Investigator, co-Principal Investigator, and/or research methodologist for several other federally-funded research projects/grants. Dr. McCoach’s research interests include gifted education, instrument design, latent variable modeling, longitudinal modeling, and multilevel modeling.

Myles Mendoza has 20-plus years of success in the non-profit sector including experience advising philanthropists about investments in education, healthcare and social services for under-served children. Prior to Empower Illinois, he worked in inpatient adolescent psychiatry, developed the Colorado Children’s Hospital HIV/AIDS program, and helped raise $62,000,000 for the Denver Scholarship Foundation. At Democrats for Education Reform, he helped create 12 state chapter offices nationwide. Most recently, he led a 400-member, coalition including 53 labor organizations; it passed a tax credit for teachers, parents and $100M for scholarship granting organizations. He led a team that passed the “Untapped Potential Act” - legislation that improves the identification of low-income gifted children and the “Acceleration Act,” allowing kids to advance at their level of competency; which ultimately led to the creation of a separate, new non-profit, the Untapped Potential Project.
Paula Olszewski-Kubilius, Ph.D., is the director of the Center for Talent Development at Northwestern University and a professor in the School of Education and Social Policy. Over the past 34 years, she has worked to create outside-of-school program models to meet the need of diverse gifted learners. She has published extensively about issues in gifted education, with a particular focus on talent development for under-served gifted students. She has served as the editor of Gifted Child Quarterly, co-editor of the Journal of Secondary Gifted Education and on the editorial boards of Gifted and Talented International, Roeper Review, Journal for the Education of the Gifted, and Gifted Child Today. She currently is on the board of trustees of the Illinois Mathematics and Science Academy and is president-elect of the Illinois Association for the Gifted. She is Past-President of the National Association for Gifted Children and received the Distinguished Scholar Award in 2009 from NAGC.

Susan J. Paik, Ph.D., is an Associate Professor in the School of Education at Claremont Graduate University. Her research interests include educational productivity, talent and leadership development, research methods and evaluation. Dr. Paik has presented her work nationally and internationally in over 150 professional venues. She has received several awards, grants (e.g., AERA), and fellowships including the Early Outreach Award for her dedication to underserved students. She is the editor or author of Advancing Educational Productivity (2005), Narrowing the Achievement Gap (2007), and Nurturing Productive Giftedness (forthcoming). Her current research projects focus on early preparation, learning, and talent development.

Jonathan Plucker is the Julian C. Stanley Endowed Professor of Talent Development at Johns Hopkins University, where he works at the Center for Talented Youth and School of Education. He is president-elect of the National Association for Gifted Children. He graduated with a B.S. in chemistry education and M.A. in educational psychology from the University of Connecticut. After briefly teaching at an elementary school in New York City, he earned his Ph.D. in educational psychology from the University of Virginia. He is a Fellow of the American Psychological Association (and the recipient of the 2012 Arnheim Award for Outstanding Achievement), Association for Psychological Science, American Educational Research Association, and the American Association for the Advancement of Science. He received the 2013 Distinguished Scholar Award from NAGC.

Sally M. Reis recently completed a six-year term as the Vice Provost of Academic Affairs and currently is the Letitia Neag Chair and a Board of Trustees Distinguished Professor in the Neag School of Education at UConn. She was previously a classroom teacher and administrator in public schools. She has authored and co-authored more than 250 articles, books, book chapters, monographs and technical reports, and worked generated over 50 million dollars in grants with a UConn research team. Sally has served as the President of the National Association for Gifted Children, has won many awards for her work and research, and is a fellow of the American Psychological Association. She is also the co-director of Confratute, the longest running summer institute in gifted education in the world. Her specialty areas in research include underachievement of high potential students, curriculum compacting and differentiation, talented readers and the Schoolwide Enrichment Model.

Joseph S. Renzulli is a Distinguished Professor of Educational Psychology and director of the Renzulli Center for Creativity, Gifted Education, and Talent Development at the University of Connecticut. His research has focused on creative and investigative learning, talent development, and organizational models for total school improvement. Although the American Psychological Association named Dr. Renzulli among the 25 most influential psychologists in the world, he lists as his proudest accomplishment the numerous innovative applications of his Schoolwide Enrichment Model in schools around the world. He considers himself to be an on-the-ground communicator who always approaches his work from the practical perspectives of teachers.

