Employer Roundtable Meeting
October 4, 2019 | 8:30am – 3:00pm
CGS Large Conference Room | One Dupont Circle NW, Suite 230, Washington, DC 20036-1146

AGENDA

8:30am – 9:00am   *Light breakfast served*

9:00am – 10:00am   **Welcome and Introductions**
- *Suzanne T. Ortega, President,*
  Council of Graduate Schools (CGS)

- *Earl Lewis, Founding Director,*
  University of Michigan Center for Social Solutions
  & CGS Employer Roundtable Chair

- *Christopher Sindt, Provost and Dean of the Graduate School,*
  Lewis University
  & CGS Board Chair

- *Roundtable Members*
  (each Roundtable member to provide a 2-minute introduction)

10:00am – 10:40am   **Graduate Education & the Global Workforce: Framing the Conversation**
- *Suzanne T. Ortega, CGS President*

Discussion (15 mins)

10:40am – 10:55am   **Coffee break**

10:55am – 11:45am   **Focus on Themes 1 and 4: University-Industry Collaborations,**
The Present and Future of Work

Creating Industry-Informed Graduate Programs (30 mins)
- *Jeffrey B. Halverson, Associate Dean, The Graduate School,*
  University of Maryland Baltimore County (UMBC)

- *Chris Valentino, Vice President, Global Cyber Solutions,*
  Northrop Grumman

Discussion (20 mins)

11:45am – 11:50am   **Break**

[over]

11:50am – 12:30pm **Focus on Theme 3: Advocating for Graduate Education**

- *Lauren Inouye, Vice President, Public Policy and Government Affairs Council of Graduate Schools (CGS)*

- *Julia D. Kent, Vice President, Best Practices and Strategic Initiatives, Council of Graduate Schools (CGS)*

Discussion (20 mins)

12:30pm – 12:45pm **Closing Discussion & Next Steps**

1:00pm – 3:00pm **Group lunch at Urbana restaurant**
4-minute walk to 2121 P St NW, Washington, DC 20037
(inside Kimpton Hotel Palomar)

CGS Employer Roundtable:
Four Broad Themes

COUNCIL OF GRADUATE SCHOOLS

The Present and Future of Work

- What workforce trends are changing your industry?
- How should graduate institutions and programs prepare their students for these and future changes? What about the changes we can't anticipate?
- What are the best ways of preparing current students to have the strongest possible skills and knowledge when they enter the workforce?
- What role will "microcredentials" play in supporting learning and career advancement?

Diversity and Inclusion

- What diversity challenges do you experience in your industry and are you addressing them? If so, how?
- How do leaders in your industry view the benefits of workforce and organizational diversity?
- How can employers and universities work together to support greater access to graduate degrees among underrepresented minorities and first-generation graduate students?
- How can universities better support your industry's efforts to recruit diverse talent?

Advocating for Graduate Education

- How can universities and employers work together to advocate for graduate education in a policy environment?
- What messages about graduate education are most effective for "making the case" for investments in graduate education? Least effective?
- How can employers and universities advocate for the value of graduate education to rural communities and economies?

Industry-University Collaboration

- What makes a collaboration between university and employers successful?
- What lessons have you learned from partnerships with universities? What advice do you have to share with graduate deans involved in such partnerships?
- What types of graduate internship programs are most effective? Least effective?
- How do you see the future of such collaborations? What kinds of challenges and opportunities do you anticipate?

CGS COUNCIL OF GRADUATE SCHOOLS

EMPLOYER ROUNDTABLE

Inaugural Meeting | October 4, 2019

Welcome and Introductions

- ***Suzanne T. Ortega,*** *President*
  Council of Graduate Schools (CGS)

- ***Earl Lewis,*** *Founding Director*
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  & CGS Employer Roundtable Chair

- ***Christopher Sindt,*** *Board Chair, CGS*
  Provost and Dean of the Graduate School
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Four Broad Themes

The Present and Future of Work

Diversity and Inclusion

Advocating for Graduate Education
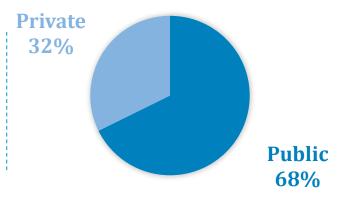
Industry-University Collaboration

Suzanne T. Ortega

President

Inaugural Meeting
October 4, 2019

CGS by the Numbers

~**500** **U.S. and Canadian Member Universities**

~**30** **International Members**

Private 32%

Public 68%

CGS Members by Carnegie Classification

R1	R2 + R3	M1	M2 + M3 + OTHERS
115	147	115	84

1,849,606 Aggregate Enrollment
(master's & doctoral students)

CGS Members in the U.S. Award

476,616
master's degrees annually
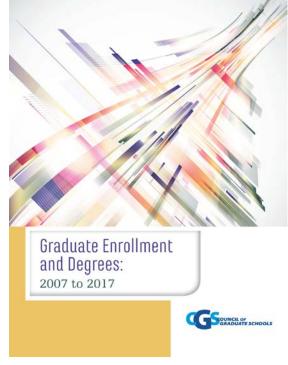
60,823
doctoral degrees annually

