



COLLEGE OF
INFORMATION STUDIES

UMD iSCHOOL

Annual Report
2019-2020



iSchool students at the original "M" circle

WHO WE ARE

- 40 tenured/tenure track faculty, 17 lecturers, 8 researchers, 45 staff, 1800 students—focused on leveraging information and technology to improve the lives of individuals and communities
- 1 Bachelor's program, 5 Masters' programs, 1 PhD program
- \$10M in research expenditures and over 85 funded research projects

GROWTH

- 300% increase in the number of faculty, staff, and students in the last three years
- Continued growth in both research funds and development funds over last three years
- BS in Information Science, est. 2016, is one of the 5 largest undergraduate programs at UMD and the 2nd fastest growing degree program overall at UMD
- Three undergraduate majors, 1 Masters degree, and other programs under development

DIVERSITY

- 29% of students from underrepresented groups, 44% female student body, students from 37 countries, 12% international students

UMD COLLABORATION

- Faculty joint appointments with Arts & Humanities (ARHU), Behavioral and Social Sciences (BSOS), Computer, Math, and Natural Sciences (CMNS), Education (EDUC), Journalism (JOUR), and Public Policy (PLCY)
- Joint degree programs with Architecture (ARCH) and ARHU
- Joint research units with BSOS (SoDa: Maryland Center for Social Data Science) and with University of Maryland Institute for Advanced Computer Studies (UMIACS) (HCIL: Human Computer Interaction Lab, and CLIP: Computational Linguistics Information Processing Lab)

THE UMD iSCHOOL

The faculty and students at the UMD iSchool study how individuals, organizations, and communities can benefit from information. We conduct leading research, spearhead partnerships and outreach, and shape the next generation of information professionals.

In all that we do, we strive to:

- Help people find and understand information
- Enable people to make beneficial decisions based on data and information
- Protect the privacy and security of information and the people who use it
- Democratize the access and benefits of information

To do this, the iSchool is a multidisciplinary college that brings together great minds from across disciplines—such as information technology, archival and library science, organizational psychology, cultural anthropology, computer science, cognitive science, and education.

A few of the ways that our college is tackling real-world information challenges:

- Developing new computer interfaces that allows people with disabilities to use accessibility features seamlessly
- Working with consumers, big data researchers, commercial providers, and regulators both domestically and internationally to determine ethical guidelines around social data use
- Creating new technologies for people with dementia to better function in their own homes
- Conducting national crowdsourcing of librarians to develop a new model of how libraries can serve communities during the pandemic

Like most other iSchools (information schools, which number over 100 worldwide), we started as a Library School and continue to work with and strengthen libraries, archives, and museums. We still hold true to our original values towards supporting diversity and inclusion as well as the use of technology to help people. We are a leader in using socio-technical approaches. We develop information and technology solutions with people, for people. We apply this approach to the development of information processes, technologies, programs, institutions, and systems.



iSchool Faculty members Dr. Ana Ndumu and Dr. Renee Hill, organizers of CIDLIS 2019

YEAR IN REVIEW

HIGHLIGHTS

- Re-Accredited by the American Library Association
- Founded the UMD Social Data Science Center (SoDa) in partnership with BSOS
- Student body grew from 1350 to 1800 students
- First graduating class of our BS in Information Science program at the Universities at Shady Grove campus

KEY EVENTS

- Sep 2019 - Panel: The Future of Deepfakes
- Sep 2019 - Dan Russell (Google), "The Joy of Search" Book Talk
- Oct 2019 - Resistance at Tule Lake: A Conversation with the Filmmaker and iSchool Digital Curators with Konrad Aderer
- Oct 2019 - Dean's Lecture Series: Disinformation & the Democratization of Tech with Dr. Nadya T. Bliss, executive director of the Global Security Initiative at Arizona State University
- Oct 2019 - Dean's Lecture Series: Managing US-China Relations in the Information Age with Carolyn Bartholomew, , Chairman, The U.S.-China Economic and Security Review Commission
- Nov 2019 - Conference on Inclusion and Diversity in Library & Information Science (CIDLIS)
- Nov 2019 - Awarded James Partridge Outstanding African American Information Professional Award to Tahirah Akbar-Williams of UMD Libraries.
- Feb 2020 - Data Challenge 2020 - Data Exploration for a Sustainable Planet
- Mar 2020 - Panel: Fighting Disinformation to Save Democracy
- Jul 2020 - Panel: Confidence in Institutions in a Time of Mistrust

