Turning WHAT IF? Into WHY NOT?

WHAT IF PHYSICS AND MATH COULD SPARK

BREAKTHROUGHS IN THE FIGHT AGAINST CANCER?

WHAT IF ONE STUDENT'S REMARKABLE JOURNEY

FROM REFUGEE TO PH.D. COULD INSPIRE OTHERS FROM DIFFICULT

BACKGROUNDS TO PURSUE A DOCTORATE?

WHAT IF THE DESIGN OF THEATER COSTUMES

COULD WEAVE GREATER CROSS-CULTURAL UNDERSTANDING?

THE UNIVERSITY OF MARYLAND'S GRADUATE SCHOOL, with its dual mission of advancing graduate education and enhancing the graduate student experience, partners with campus colleges and schools to move the boundaries of science and discovery—transforming "What if?" into "Why not?" ¶ **Together, we provide leadership for Maryland's more than 200 advanced degree programs** by building robust research and educational partnerships; providing advocacy and financial support to students; promoting diversity; enhancing international graduate education and training; and helping to place our graduates where they will have the biggest scientific and societal impact. ¶ **The University of Maryland is rapidly becoming *the* institution for innovation and entrepreneurship in the mid-Atlantic region, and one of the world's best**. The Graduate School is a cornerstone of that effort—recruiting and cultivating some of the brightest and most creative scientists, scholars, and artists anywhere.
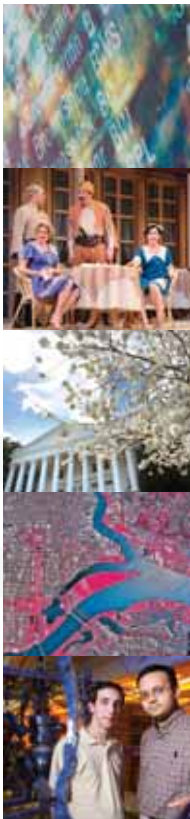
ADVANCING

Graduate Education

GRADUATE EDUCATION AT THE UNIVERSITY OF MARYLAND addresses large-scale global challenges involving climate, health, energy, language and culture, information technology, and more. We also offer training for careers as public policy experts, business innovators, and world-class artists and performers.

The Graduate School supports these endeavors, collaborating with campus colleges and schools on doctoral training, transitional and terminal master's degrees, and graduate certificate programs that are relevant, agile, and competitive in the marketplace, and uphold the highest academic standards.

The more than 11,000 postbaccalaureate scholars at Maryland represent all **50 states** and **120-plus countries**.

The Graduate School enhances cross-disciplinary education through its Graduate Field Committees, which coordinate symposia and lectures, new courses, and interdisciplinary research in areas like **developmental science**, film studies, **energy systems engineering**, and biophysics.

APPROXIMATELY **600** **DOCTORAL DEGREES**

AND **2,200**

MASTER'S DEGREES ARE CONFERRED ANNUALLY.

WHAT IF

FUSING THE PHYSICAL AND LIFE SCIENCES COULD HELP PREDICT HOW CANCEROUS CELLS MOVE?

COLIN MCCANN PH.D. '11 (left) sought the answer through a unique research and educational partnership between the University of Maryland and the nearby National Cancer Institute (NCI). For the final two years of his physics doctoral training, McCann worked side-by-side with the NCI's renowned cancer experts, seeking new diagnostic tools to combat the disease that kills more than a half-million Americans each year. "I came to understand very clearly why cell biologists approach their research the way they do," says McCann, now a scientist at Decisive Analytics Corp. "You can't always fit the complexities of a cell into an equation."

"I came to understand very clearly why cell biologists approach their research the way they do. You can't always fit the complexities of a cell into an equation." — COLIN MCANN

Experience

THE GRADUATE SCHOOL supports programs and policies that enhance the living and learning environment for all graduate students. These include dedicated areas for graduate students in McKeldin Library; family-friendly policies for graduate students for childbirth, adoption, or other urgent domestic needs; and specialized writing resources specific to graduate education.

To ensure that Maryland doctoral students have the highest level of mentoring and professional development, the Graduate School initiated a series of sweeping changes in 2010 that included reshaping and resizing Maryland's doctoral programs and reducing the overall number of doctoral students.

Maryland also offers new financial aid measures that support doctoral students throughout their studies, allowing the university to compete successfully with institutions like the University of California, Berkeley, the Massachusetts Institute of Technology, and Stanford University for the best doctoral students.