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Research

➢ **Who are our students**

- ▪ 1,869,845 total number
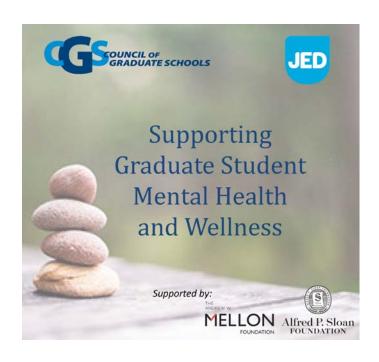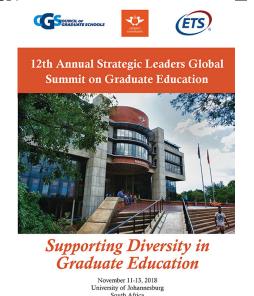- ▪ 73.9 percent are Master's
- ▪ 58.2 percent women
- ▪ 24 percent URM

Graduate Enrollment and Degrees: 2007 to 2017

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International Graduate Applications and Enrollment: Fall 2018

By Hironao Okahana and Enyu Zhou

February 2019

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...and what policies, practices, and resources optimize broad access to and success in graduate study

➤ Supporting Graduate Students Mental Health and Wellness– **Mellon & Sloan**

➤ Supporting Diversity in Graduate Education: Next Steps in the International Agenda – **ETS**

Career Pathways

Based on work supported by the Andrew W. Mellon Foundation and the National Science Foundation (#1661272)

Member Engagement: Addressing Hot Topics and Enduring Challenges

➤ Collaborations that "Work": Bridging Higher Education and the Workforce, Martin Simon, National Governors Association, Annual Meeting 2019

➤ Partnering with Business to Reverse the Skills Gap, Jim Goodnight, SAS, Summer Meeting 2016

➤ Strategic Business-Higher Education Partnerships: Impact on Graduate and Undergraduate Education, Brian Fitzgerald, Business Higher Education Forum, Annual Meeting 2016

Advocacy and Government Affairs

How do we make the case that graduate education has private value AND is a public good?

CGS Employer Roundtable
Four broad themes

The Present and Future of Work

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Resources

Priorities for our work together?

Dr. Jeffrey B. Halverson

Associate Dean, The Graduate School

UMBC Campus founded in 1966

- Carnegie Classification: *Doctoral University – Higher Research Activity*
- UMBC is designated a Minority Serving Institution (MSI) since 2017
- Extramural Research Awards in FY'18: $85M
- Per NSF, ranks in top 150 U.S. universities in federal R&D expenditures
- #12 in U.S. in NASA funding

24 PhD, 40 Master's and 22 Graduate Certificate Programs
Key research themes:

Computer Information Sciences & Engineering
- Cybersecurity and AI
- Cognitive Computing & Big Data Analytics
- Health IT

Environmental Sciences & Engineering
- Atmospheric Physics & Remote Sensing
- Ecology & Remediation
- Earth & Space Sciences

Life Sciences & Biotechnology
- Bio Sciences & Engineering
- Marine Biotechnology

- Employment in Maryland is strongly driven by Federal labs and agencies, and their industrial/corporate partners

- NSA, NASA, NAVY, NIST, NIH and others

- UMBC aligns a strong research focus with regional and national priorities in the environment, health, national security

- Key Examples:

- Cyber is a major part of Maryland and Federal government focus; UMBC has many activities and partnerships in cybersecurity i.e Northrop Grumman Corporation (NGC)

- Maryland Department of Health alignments with MIPAR (Maryland Institute for Policy, Analysis and Research), Hilltop Institute

- Joint Center for Earth Systems Technology (JCET), Center for Space Sciences and Technology (CSST) and Goddard Planetary Heliophysics Institute (GPHI) – major alignments with NASA Goddard Space Flight Center

UMBC's Information Technology and Engineering Building

Maryland is home to about 1,200 private sector cyber companies, many of which are government contractors, as well as over 60 government agencies, including the NSA at Fort Meade

Maryland: The Epicenter of Cyber Security

Maryland's location is strategic for defense contractors, IT companies and researchers in cyber security.

Fifty federal agencies and research facilities are located in Central Maryland. Three international airports provide global market access. A separate power grid from New York makes Maryland an ideal location for secure back-office operations. The State has a fiber-rich, redundant and reliable telecommunication network valued at $5.5 billion to support cyber security activities.

Growing Cyber Presence

Millions of square feet of new development are centered around Naval Air Station Patuxent River, Aberdeen Proving Ground and Fort Meade. National Business Park, a 285-acre business community in Anne Arundel County houses government contractors and expects to gain additional tenants from federal cyber security initiatives. Developments include Sensitive Compartmented Information Facility space and secure facilities. Across the state, more than 20 business incubators offer shared resources, access to state-of-the-art equipment and facilities and business assistance.