Y 2019-2020

SIGNIFICANT AWARDS & GRANTS

- National Federation of the Blind (NFB) Maryland: Inaugural Rachel Olivero Accessibility Innovation Award: Jonathan Lazar
- NFB Accessibility Inclusion Fellowship: Renee Hill to develop accessibility, diversity, and inclusion curriculum
- Young Adult Library Services Association (YALSA) Outstanding Achievement Award: Mega Subramaniam
- National Academy of Education (NAE) Spencer Postdoctoral Fellowship: David Weintrop to support critical education research
- National Science Foundation (NSF) Grant: Naeemul Hassan to design computational models to automatically detect clickbait
- Institute of Museum and Library Services (IMLS) Early Career Award: Katrina Fenlon for sustaining digital community collections
- Andrew W. Mellon Foundation Grant: Katrina Fenlon on the sustainability of digital humanities scholarship
- IMLS Laura Bush 21st Librarian Grant: Mega Subramaniam to work with rural libraries developing teen services
- Maryland Innovation Initiative Grant: Charles Harry to create a web application for his cybersecurity framework
- Army Research Office Grant: Susannah Paletz on AI to support cybersecurity teams

iSchool faculty and conference co-chairs Dr. Wayne Lutters and Dr. Mega Subramaniam at the iConference, April 2019, College Park, MD



YEAR IN REVIEW

A

NEW FACULTY



Wei Ai

Assistant Professor in
Large-scale Behavioral
Data Analysis

Alex Leitch
Lecturer in Game Design
& Makerspaces



Pamela Duffy

Junior Lecturer in
Database Design

Ana Ndumu
Assistant Professor in
Information Justice &
Human Rights



Babak Fotohui

Assistant Professor in
Computational Social
Science

M.R. Sauter
Assistant Professor
in Socio-Technical
Cybersecurity



Naeemul Hassan

Assistant Professor
in Data Mining &
Journalism

Caro Williams-Pierce
Assistant Professor
in Game Design for
Learning



Y 2019-2020

NEW STAFF

- Nicole Pietrucha, Graduate Academic Advisor
- Dustin Smith, Graduate Academic Advisor
- Jo Anne Mealo-Wentz, Payroll & Benefits Coordinator
- Jonon Blair, Facilities Assistant
- Celeste (Liv) Johnson, Undergraduate Academic Advisor
- Lavidia Beveney, Operations Coordinator
- Galina Madjaroff, Program Director for InfoSci Shady Grove
- Jackie Armstrong, Business Manager
- Naielia Allen, Administrative Coordinator for Faculty Affairs
- Claudia Aragón, Academic Program Specialist for InfoSci Shady Grove
- Bridgette Comanda, School Library Experiential Learning Coordinator
- Corie Brown, Academic Program Specialist for InfoSci College Park
- Kevin McGuire, Web Development Assistant
- Brittany Antrum, Academic Program Specialist
- Jillian Scarson, Academic Program Specialist

iSchool Faculty and Staff at the ALA Accreditation Reception. Left to right (back): Caro Williams-Pierce, Joan Olive-Cole, Rochelle Robinson, Luis Cortes, David Napier; (front): Yen Lin, Jacqueline Armstrong, Cecilia Penn-Diallo, Michelle Simon, Lucinda Botlero



ACADEMICS

EDUCATIONAL MISSION & VISION

The iSchool's foundational educational mission is to provide high-quality, timely, information-related education that enables students to use creativity, discovery, and innovation to serve their communities. Earning an iSchool degree means understanding that information is a tool that should be harnessed for the social good.

We do this by focusing on a set of curricular, co-curricular, and extracurricular programs that represent a clear and central iSchool identity—they teach students to strategically bridge the gap between technology, people and information, while creating solutions that are meaningful and impactful.