The Flagship Fellowship program, established in 2007 to recruit and retain superlative doctoral students, **appoints eight to 12 fellows every fall**, with each receiving a $50,000 supplement to his or her fellowship or assistantship offer.

The **Jacob K. Goldhaber travel grants**, named for a former dean of the Graduate School, have doubled in recent years. These awards fund graduate student travel to scholarly meetings around the world, allowing students to present their research and to network with the academic leaders in their discipline.

New **International Student Support Awards** were established in FY11 with a $10,000 budget, increased to $60,000 in FY13.

$8M FOR FELLOWSHIPS AND OTHER AWARDS

+ $4.2M IN TUITION REMISSION

$12.2M PROVIDED ANNUALLY BY THE GRADUATE SCHOOL IN STUDENT AND FACULTY SUPPORT

WHAT IF

A MENTOR COULD HELP A GRADUATE
STUDENT BEGIN HIS OR HER EXPERIENCE
ON DAY ONE AT MARYLAND?

MELANIE KILLEN (right), a noted professor of human development and former director of graduate studies in her department, believes in immediately immersing her graduate students in the day-to-day research of her Social and Moral Development Laboratory. "Classroom instruction is important, but observing firsthand as young people develop their social cognition, moral reasoning, and peer relationship skills is critical," says Killen, whose work has been featured on CNN and in *The New York Times* and *The Washington Post*.

INCREASING THE UNIVERSITY'S

International Ties

THE GRADUATE SCHOOL'S OFFICE FOR INTERNATIONAL INITIATIVES is creating new programs, partnerships, and other opportunities that exemplify the university's commitment to global outreach and impact.

In 2011, the Graduate School and the Department of Criminology and Criminal Justice partnered with the People's Police Academy in Hanoi to establish a master of professional studies in justice leadership program, the first of its kind between a U.S. institution and Vietnam.
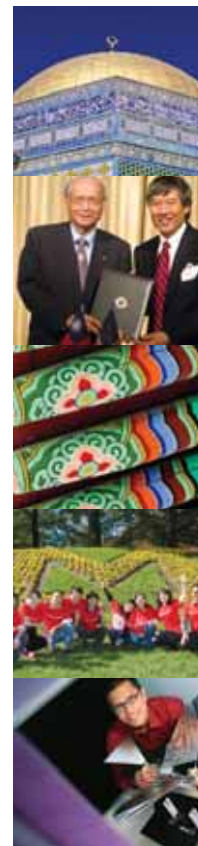
In 2012, we introduced International Graduate Research Fellowships, sending Maryland graduate students to work with distinguished faculty overseas. In the pilot year, students in agriculture, biochemistry, cybersecurity, and other fields traveled to Argentina, China, France, Hungary, Israel, and Norway.

Nearly 23,000 students apply to the Graduate School annually, half of them from countries outside the U.S. International scholars make up 25 percent of our graduate enrollment.

Maryland graduate students have joined with undergraduates in **Engineers Without Borders** to work on service projects with local populations in Ethiopia, Peru, and Burkina Faso.

Graduate students in the geographical sciences are part of a long-term project in central Africa's Congo River Basin, using **NASA satellites** to improve agricultural practices and land-use planning for the region's 80 million inhabitants.

The dean of the Graduate School has joined the university president and other officials on trips to forge **academic and entrepreneurial partnerships** with universities and governments around the globe.

WHAT IF

COSTUME DESIGN COULD WEAVE A FABRIC OF CROSS-CULTURAL UNDERSTANDING?

Master of fine arts major **LAREE LENTZ** collaborated online with peers at the National Academy of Chinese Theatre Arts to design fantastical costumes for a one-of-a-kind production of Shakespeare's "A Midsummer Night's Dream." Students from the two institutions staged the play in China and the United States in Fall 2012, with actors from each country speaking in their native language. Lentz and the Beijing academy students sought to represent both cultures in the stunning clothes. "We came to realize that no matter how different we seemed to be, that we are actually similar in so many ways," she says.