The **Chesapeake Innovation Center** (CIC) in Anne Arundel County is the nation's first business accelerator for government innovation, homeland, national and cyber security initiatives. CIC was established to help emerging businesses developing homeland and national security technologies. CIC connects these businesses and innovations to the federal intelligence agencies. CIC's TechBridge Program provides a demonstration of the products and solutions to key senior staff at government agencies and major prime contractors.

The **bwtech@UMBC Incubator and Accelerator** is strategically positioned to develop more activity in cyber security. Home to 30 emerging technology and life science companies, bwtech@UMBC operates an Idea Lab to help students and faculty develop businesses. The Incubator and Accelerator offers office and wet lab space, flexible lease arrangements and access to resources and networking opportunities.

LEGEND

- Cyber Clusters
- Cyber Facilities
- Military Installations
- Colleges & Universities

MAJOR ROADS
- Interstates
- US Highways

Miles
0 5 10   20

Maryland is a Hub of National Cyber Initiatives

- **National Security Agency (NSA)**
- **U.S. Cyber Command**
- **Intelligence Advanced Research Projects Agency (IARPA)**
- **Defense Information Systems Agency Headquarters (DISA)**
- **NIST – National Cybersecurity Center of Excellence (NCCoE)**

Interdisciplinary Research Institute comprising over 30 Faculty
– Designated by NSA and DHS as CAE-R and CAE-CD

Graduate and Undergraduate Education Programs
– Traditional Graduate Programs
– Cybersecurity MPS designed with industry/government input
– Cybersecurity track for CS and CE students; planned for IS
– Cyberscholars, SFS CyberCorps, INSURE, etc. …

Established in 2012

Mobile Systems & Device/Endpoint Security
Policy-based, Context-aware Access Control
Security and Privacy for IoT/E, Mobile, Cloud Environments
Big Data/Analytics for Security
   – Especially privacy-preserving Analytics
Economic Risk Analysis for Cyber Attacks
Public Policy Issues

UCYBR Director: Anupam Joshi
– Chair & Professor, CSEE
– http://cybersecurity.umbc.edu

Graduate Programs in Cybersecurity
UMBC's Cybersecurity Academy delivers high quality Cybersecurity training and education programs to individuals and organizations.

Twenty Years Relationship with National Security Agency (NSA)

First NSA Featured School in a series recognizing academic partnerships that support national security

– 1100+ NSA Employees with UMBC Degrees (#1 supplier)

– 200+ UMBC Graduates hired in the past 5 years alone

– 14,000 sqft of NSA Research Space at bwtech@UMBC

– Senior NSA officials serve on Ph.D. committees

200+
UMBC graduates hired
by NSA in the past 5 years

Top majors
Computer Engineering
Computer Science
Information Systems
Math
Mechanical Engineering
Political Science
Psychology
Visual Arts

Degree types
Bachelors (84%)
Masters (13%)
Doctorate (3%)

1100+
NSA employees
with UMBC degrees

15
UMBC graduates on
patent applications
filed by NSA

200+
UMBC participants in
NSA's Codebreaker
Challenge in past 3 years

14,000+
Square feet of NSA
research space on
UMBC campus

bwtech@UMBC Incubators
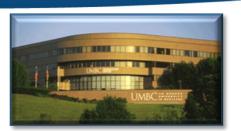
– Technology and Life Science Incubator – founded 1994
  - Entrepreneur in Residence (EiR) – David Fink, PhD
  - USGS Water Science Center for MD, DE and DC
  - 100+ Companies and Affiliates since 2000

– Cyber Incubator – founded 2010
  - Supports early stage companies providing tech products/services to DoD, intelligence communities
  - CYNC Program with Northrop Grumman
  - 50 Cyber Companies currently at bwtech

Express license agreement, technology catalyst fund

130+ Tenants – 1,650 Direct Jobs, 2,850 spin-off jobs in MD

$475M+ income generation & biz sales/year

Tax Revenues: $8.8M/year (State)
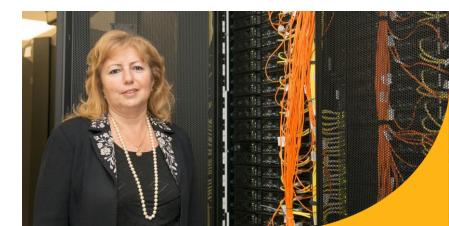
CARTA – An NSF-supported Industry-University Cooperative Research Center (IUCRC)

– A key project will integrate massive and diverse data sets—from publications to live meteorological data to social media posts—to better track origin and spread of highly infectious diseases worldwide. Another project will focus on cloud data privacy and protection to ensure that approved users can safely access the data they need, including effectively tracking the provenance of data.