UNDERGRADUATE PROGRAMS

B.S., Information Science at College Park (est. 2016)

Teaches students technical skills such as database design, information architecture, web/mobile development, data analytics, and cybersecurity alongside social sciences, leadership, and the humanities – addressing the growing and unique need for information professionals who understand complex social and organizational issues.

- 1,321 students
- 2019 career placement rate: 95%
- 31% female; 0.1% American Indian/Alaskan native; 34% Asian; 22% Black; 9% Latinx; 28% white; 6% international
- Dual B.S., Information Science and Master of Library and Information Science (launching AY20-21)
- Example alum: George Mirano (College Park, 2019), Cyber Defense Technology Specialist, Darktrace

B.S., Information Science at Shady Grove (est. 2018)

- 97 students
- 28% female; 29% Asian; 27% Black; 16% Latinx; 22% white
- Example alum: Nicholas Wentz (Shady Grove, 2020), Software Developer, General Dynamics

GRADUATE PROGRAMS

Master of Library and Information Science (MLIS, est. 1965)

Prepares students to support information institutions such as libraries, museums, and archives, innovate to meet the information needs of individuals and communities, and advocate for information and technology inclusivity, accessibility, and literacy

- 269 students
- 2018 career placement rate: 96%
- 4-year graduation rate: 89%
- 81% female; 6% Asian; 10% Black; 5% Latinx; 73% white; < 1% international
- Example alum: Adrienne Hieb (2015), Metadata Librarian, National Aeronautics and Space Administration (NASA)

Master of Library and Information Science and M.A., History (HiLS, est. 1979)

Prepares students to use skills in historical methodology and cutting-edge library and information science practices, preparing them for careers in libraries, archives, museums, and other information centers in the public, private, and non-profit sectors

- 30 students
- 70% female; 3% Asian; 3% Black; 3% Latinx; 76% white
- Collaboration with History (ARHU)

M.S., Human-Computer Interaction (HCIM, est. 2011)

Prepares students to create innovative technologies that transform the way people connect to information

- 73 students
- 2019 placement rate: 92%
- 4-year graduation rate: 94%
- 69% female; 36% Asian; 20% Black; 1% Latinx; 22% white; 33% international
- Example alum: Lacey Sabado (2019), User Experience Product Manager, Google

Master of Information Management (MIM, est. 2003)

Prepares students to become strategic leaders in data analytics, data visualization, information technology development and deployment, information strategy and governance, and cybersecurity and cyber-threat intelligence

- 41 students
- 2018 career placement rate: 95%
- 4-year graduation rate: 93%
- 63% female; 50% Asian; 23% Black; 5% Latinx; 20% white; 41% international
- Example alum: Nakul Sharma (2011), Data Scientist, Washington Metro Area Transit Authority (WMATA)

Dual Master of Information Management and Master of Community Planning (collaboration with MAPP+) (launching AY20-21)

Prepares students to support smart cities enabled by new data sources and increased resident engagement

Ph.D., Information Studies (est. 1969)

Prepares students to address the hardest social and technical problems of today and tomorrow, conducting research on pressing information issues, which often entwine social and technical innovation.

- 70 students
- Graduates go on to academic and corporate positions
- 70% female; 36% Asian; 4% Black; 8% Latinx; 40% white; 34% international
- Example alum in academia: Danuta Nitecki (1995), Dean of Libraries, Professor of Information Science, Drexel University
- Example alum: Gagan Jindal (2020), Qualitative User Experience Researcher, Facebook

iSchool Professor Dr. Richard Marciano.