"We came to realize that no matter how different we seemed to be, that we are actually similar in so many ways." — LAREE LENTZ

The Graduate School works closely with colleges and academic departments to establish **SUCCESSFUL AND INNOVATIVE PROGRAMS ABROAD**. These include:

DENMARK
Agriculture collaboration with the University of Copenhagen

UNITED KINGDOM
Film studies collaboration with the University of Roehampton

MALTA
Joint master's program in education counseling

BRAZIL
Collaboration with Museum of Art of São Paulo

CHILE
Joint doctoral program in astronomy with Pontificia Catholic University

ARGENTINA
International Research Fellowships with the School of Agriculture, University of Buenos Aires

GERMANY
Neuroscience and cognitive science collaboration with the University of Tübingen

BEIJING
Robert H. Smith School of Business executive M.B.A. program

NANJING
Master's in criminology program at Nanjing Normal University. Book and personnel exchange programs with Nanjing Library

SHANGHAI
Joint research in cybercrime and leadership training for provincial officials

SOUTH KOREA
Joint graduate program in mechanical engineering with Pusan National University

VIETNAM
Professional master's in justice leadership in Hanoi

PROMOTING A

Diverse Academic Community

The Graduate School funds an assistantship for a doctoral candidate researching a topic related to the holdings or mission of the university's **David C. Driskell Center** for the Study of the Visual Arts and Culture of African Americans and the African Diaspora.

In 2011, the Graduate School inaugurated the **Ronald E. McNair Graduate Fellowships**, making the University of Maryland one of the few institutions in the country to offer graduate, as well as undergraduate, McNair fellowships.

THE GRADUATE SCHOOL, like the university as a whole, promotes diversity as a core value. We recognize the great strength that an intellectual community derives by embracing a variety of racial, ethnic, cultural, and academic viewpoints.

The Graduate School Office for Diversity Initiatives works closely with other University System of Maryland institutions—and with UMD senior administrators, deans, and faculty—to develop innovative and effective programs to recruit, enroll, retain, graduate, and place a diverse graduate student body.

One example is when we partnered with colleagues at the University of Maryland, Baltimore County and the University of Maryland, Baltimore on a multiyear Alliances for Graduate Education and the Professoriate program. Funded by the National Science Foundation, the program recruits and prepares students from underrepresented minorities for the professoriate in science, technology, engineering, and mathematics (STEM) disciplines. When the grant expired, the Graduate School reallocated internal funding to continue the program.

MARYLAND RANKS AMONG THE TOP 4

INSTITUTIONS IN THE AMERICAN ASSOCIATION OF UNIVERSITIES IN GRADUATING AFRICAN-AMERICAN DOCTORAL CANDIDATES, ACCORDING TO *DIVERSE: ISSUES IN HIGHER EDUCATION.*

WHAT IF

ONE YOUNG MAN'S REMARKABLE ACADEMIC JOURNEY COULD INSPIRE OTHERS?

After civil war engulfed his native Somalia, **ILYAS ABUKAR** harbored no ambitions beyond survival in the Kenyan refugee camp where his family had fled. Today, Abukar is pursuing his doctorate in American studies through a new program that attracts and supports outstanding doctoral candidates from traditionally underrepresented populations.

The McNair Graduate Fellowship Program—conceived and funded by the Graduate School—allows Abukar to study critical race theory and ethnic studies, which he hopes will lead to a career in academia. "I don't see a lot of Somali graduate students or professors, African professors, or even American professors of color," he says. "I hope I can inspire others to go on, too."

Flagship Campus

RANKINGS MATTER. Whether recruiting the best students, building partnerships with major defense contractors, or seeking increased funding from the state legislature, external perceptions of an institution's quality can sway opinions.

Graduate education and research play an important role in the University of Maryland's visibility. Many of our programs rank in the Top 10 in the *U.S. News & World Report*'s Best Graduate Schools, including, in 2012, criminology, public policy analysis, information systems, educational psychology and special education, aerospace engineering, geochemistry, African-American literature, and sociology of sex and gender, as well as several programs in physics and in library and information sciences.

Graduate School alumni also enhance Maryland's reputation, whether by landing an academic appointment at a top university, making a splash in a Fortune 500 company, or writing a best-selling novel.

Maryland's programs in aerospace engineering, **agricultural and resource economics**, comparative literature, computer science, geography, linguistics, **atmospheric and oceanic science**, and public policy were ranked among the best in the country in 2010 by the National Research Council.