Lead Institution: UMBC

– Academic Partners: NC State, Rutgers/Newark, Rutgers/New Brunswick, Tel Aviv University

– Industrial Members: DWave, GE, IBM, Morgan Stanley, Northrop Grumman, Lexis Nexis, Seagate

– Government Lab Members: DHS, FDA, NIST, NSA

CARTA Director: Yelena Yesha

– Distinguished University Professor, CSEE

– http://carta.umbc.edu

Projects Under Development:

Institute for Trusted Autonomous Space Systems (ITASS) - addresses vulnerability of satellite command/control to advanced cyber attack, and achieve the goal of "autonomous thinking spacecraft" that reliably react to changes in the environment

Research synergies between APL and UMBC graduate (Ph.D.) programs in Computer Science and Electrical Engineering (CSEE) and Mathematics/Statistics

Professional Degree (MPS) and academic certificates in cybersecurity, Data Science, Health IT, IO Psych across two campuses in Maryland– UMBC Main Campus and at USM's Shady Grove campus (13 MPS degrees offered at UMBC, many with hybrid courses, no thesis required – designed to be agile, quick
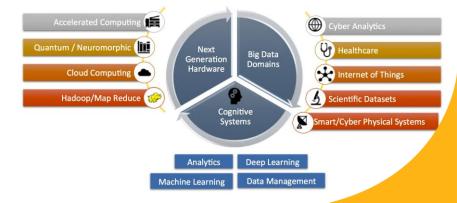
Many of our MPS degrees are developed in close consultation with industry/corporations; UMBC undertakes extensive market research, workforce analysis – what is the job demand? Evidence-based approach to program development – what specific skillsets are employers seeking?

Alex Brown Center for Entrepreneurship – MPS in Entrepreneurship, Innovation and Leadership; work closely with Baltimore business community

Data Science is UMBC's newest MPS and enrollment is skyrocketing

Non-credit technical training courses offered by **UMBC Training Centers** for non-traditional students; develop with industry; model for speed, responsiveness in a discipline; can inform MS program development

UMBC Research in Data Science

GUIDING PHILOSOPHY

- *For success in our partnerships, committed leaders are needed at both UMBC and inside the industry, that meet regularly, with teams or advising committees on both sides*

- *Goal – create high-value, long-term relationships*

- *Both parties capitalize on proximity and a mutual understanding of the "local ecosystem"*

- *UMBC educates the student, can provide core facilities; student works for the company and may receive tuition remission*

- *UMBC graduate programs will be receptive to part-time students, offer evening courses, course waivers based on industry experience*

- *Continued cultural and knowledge interchange is very important*

- *UMBC Corporate Relations will track, manage overall health of partnerships,*

promote UMBC students and create faculty connections, ensure high level of service and support for partner organizations, educate campus on the value of the partnership, build on-campus relationships b/t corporate partner and academic leaders, faculty, Career Center

Multi-Level Corporate Partnerships

Pyramid (top to bottom):
- Corporate Donations
- Licensing/ Technology Transfer
- Core Facilities & Technical Services
- Research Collaboration (and board participation)
- Workforce Development & Training (including input on new programs/courses)
- Student Recruitment (Internships/Co-ops/Full-time Hiring)

Incubator & Research Park

NORTHROP GRUMMAN

UMBC
AN HONORS UNIVERSITY IN MARYLAND
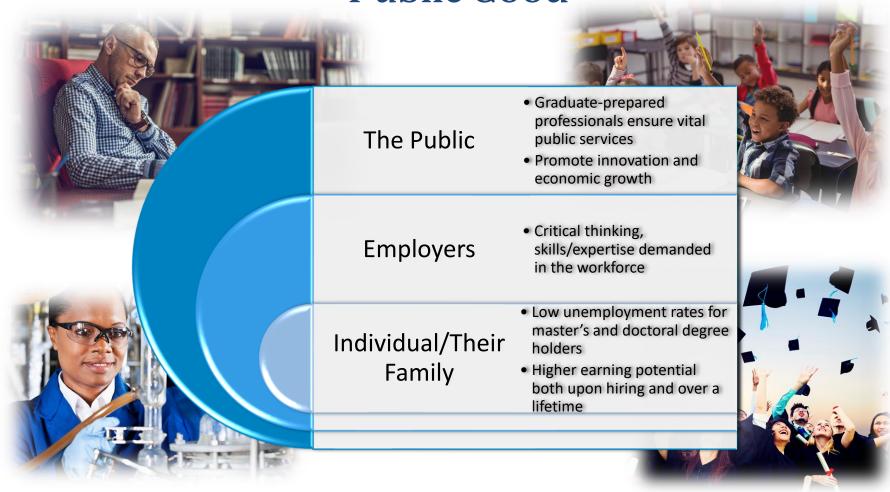
Advocating for Graduate Education

Employer Roundtable Meeting

October 4, 2019

Julia Kent, Vice President, Best Practices and Strategic Initiatives

Lauren Inouye, Vice President, Public Policy and Government Affairs

Graduate Education: A Private and Public Good

The Public	• Graduate-prepared professionals ensure vital public services • Promote innovation and economic growth
Employers	• Critical thinking, skills/expertise demanded in the workforce
Individual/Their Family	• Low unemployment rates for master's and doctoral degree holders • Higher earning potential both upon hiring and over a lifetime

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Questions for Discussion

- How can universities and employers work together to advocate for graduate education in a policy environment?

- What messages about graduate education are most effective for "making the case" for investments in graduate education? Lease effective?