POST-BACCALAUREATE CERTIFICATES

- Information Risk, Privacy and Security Certificate
- School Libraries Certificate
- Museum Scholarship and Material Culture (with ARHU and BSOS)

PROFESSIONAL DEVELOPMENT CERTIFICATE

- Digital Curation for Information Professionals Certificate

PROGRAMS IN DEVELOPMENT

New program development is focused on integrating iSchool skills with other disciplines and knowledge domains, resulting in a robust series of collaborations with other units on campus, as well as a growing interest in dual degrees and in professional certificates

- B.Des., Technology and Information Design
- B.S., Social Data Science (collaboration with BSOS)
- B.A., Accessibility Studies (collaboration with EDUC)
- Dual B.S., Information Science and Master of Journalism (collaboration with JOUR)
- Minor in Science, Technology, Ethics and Policy (collaboration with ARHU, ENGR, PLCY)
- Shared sponsorship of Honors Living-Learning Program in Design Cultures and Creativity (collaboration with ARHU, Honors)
- Certification for InfoSci majors to teach computer science at the high school level (collaboration with EDUC, CMNS)
- M.P.S., Gaming, Entertainment and Media Analytics
- M.P.S., Data Journalism (collaboration with JOUR)
- Dual Master of Information Management and P.B.C., Computational Methods in Atmospheric and Oceanic Science (collaboration with CMNS)
- Post-Baccalaureate Certificate (P.B.C.), Information Risk, Privacy and Security
- P.B.C., Information Management for Smart Cities
- P.B.C., Cyber Threat Intelligence
- P.B.C., Accessibility in Human-Computer Interaction

STUDENT ENGAGEMENT

Student engagement efforts focus on giving students experiential learning opportunities and bringing them into contact with potential future employers

iConsultancy – partners with industry, government and communities to design and execute technology-based experiential learning projects. For example:

- MIM students worked with the Washington Suburban Sanitary Commission (WSSC) to develop end-user dashboards based on Internet of Things data from storm water sensors

Digital Curation Innovation Center – sponsors interdisciplinary projects that explore the integration of archival research data and technology. For example:

- Team of students from InfoSci, MLIS and MIM worked with the Maryland State Archives to preserve manumission documents and census records, then conducted data analytics and visualization on the freedom of slaves in Maryland; identified 420,000 freed slaves

Data Challenge – organized by the iSchool, this annual week-long data exploration event involves students from across UMD and beyond to gain analytical experience by solving challenging problems working with datasets provided by professional organizations such as Booz Allen Hamilton and the US Department of Housing and Urban Development.

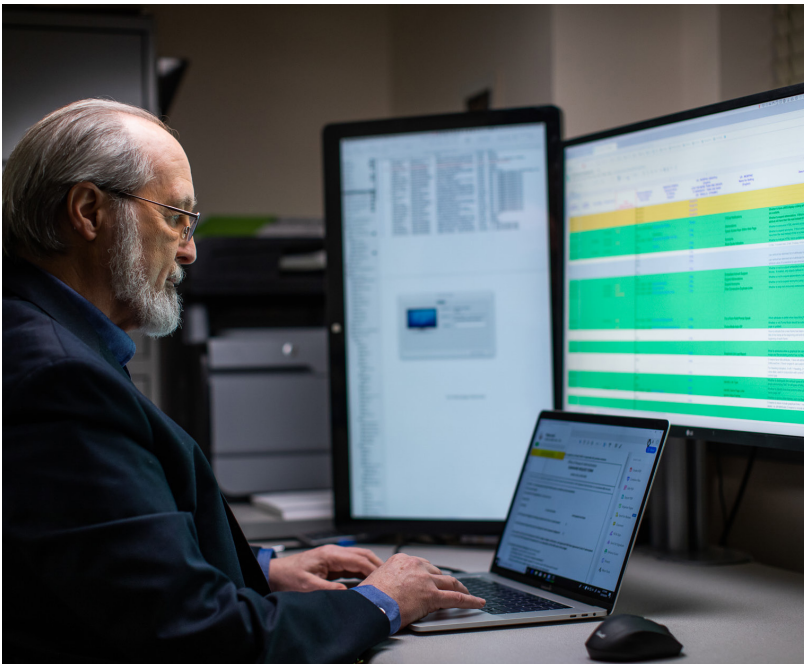
- 150 students from UMD, UMBC and the US Naval Academy competed to solve real-world data challenges. 9 UMD Colleges were represented. Since its inception in 2018, the UMD Data Challenge has worked with 150 partners from over 50 organizations including Amazon Web Services, Google, Booz Allen, Pepsi, Tableau, EPA, HUD, DOJ, JHU, and many more. The event has also engaged faculty volunteers from 18 UMD colleges and centers.