Julia Link Roberts is the Mahurin Professor of Gifted Studies at Western Kentucky University as well as the Executive Director of The Center for Gifted Studies and The Carol Martin Gatton Academy of Mathematics and Science in Kentucky. She is President of the World Council for Gifted and Talented Children, Past-President of The Association for the Gifted, and Chair of the Kentucky Advisory Council for Gifted and Talented Children. Dr. Roberts directs programming for children and young people, conducts professional development, and is the co-editor of Introduction to Gifted Education (2018) and author of books and articles on curriculum, differentiation, STEM schools, policy, and advocacy.
Ann Robinson is Professor of Educational Psychology and Founding Director of the Jodie Mahony Center for Gifted Education at the University of Arkansas - Little Rock. She is past president of the National Association for Gifted Children (NAGC), a former editor of the Gifted Child Quarterly, and has been honored by NAGC as Early Scholar, Early Leader, Distinguished Scholar and for Distinguished Service to the association. Ann developed five Jacob K. Javits projects including two STEM research and demonstration programs for elementary students and teachers. She is the lead author on the best-selling Best Practices in Gifted Education: An Evidence-Based Guide and co-editor with Jennifer Jolly of A Century of Contributions to Gifted Education: Illuminating Lives. Her Blueprints for Biography curriculum guides provide teachers with strategies for differentiating non-fiction reading for talented students.

Nancy M. Robinson (Stanford Ph.D. in Psychology, 1958) is Professor Emerita of Psychiatry and Behavioral Sciences at the University of Washington and former Director of what is now known as the Halbert and Nancy Robinson Center for Young Scholars, established in 1975 by her late husband. The Center is best known for its two pioneering programs of early entrance to college but offers summer opportunities as well. Engaged previously in a 30-year career in intellectual disabilities, her research interests in giftedness have focused on marked academic acceleration to college, adjustment issues of gifted children, intellectual assessment, and verbal and mathematical precocity in very young children. She has consulted for more than 25 years with the U.S. State Department’s Office of Overseas Schools. She received the 1998 National Association for Gifted Children (NAGC) Distinguished Scholar Award and the 2007 NAGC Ann Isaacs Founders Memorial Award.

Bob Root-Bernstein is a Professor of Physiology at Michigan State University. His degrees are from Princeton University and he was a Post-doctoral Fellow with Jonas Salk. A MacArthur Fellowship encouraged his multidisciplinarity, including studies of creativity, art-sciences interactions and polymathy (e.g., Discovering, 1989 and, with Michele Root-Bernstein, Sparks of Genius, 1999). He is an editor of Leonardo, an art-sciences journal, exhibits his own artwork and collaborates with the trans-media artist Adam W. Brown (http://adamwbrown.net), and is currently at work on a new book called Modern Leonardos: Artists, Musicians and Performers as Scientists and Inventors.

Michele Root-Bernstein studies creative imagination across the arts and sciences. Her most recent book, Inventing Imaginary Worlds, From Childhood Play to Adult Creativity Across the Arts and Sciences (Rowman & Littlefield Education, 2014), argues for the importance of imaginative play in childhood and adulthood as an incubator of creative skill and know-how. Currently an adjunct faculty member at Michigan State University, Michele is co-author with Robert Root-Bernstein of Sparks of Genius, The Thirteen Thinking Tools of the World’s Most Creative People (Houghton Mifflin, 1999), as well as numerous articles on imaginative thinking, polymathy, and creative education. Michele received a B.A. from the University of Pennsylvania in 1975 and a Ph.D. in history from Princeton University in 1981. In addition, she has been a devotee of haiku and haiku-related arts for over twenty years, publishing in journals across the U.S. and Canada. Currently she facilitates a haiku study group at MSU.

Amy Shelton, Ph.D., holds a joint appointment as Director of Research at the Center for Talented Youth and Professor in the Johns Hopkins University School of Education. Her research interests include Spatial Cognition (Learning and Memory), Individual Differences, Spatial Skill Development, Neurodevelopmental Disorders, Distortions of Space Perception, Spatial Reasoning, Social and Spatial Skill Interactions, and Functional Neuroimaging.