- How can employers and universities advocate for the value of graduate education to rural communities and economies?

Collaborating for Effective Advocacy

CGS members are powerful advocates for graduate education. They collaborate with campus leadership as well as local, state, and federal stakeholders.

Campus	Local	State
• Provost/President • Student financial aid office • Office of student services	• Employers/industry • Disciplinary societies and clubs	• State legislature • Chamber of Commerce

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Collaborating for Effective Advocacy

Federal

Collaborations for Effective Advocacy

CGS Best Practices projects create opportunities for graduate education and employers to contribute together.

CGS annual membership meetings invite experts to discuss the intersection of graduate education and the workforce.
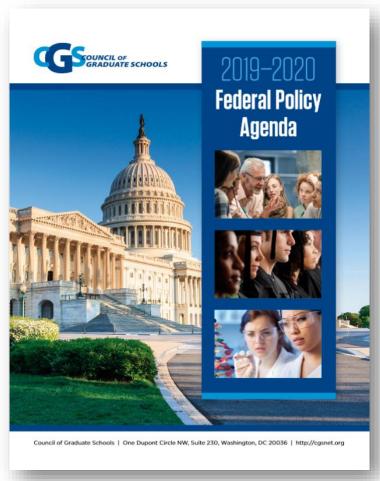
Promoting Policies that Advance the
U.S. Workforce

- **Strengthen investments in financial aid and loan repayment programs** that promote employment of graduate degree holders in regions and communities where they are most needed.
  - Public Service Loan Forgiveness
  - HRSA Workforce Development Programs

- **Enhance provisions in the tax code** that allow employers/employees to make investments in graduate education
  - AOTC/LLC
  - Sec. 127 and Sec. 529

Promoting Policies that Advance the U.S. Workforce

- **Promote policies that encourage international graduate students** to study in the U.S. and receive training related to their field.
  - Timely processing of student visas
  - Optional Practical Training

- **Strengthen federal investments in R&D**
  - Funding streams that support a variety of disciplines and fields of study

- **Promote diversity, inclusion, and equity within graduate education**, which ultimately impacts the makeup of our workforce.

Outreach to the Media and Public

CGSGradEd

Mainstream and Higher Education Press

THE WALL STREET JOURNAL.   *WSJ*, Feb. 7, 2019

U.S. | EDUCATION

International Student Enrollment Drops for Second Year, Report Says

Institutions that primarily offer masters degrees but not doctorates are hardest hit

THE CHRONICLE OF HIGHER EDUCATION

Chronicle, Oct. 18, 2018   **Disenchanted Ph.D. Recipients, Take Solace: It Gets Better, New Research Suggests**

WISCONSIN PUBLIC RADIO
Wisconsin and the World. n|p|r

Changing The Narrative Of Being Black And Hooded   *NPR*, May 22, 2018

Twitter Hashtag Celebrates Graduate-Level Accomplishments While Serving As Reminder Of Overcoming Obstacles

Outreach to Funders of Graduate Education

GradImpact: Stories of Graduate Education Improving Lives

How Ceramic Engineering Led to Cutting-Edge Inventions in Wound Care

Steve Jung
Missouri University of Science and Technology

A Veteran Brings the Parks to the People through Research and Outreach

Jessica Phillips
North Carolina State University

Providing Clean Drinking Water and an Education to Rural Communities in Sub-Saharan Africa

Prosper Zongo
University of South Dakota

Music as a Path out of Poverty

Dafne Guevara
University of Nevada, Las Vegas

Protecting Firefighters from Toxic Exposures through Textile Chemistry

Chandler Maness
North Carolina State University

3MT® Winners:

Why You Should Care about my Research

Best Practice Initiatives:

Helping Universities Prepare Graduate Students for Careers

Shaping Effective Programs for STEM Graduate Students

PROFESSIONAL DEVELOPMENT
Shaping Effective Programs
for STEM Graduate Students

- Recommendations for improvements to the professional development of STEM graduate students, including PhDs, master's degree holders, and postdoctorates.

- Project interviews with employers from across the advanced STEM workforce including industry and government

- "We can teach project management, but it would be better if they had some coming in; they are more effective if they have had team experience in an experiential context."

Questions for Discussion

- Based on what you have learned about our past work, are we getting the messages right? Are there points and evidence to support them that we are overlooking?

- Based on what you have learned about our past and current advocacy strategies, what advice can you give us for greater collaboration and impact?

Ideas for Getting Involved

- Identify and share examples from your industry that shed light on the four themes organizing the Roundtable.

- Share information about the Employer Roundtable with your senior leadership team, including your human resources leaders. From their perspective, are we asking the right questions? What are we missing?

- Provide data from your industry that have implications for the future of work.

- Recommend (and possibly facilitate contact with) other leaders and experts who can provide a presentation to the Roundtable or the CGS community, including your employees.

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Ideas for Getting Involved

- Help CGS identify opportunities for high-impact communication regarding graduate education and the workforce and/or volunteer to join communications (e.g. Op-eds, media interviews).