The university's unique and advantageous location in the Washington, D.C. metro area provides graduates with exceptional opportunities for internships, research appointments, and notable careers in the **National Institutes of Health**, NASA, the World Bank, the **Smithsonian Institution**, the Kennedy Center for the Performing Arts, and countless other prestigious laboratories, agencies, and cultural venues.
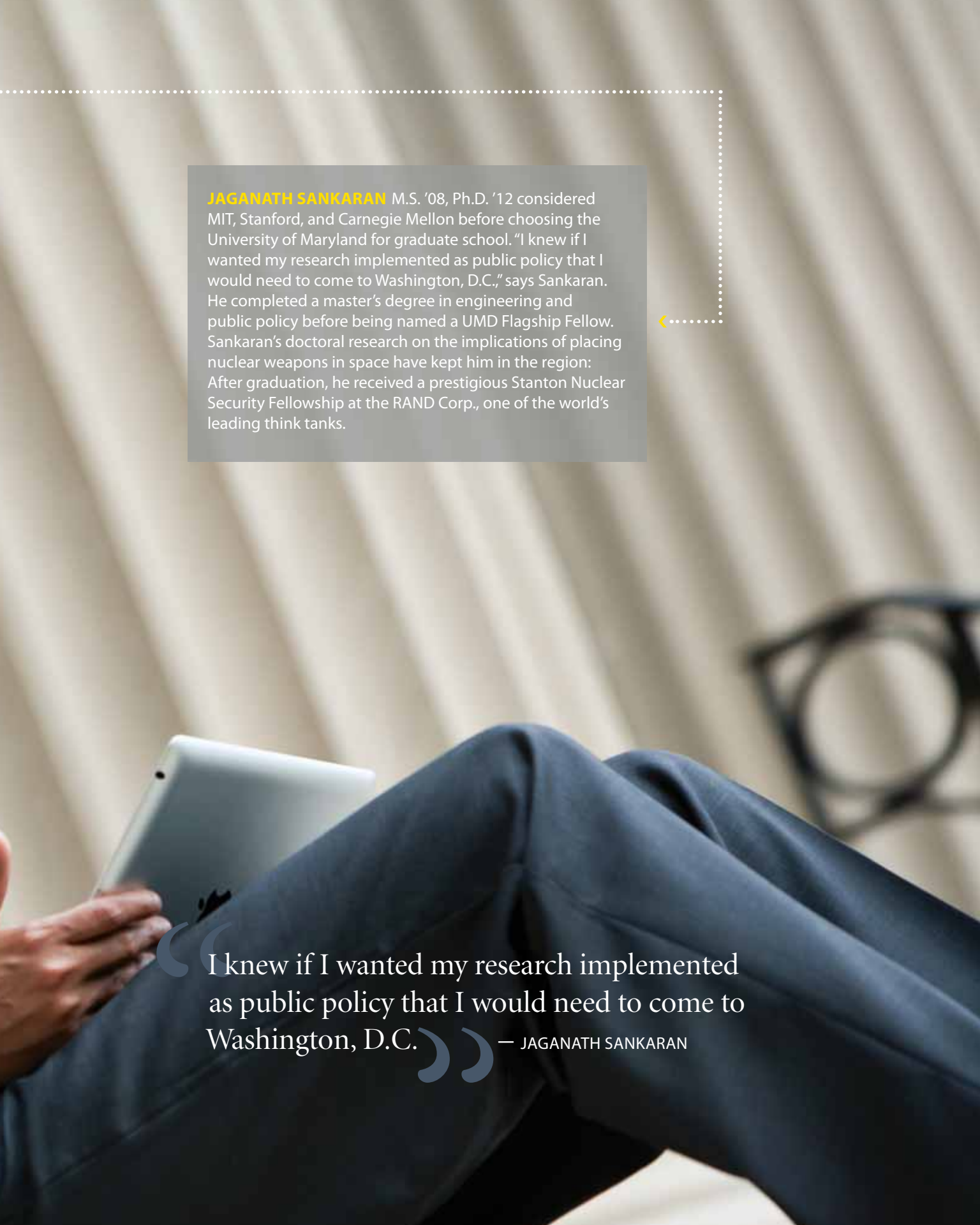
MANY OF OUR PROGRAMS RANK IN THE TOP 10

ON *U.S. NEWS & WORLD REPORT'S* LIST OF BEST GRADUATE SCHOOLS

WHAT IF YOU WANTED YOUR IDEAS AND SOLUTIONS TURNED INTO POLICY?