Del Siegle is Associate Dean for Research and Faculty Affairs in the Neag School of Education at the University of Connecticut. He serves as director of the National Center for Research on Gifted Education and is a professor in gifted and talented education at UConn. He is a past president of the National Association for Gifted Children (NAGC), and past chair of the Research on Giftedness, Creativity, and Talent SIG of the American Educational Research Association (AERA). Along with Betsy McCoach, he was a co-editor of Gifted Child Quarterly (founding co-editor of the Journal of Advanced Academics). Dr. Siegle is co-author with Gary Davis and Sylvia Rimm of the popular textbook, Education of the Gifted and Talented. He is also author of The Underachieving Gifted Child: Recognizing, Understanding, & Reversing Underachievement.
Saiying Steenbergen-Hu, Ph.D., is a research assistant professor and the research director of the Center for Talent Development (CTD) of Northwestern University’s School of Education and Social Policy. Her methodological interests and skills include meta-analysis, educational measurement and assessment, quantitative research methodology, and applied statistical analysis. Her meta-analysis, coauthored with Sidney Moon, on the effects of acceleration on high-ability learners won the Gifted Child Quarterly (GCQ) Paper of the Year Award in 2012. Steenbergen-Hu, Makel, and Olszewski-Kubilius published “What one hundred years of research says about ability-grouping and acceleration: Findings of two second-order meta-analysis” in Review of Educational in 2016.

Rena F. Subotnik, Ph.D., is Director of the Center for Psychology in Schools and Education at the American Psychological Association. One of the Center’s missions is to generate public awareness, advocacy, clinical applications, and cutting-edge research ideas that enhance the achievement and performance of children and adolescents with gifts and talents in all domains. She has been supported in this work by the National Science Foundation, the American Psychological Foundation, the Association for Psychological Science, the Camille Dreyfus Foundation, the Jack Kent Cooke Foundation, and the Courant Institute of Mathematics.

Rachel E. Taylor is a doctoral student in the Research Methods and Statistics department at the University of Denver, where she focuses on both quantitative and qualitative methodology. Her current research focuses on college athletes and mental health, in addition to culturally proficient leadership in the identification of demographically underrepresented gifted learners in rural contexts. She earned her Bachelors and Masters degrees in Experimental Psychology.

Joyce VanTassel-Baska is the Jody and Layton Smith Professor Emerita of Education and founding director of the Center for Gifted Education at The College of William and Mary in Virginia where she developed a graduate program and a research and development center in gifted education. She also initiated and directed the Center for Talent Development at Northwestern University. Prior to her work in higher education, Dr. VanTassel-Baska has served as the state director of gifted programs for Illinois, as a regional director of a gifted service center in the Chicago area, as coordinator of gifted programs for the Toledo, Ohio public school system, and as a teacher of gifted high school students in English and Latin.

Frank Williams is the Johns Hopkins University Center for Talented Youth Associate Director of Testing and Assessment. In his role he creates and modifies testing policies in order to protect test takers as well as CTY; designs robust test development plans for creating high quality items, forms, and tests; implements test security measures; assists with data analysis on projects; and disseminates information about psychometric issues. Prior to CTY, Frank worked at Educational Testing Services where he researched the capabilities of various automated scoring engines for tests such as the GRE and TOEFL.

Frank C. Worrell is a Professor of School Psychology at the University of California, Berkeley, where he also holds an affiliate appointment in the Personality and Social Psychology program. His areas of expertise include talent development/gifted education, at-risk youth, cultural identities, scale development and validation, teacher effectiveness, and the translation of psychological research findings into practice. A current Member-at-Large of the Board of Directors of the American Psychological Association (APA), Dr. Worrell is a Fellow of the Association for Psychological Science, the American Educational Research Association, and five divisions of APA. Dr. Worrell was a 2013 recipient of the Distinguished Scholar Award from the National Association for Gifted Children and a 2015 recipient of the Distinguished Contributions to Research Award from the Society for the Psychological Study of Culture, Ethnicity, and Race.
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