- Join a committee/working group on drafting a set of recommendations for current and future action for release in late 2020.

- Provide additional suggestions or ideas for collaboration.

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Next Meeting: Spring 2020

Thank You!

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Roundtable Members

Suzanne Ortega serves as president of the Council of Graduate Schools (CGS). The only U.S. higher education association devoted solely to graduate study, CGS has nearly 500 U.S. and Canadian members and 28 international affiliates. A sociologist by training, Ortega's research focuses on social inequality, mental health, and graduate education. Prior to assuming her current position, she served as the University of North Carolina Senior Vice President for Academic Affairs (2011-14). Previous appointments included the Executive Vice President and Provost at the University of New Mexico, Vice Provost and Graduate Dean at the University of Washington, and the University of Missouri. Ortega's masters and doctoral degrees in sociology were completed at Vanderbilt University. She has served on review panels for NSF and NIH and has been the principal investigator or co-investigator on grants totaling more than $12 million in state, federal, and private foundation funds. Ortega also has served on a number of professional association boards and committees, including the Graduate Record Exam (GRE), the National Academies of Science Committee on Revitalizing Graduate STEM Education for the 21st Century, and the NSF's Human Resources Expert Panel.

Chair, CGS Employer Roundtable

Earl Lewis is the Thomas C. Holt Distinguished University Professor of history, Afroamerican and African Studies, and Public Policy and director of the Center for Social Solutions at the University of Michigan. From March 2013-2018, he served as president of The Andrew W. Mellon Foundation. An author and esteemed social historian, he is past President of the Organization of American Historians. A fellow of the American Academy of Arts and Sciences (2008) and the recipient of eleven honorary degrees, he has held faculty and administrative appointments at Michigan (1989-2004) and the University of California, Berkeley (1984-89). From 2004-2012, he served as Emory University's Provost and Executive Vice President for Academic Affairs and the Asa Griggs Candler Professor of History and African American Studies. In addition to prior service on a number of nonprofit and governmental boards, Lewis chairs the board of Regents at Concordia College, is a trustee of ETS, and a director of 2U and the Capital Group, American Funds.

Charles R. Craig is senior vice president, science & technology, administration & operations with Corning Research & Development Corporation. In this position, he leads the operations chief of staff responsibilities for the chief technology officer and the administrative and operations functions of science & technology. Since 1990, he has been chief of staff for five consecutive CTOs. Craig joined Corning in 1974 as a senior chemist and has 45 years of experience in technology management in various leadership positions. Craig received his bachelor's degree in chemistry from Dickinson College, and completed four years of graduate studies and research in analytical chemistry and materials science at the University of Minnesota. Craig is Corning's representative on the Board of Trustees for Clarkson University and is a member of the Executive Committee. He is a member of the College Council at SUNY Alfred State College. He serves as chairman of the board of trustees for IncubatorWorks – the organization responsible for the Ceramics Corridor incubators in Alfred and Corning, NY.

Roger W. Ferguson, Jr., is president and chief executive officer of TIAA, a Fortune 100 financial services organization. Ferguson is the former vice chairman of the Board of Governors of the U.S. Federal Reserve System. He represented the Federal Reserve on several international policy groups and served on key Federal Reserve System committees, including Payment System Oversight, Reserve Bank Operations, and Supervision and Regulation. Prior to joining TIAA in April 2008, Ferguson was head of financial services for Swiss Re, Chairman of Swiss Re America Holding Corporation, and a member of the company's executive committee. Ferguson is a member of the Smithsonian Institution's Board of Regents and serves on the New York State Insurance Advisory Board. He is a fellow of the American Academy of Arts & Sciences and co-chairs its Commission on the Future of Undergraduate Education. He serves on the boards of Alphabet, Inc.; General Mills, Inc.; and International Flavors & Fragrances, Inc.

Betty Fleurimond is a managing director in Deloitte's Higher Education practice with responsibility for market leadership and client relations, nationally. With 20 years of professional experience, she has a strong and proven track record of successfully driving large-scale and complex business strategies across technology, operations, cybersecurity, and strategy and change leadership. Under Fleurimond's leadership, Higher Education earned the distinction of becoming a dedicated sector across all four of Deloitte businesses—Consulting, Advisory, Tax, and Audit. Today, Deloitte proudly serves more than 100 colleges and universities across the U.S., with an ever-increasing global network. Fleurimond also chairs the governing board of Deloitte's Center for Higher Education Excellence, a research center located in Washington D.C., dedicated to scholarship and thought leadership in higher education.