JAGANATH SANKARAN M.S. '08, Ph.D. '12 considered MIT, Stanford, and Carnegie Mellon before choosing the University of Maryland for graduate school. "I knew if I wanted my research implemented as public policy that I would need to come to Washington, D.C.," says Sankaran. He completed a master's degree in engineering and public policy before being named a UMD Flagship Fellow. Sankaran's doctoral research on the implications of placing nuclear weapons in space have kept him in the region: After graduation, he received a prestigious Stanton Nuclear Security Fellowship at the RAND Corp., one of the world's leading think tanks.

"I knew if I wanted my research implemented as public policy that I would need to come to Washington, D.C." — JAGANATH SANKARAN

INCREASING THE UNIVERSITY'S
STRATEGIC PARTNERSHIPS FOR

Innovation and Entrepreneurship

THE GRADUATE SCHOOL both directly and indirectly supports unique and valuable partnerships that advance research and education and that translate ideas into impact.

Maryland graduate students are also innovators and entrepreneurs, with many of the startups spun out of the university's technology incubator featuring Maryland faculty, alumni, and graduate students.

Innovation isn't just tied to technology: Some of the university's most creative thinkers are working on graduate-level projects that involve architecture, sculpture, women's studies, and piano performance.

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The Graduate School has joined an elite group of 25 research universities in the **Center for the Integration of Research, Teaching, and Learning (CIRTL) Network**, a bold and innovative partnership to prepare an outstanding national faculty for STEM undergraduate learning.

Mtech's VentureAccelerator program gave Matthew Dowling Ph.D. '10 the financial boost needed to develop Kytoclot, a unique blood-clotting foam that can save the lives of military or civilian personnel in emergency or mass casualty situations. The *Maryland Daily Record* named Dowling **Innovator of the Year in 2009**.

WHAT IF

HAVING A MAJOR FEDERAL AGENCY RIGHT NEXT DOOR COULD HELP FURTHER YOUR RESEARCH?

TIM CREECH (right) wants the computers onboard NASA's next generation of satellites to operate fast—really fast. The second-year doctoral student of electrical and computer engineering spent the summer of 2012 at NASA's nearby Goddard Space Flight Center, working with government scientists to develop software that could take advantage of new parallel computing platforms. "It was empowering to me as a researcher that NASA was very open to using my ideas," says Creech. He is one of seven Maryland graduate students to receive a NASA Space Technology Research Fellowship, which will fund Creech's research in the summer of 2013 and beyond at NASA's Ames Research Center in California.

WE HOPE THIS BROCHURE HAS GIVEN YOU SOME INSIGHT INTO THE MISSION AND VALUES OF THE GRADUATE SCHOOL AT THE UNIVERSITY OF MARYLAND.

As we move forward, several strategic objectives will guide us. As a community, we will:

Advance, encourage, and ensure **excellence in graduate education** throughout the university.

Enhance the graduate student experience in collaboration with campus units and student organizations.

Increase resources for graduate education and students and ensure their effective and efficient use.

Foster an intellectual community through innovative and rigorous campus initiatives.

Continue to build a strong Graduate School for the future.

If you would like to join us in realizing these goals, please contact me. We welcome any and all ideas that will help our graduate faculty and students achieve excellence.

Charles Caramello
Associate Provost for Academic Affairs and Dean of the Graduate School

email: graduate-dean@umd.edu

UNIVERSITY OF MARYLAND COLLEGES AND SCHOOLS

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES
www.agnr.umd.edu

SCHOOL OF ARCHITECTURE, PLANNING AND PRESERVATION
www.arch.umd.edu

COLLEGE OF ARTS AND HUMANITIES
www.arhu.umd.edu

COLLEGE OF BEHAVIORAL AND SOCIAL SCIENCES
www.bsos.umd.edu

ROBERT H. SMITH SCHOOL OF BUSINESS
www.rhsmith.umd.edu

COLLEGE OF COMPUTER, MATHEMATICAL, AND NATURAL SCIENCES
www.cmns.umd.edu

COLLEGE OF EDUCATION
www.education.umd.edu

A. JAMES CLARK SCHOOL OF ENGINEERING
www.eng.umd.edu

PHILIP MERRILL COLLEGE OF JOURNALISM
www.merrill.umd.edu

COLLEGE OF INFORMATION STUDIES
www.ischool.umd.edu

SCHOOL OF PUBLIC HEALTH
www.sph.umd.edu

SCHOOL OF PUBLIC POLICY
www.publicpolicy.umd.edu

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