iDiversity Student Organization – student organization focusing on issues of information equity and inclusion with the mission to explore how concentrated social approaches to gathering and sharing information can transform communities. For example:

- Held a Wikipedia edit-a-thon related to diverse authors in young adult literature

UMD students at Data Challenge 2019





*Dr. Gregg Vanderheiden, Professor and
Director of the Trace R&D Center*

RESEARCH

The iSchool is multidisciplinary and partners with many other Colleges and Departments at the University of Maryland, as well as other universities, companies, and non-profit organizations all over the world

Research at the intersection of information, technology, and people.

Our researchers combine principles of information science with cutting-edge technology to foster access to information, improve information interfaces, and expand how information is used. Our innovations are socio-technical. We are driven by a mission to:

- Improve people's lives and life opportunities through information
- Connect and advance communities through information and technology
- Develop and use co-design methods, particularly with marginalized groups
- Embrace our bias for social justice and inclusion
- Create and strengthen open information institutions, such as libraries, archives, and museums

To accomplish this, we are multidisciplinary. Our faculty and researchers bring expertise from data science, computer science, social science, liberal arts, and more.

TOP THREE FUNDING SOURCES

- National Science Foundation (NSF)
- Institute for Museum and Library Services (IMLS)
- Trace Center Funding: Department of Education and National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR, HHS)

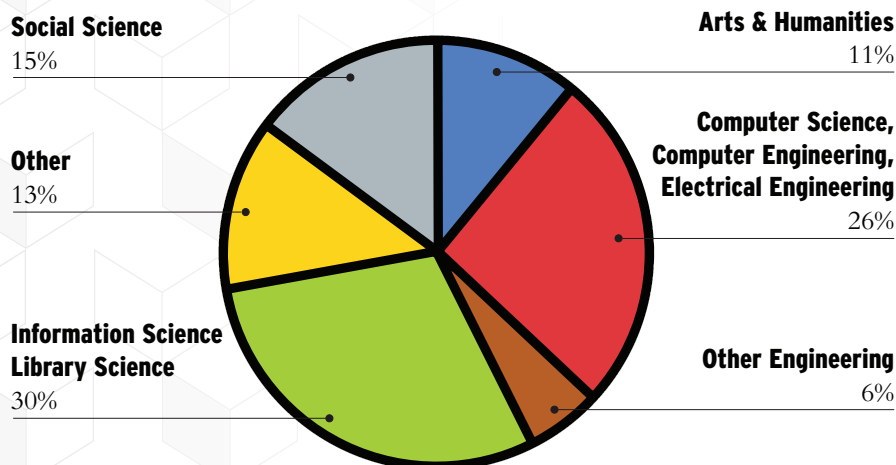
Student participating in a hands-on workshop for an Aging and Disability course at the iSchool