Phil Komarny is the vice president, innovation for Salesforce.com. Komarny has held multiple leadership roles both inside higher education as the Chief Digital Officer for The University of Texas System, as well as outside as the CEO of Robots and Pencils. He is an award-winning senior executive with a 20+ year track record of delivering innovative, high value solutions by aligning existing problems with emerging technologies. Komarny was the first technology leader to introduce the Apple iPad as a platform for business transformation. He has won the CIO100 for his work at Seton Hill University, grew Robots and Pencils to the 34th fastest growing technology company in 2015, and is a member of Constellation's Business Transformation 150 (BT-150), an elite list that recognizes the top global executives leading business transformation efforts in their organizations. Komarny has also won multiple Apple Distinguished Program Award for the 'iPad for Everyone' initiative at Seton Hill University.
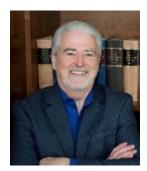
Richard Kurin is the Smithsonian Distinguished Scholar and Ambassador-at-Large, the first person so designated in the 171-year history of the Institution. As a member of the Smithsonian's senior leadership team, Kurin focuses on strategic direction, institutional partnerships, public representation, philanthropic support, and special initiatives. Prior to his current role, Kurin served as acting provost and under secretary for museums and research from 2015, and from 2007, as under secretary for history, art, and culture. An anthropologist with a doctorate from the University of Chicago, Kurin specialized in the study of South Asia, conducting years of fieldwork in India and Pakistan. He has held Fulbright and Social Science Research Council fellowships, taught at the Johns Hopkins University School of Advanced International Studies, and authored six books, including *Reflections of a Culture Broker: A View from the Smithsonian, Hope Diamond: The Legendary History of a Cursed Gem* and the best-selling *Smithsonian's History of America 101 Objects*. He is an elected fellow of the American Academy of the Arts and Sciences.

Stanley S. Litow is a professor at both Columbia and Duke University. At Duke University, he also serves as innovator in residence. Litow is the author of *The Challenge for Business and Society: From Risk to Reward*. He previously served as president of the IBM International Foundation and as deputy chancellor of schools for the City of New York. Before his service at IBM and the NYC public schools, he served as president and founder of Interface and as executive director of the NYC Urban Corps, operated out of the mayor's office. He has served on multiple Presidential and Gubernatorial Commissions and on the SUNY Board of Trustees; he also serves on the board of Roosevelt House and the Citizens Budget Commission. Litow helped devise the innovative school to college to career program called, PTECH, as well as the IBM Corporate Service Corps, often referenced as the corporate version of the Peace Corps. He has received multiple awards for his community service, from organizations such as the Anne Frank Commission, the Martin Luther King Commission, and the Center for an Urban Future, as well as the Corning Award from the New York State Business Council.

Walt MacDonald is president and CEO of Educational Testing Service (ETS). Over the course of his career, he has led nearly every major program — guiding each to grow and achieve the mission of ETS. MacDonald came to ETS in 1984. As a science assessment specialist, he redesigned the College Board's Advanced Placement® biology curriculum and exam. In the late '80s, he directed test development for the National Assessment of Educational Progress (NAEP), known as the "Nation's Report Card." Rising through the organization, he directed the Advanced Placement program through incredible growth, and later led the College Board®, Higher Education, K–12 and Teacher Licensure divisions of ETS. MacDonald was appointed executive vice president in 2009 and took on more responsibilities when chief operating officer was added to his title the following year. As COO, he was responsible for all of ETS's business and operational divisions. MacDonald earned an associate degree in science at Camden County Community College, a bachelor's degree in biology at Rutgers University in Camden, and a doctorate in ecology at Rutgers University in New Brunswick.

Marian Roberge is senior vice president of Global Human Resources with ProQuest, a global information-content and technology company, where she leads organizational development, talent acquisition, total rewards, talent management and development, and employee experience. Roberge has 25 years of U.S. and international HR experience. She previously led human resources at Plastipak, a global packaging and recycling company. She has also been a director and officer at the Abu Dhabi National Energy Company and Entertainment Publications. In addition to her HR responsibilities, Roberge has overseen other corporate functions including legal, accounting and finance, IT, operations and supply chain. Roberge holds a master's degree in human resources and labor relations from Michigan State University and a bachelor's degree in English and psychology, with honors, from the State University of New York at Potsdam. She is based in ProQuest's Ann Arbor office.

Lesli Rotenberg is chief programming executive and general manager, Children's Media and Education at PBS. With a focus on kindergarten readiness, Rotenberg leads a cross-disciplinary team charged with content production, digital development, multi-platform asset distribution, licensing, educational product creation, and marketing and communications for PBS KIDS, the #1 children's educational media brand. Rotenberg leads the development and distribution of top-rated PBS KIDS media properties that help children ages 2-8 build science, literacy, math, critical thinking, and social-emotional skills, among others. Rotenberg oversees PBS' efforts to support and empower PreK-12th grade educators, helping improve learning outcomes for students across America. Rotenberg has positioned PBS and local member stations as key partners for teachers through content, community, and professional learning resources tailored to their needs. An educational media expert,

Rotenberg was named one of the nation's top 15 "Women to Watch" by Advertising Age and invited to participate in the prestigious FORTUNE Most Powerful Women in Business Forum. Rotenberg has received numerous honors, including 28 Emmy Awards since 2015.

Ron Townsend currently leads Battelle's Global Laboratory Operations business, where he oversees Battelle's role in the management of seven national laboratories with annual R&D expenditures of $8B involving 28,000 lab staff; six national laboratories for the U.S. Department of Energy (Brookhaven National Laboratory, Idaho National Laboratory, Los Alamos National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory and Pacific Northwest National Laboratory); and a laboratory for the U.S. Department of Homeland Security (National Biodefense Analysis & Countermeasures Center). He also manages Battelle's role as an integrated subcontractor at Lawrence Livermore National Laboratory. From 1997 to January 2009, he served as the president of Oak Ridge Associated Universities (ORAU), a national consortium of doctoral-granting colleges and universities. Before joining ORAU, Ron served as Commandant of the Air Force Institute of Technology located at Wright-Patterson Air Force Base. He earned his bachelor's and master's degrees in mathematics from Kansas State University and completed his doctoral degree in atmospheric science at the University of Wisconsin-Madison.

Chris Valentino currently serves as vice president of the Global Cyber Solutions business unit within Northrop Grumman Mission Systems' Cyber and Intelligence Mission Solutions (CIMS) division. In this role, Valentino is responsible for the overall growth and program execution of the division's global cyber business portfolio, as well as leadership of the company's cyber campaign. Valentino has more than 20 years of domestic and global cyber expertise. He most recently served as the director of joint cyberspace programs for the Global Cyber Solutions business unit, where he was responsible for the development and delivery of full-spectrum cyberspace solutions. Prior to this, he served as the CIMS division's director of strategy where he led the division's strategic planning efforts, resource management, and initiatives for Northrop Grumman's cyber and intelligence business. Valentino holds a bachelor's of science degree and master's of science degree in information systems from the University of Maryland Baltimore County (UMBC). Valentino serves on the UMBC College of Engineering and Information Technology (COEIT) external advisory board.

Chair, CGS Board of Directors (Ex-Officio)

Christopher Sindt has served as provost and dean of graduate studies at Lewis University since 2018. Prior to his tenure at Lewis, he served for 17 years at Saint Mary's of California as Professor of English and in various administrative capacities, including as the graduate dean. In 2011-2012 he served as an American Council for Education Fellow. He is currently chair of the board of directors of the Council of Graduate Schools (CGS) and vice president of the board of directors of the Squaw Valley Community of Writers. Sindt earned a bachelor's degree in English from the University of California, Los Angeles, and his master's and doctoral degrees in English from the University of California, Davis. He is the author of two collections of poetry, *The Bodies*, and most recently, *System and Population*. He has been the recipient of numerous awards and fellowships for his poetry, including the James D. Phelan award and fellowships at the Macdowell Colony and the Blue Mountain Center.

Speakers & CGS Staff

Jeffrey Halverson serves as associate dean of The Graduate School at the University of Maryland Baltimore County, and is also Professor in the Department of Geography and Environmental Systems. In the Graduate School, he mediates and responds to student academic concerns, serves on the Graduate Council, and presides over the Graduate Student Association. As a research scientist, he has pioneered novel observation strategies for sampling the inner core of hurricanes, and continues to conduct research into severe storms impacting the Mid Atlantic Region. He is a frequent contributor as Severe Storms Expert to the Washington Post's Capital Weather Gang, and is authoring a textbook on severe and hazardous weather with Oxford University Press.

Lauren Inouye is vice president, public policy and government affairs at the Council of Graduate Schools (CGS). In this role, she leads the association's federal policy and advocacy portfolio on issues related to higher education, research, immigration, tax, and diversity. She serves as CGS's representation in the legislative and regulatory arenas, working with stakeholders in the higher education and research communities to advance these priorities. She engages with CGS's members to elevate the voice of graduate education through advocacy on their campuses and in Washington, D.C. Prior to joining CGS, Lauren served as the director of government affairs for the American Association of Colleges of Nursing.

Julia Kent is vice president, best practices and strategic initiatives at the Council of Graduate Schools (CGS). Since 2008, she has led programs on a broad range of topics in graduate education, including PhD career pathways; diversity and inclusion; graduate admissions processes; international collaborations; research ethics and integrity; and the preparation of future faculty. Currently, she serves as co-Principal Investigator for a project supported by the National Science Foundation (NSF) and the Andrew W. Mellon Foundations, *Understanding PhD Career Pathways for Program Improvement* (NSF #1661272), which has brought together a coalition of over 70 universities working to collect and analyze data on PhD careers. She also serves as co-PI Investigator for a new initiative supported by the Alfred P. Sloan and Mellon Foundations, *Supporting Graduate Student Mental Health and Wellbeing*, designed to create an evidence-base to inform future policy and action in the area of graduate student mental health and wellbeing. She holds a PhD in English from Johns Hopkins University.

Adrienne Mosley Vincent is director, corporate relations at the Council of Graduate Schools (CGS). In this role, she works to cultivate and sustain relationships with companies and nonprofit organizations that are committed to advancing graduate education. These relationships can take many forms including joining the CGS Sustaining Membership Network, supporting CGS' research and best practices work, and participating in the CGS Employer Roundtable. Prior to joining CGS, Adrienne was senior program manager, partnerships & special projects, at the American Association of State Colleges & Universities (AASCU).