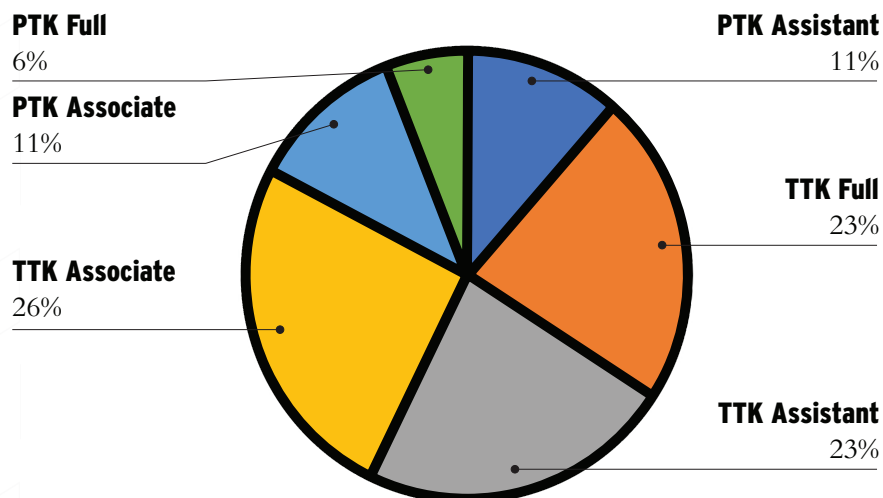
RESEARCH AREAS

Library and Information Science
 Digital Humanities
 Computational Archival Science
 Data Privacy and Sociotechnical Cybersecurity
 Social Networks and Online Communities
 Smart Cities and Connected Communities
 Information Justice, Human Rights, and Technology Ethics
 Human-Computer Interaction
Accessibility and Inclusive Design
 Future of Work
 Health Informatics
 Youth Experience, Learning, and Digital Practices
 Data Science, Analytics, and Visualization
 Computational Linguistics, Machine Learning, and Information Retrieval

PhD field of our faculty



Numbers of our faculty who research (all TTK and some PTK)



RESEARCH PROJECT EXAMPLES

Innovative ICT to move the world forward

- sign language interpretation technology using auto-personalized machine learning
- multilingual casual conversation translator for the workplace
- augmented reality overlay of UMCP campus for civic, safety, and tourism uses

Empowering marginalized groups

- cloud-based software to populate individuals with disabilities' accessibility settings on any computer
- co-designing with people with dementia to develop technology to assist them in their homes
- addressing health justice through identifying the information-related causes of health disparities and developing potential solutions

Supporting information institutions

- creating new archiving processes using machine learning
- co-designing with libraries, e.g. digital safety courses, youth programs, census participation initiatives, and new services during the pandemic

RESEARCH SUPPORT INITIATIVES

Growth in the quality, quantity, and size of proposals resulting from an increased focus on supporting faculty in developing impactful research proposals.

- Robust college mentoring program with annual reviews for all assistant professors
- First-year research mentorship provided by ADR through service on the Research Committee
- Proposal Development Program guides faculty in developing a funding proposal (incentivized with \$1,000 upon submission)
- Research Improvement Grants provide College funds for completion of outstanding research (\$1,000) or increased impact of research (\$10,000)
- Speaker Series and Reading Groups focused on HCI, Communities and Information, Sociotechnical Cybersecurity, and Anti-racism
- Median expenditures approximately \$86,000 (FY 2016), \$120,000/year (FY 2020) per TTK faculty based on funds managed by iSchool

MOVING FORWARD

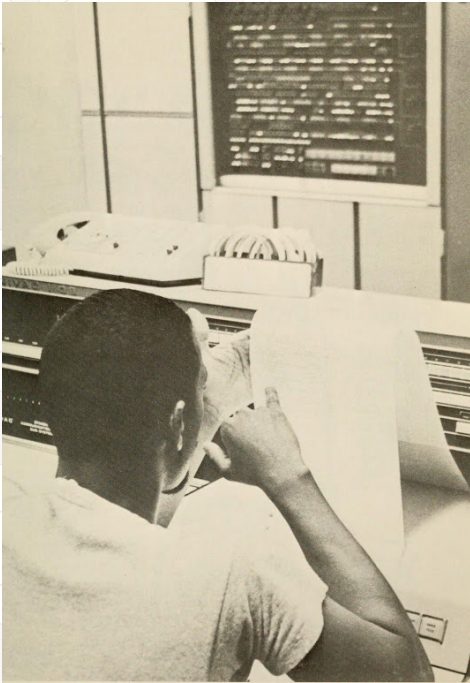
Condition

Relatively young research-active faculty
6 early career awards (NSF, IMLS)
Most funding from a small set of funders
Averaged \$5.4M/year in last 12 years

Goal

Develop faculty research capacity
Double career awards over next 3-4 years
Diversify, increase Foundation and Corporate funding
Grow size and number of awards

DIVERSITY & INCLUSION AT THE UMD ISCHOOL



Research at the School of Library and Information Services, 1967

A HISTORY OF ACTIVISM

The UMD iSchool (formerly the UMD School of Library and Information Services) was founded in 1965 with a mission to transform the ways in which libraries functioned in communities – bringing information related to health, housing, education, police and emergency services, consumer affairs, employment, government, and more to underserved communities. In the 1960s, this was a radical and even opposed concept.

The UMD iSchool is credited as having the first library and information science program with a core focus on identifying and addressing the social needs of communities. The college also has a legacy of championing diversity within its own community, actively recruiting students and faculty from underrepresented populations since its inception.

CONTINUING A MISSION OF ACTIVISM

Diversity and inclusion continues to be central to the mission of the UMD iSchool today.

Our faculty, staff, and students actively engage critical issues of:

- Collaborating with the National Federation of the Blind to develop and enhance curriculum in areas of diversity and inclusion
- Organizing the annual Conference on Inclusion and Diversity in Library and Information Science (CIDLIS), the first and longest-running event of its kind
- Serving on diversity and inclusion focused boards and committees, such as the Executive Board of the Black Caucus of the American Library Association and the FAS COVID-19 Rapid Response Task Force – Societal Impacts Group
- Partnering with Baltimore City in the creation of their Smart City Plan, leading co-design sessions with inner-city communities
- Offering an MLIS specialization in diversity and inclusion (we were the first program to do so)

DIVERSITY IN THE UMD ISCHOOL COMMUNITY TODAY

Our faculty, staff, students, and alumni represent a wide range of backgrounds and experiences. Together, they create a welcoming and inclusive environment that encourages new generations of diverse students to choose the UMD iSchool.



29% of students from underrepresented groups



44% female student body

Within our
STEM programs:

InfoSci: 30% female

MIM: 53% female

HCIM: 66% female

PhD: 67% female



1800 students from 37 countries



Professors Dr. Hernisa Kacorri, Dr. Amanda Lazar, and Dr. Eun Kyoung Choe discussing a Health Informatics project.

DEVELOPMENT AND ALUMNI RELATIONS

BUILDING A CULTURE OF PHILANTHROPY

Alumni by program:

MLIS: 6,654

MIM: 704

BSIS: 595

HCIM: 117

Ph.D.: 95

Certificates: 41

TOTAL: 8,151

Three pillars: *individuals, corporations, and foundations*

- Overall fundraising in Fiscal 2020 grew by 76% since Fiscal 2019, and by 161% since Fiscal 2018. Fiscal 2021 goal is \$1 million.
- We have created more opportunities for our constituents to give:
 - Dean's Quarterly Alumni Newsletter was launched in Spring 2019 and includes remittance
 - The iConsultancy program formalizes our relationship with organizations
 - iSchool Advisory Council (iLEAD) members have newly defined roles and responsibilities, including philanthropy
 - New gift funds have been established to support new programs and initiatives, i.e. undergraduate program, diversity and inclusion;
 - Giving Day efforts broadened to motivate faculty and staff giving
- Major gift pipeline includes \$1.6 million in planned asks for Fiscal 2021.
- Partnership between development and communications teams has been strengthened with efforts focused on enhanced and increased communications with constituents and the creation of collateral to help better promote the iSchool.
- A Development Committee comprised of iSchool faculty and staff has been created to to increase philanthropic efforts.
- Alumni events (in person and virtual) are now more focused and collaborative, highlighting the work and research of iSchool faculty and involving faculty from other UMD units.

Long term goals

- Increase overall fundraising and grow to the \$5 million level/year over the next five years.
- Increase support for students in the form of scholarships, fellowships, and awards; continue this as a top priority.
- Seek the support of foundations and corporations to provide more opportunities for students and faculty to help us achieve our long term fundraising goals.

*Image from March 3, 2020 panel discussion,
"Fighting Disinformation to Save Democracy,"
held at the Mansion at Strathmore. Left to right:
Dr. Jen Golbeck, Dr. Charlie Harry, Dr. Naemul
Hassan, Dr. David Karph (George Washington
University), Dr. Shawn Parry-Giles (Dept. of
Communications).*





COLLEGE OF INFORMATION STUDIES

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