

## HIGHLIGHTS: UMBC HONORS AND ACHIEVEMENTS

### LEADERSHIP AND INNOVATION

*UMBC is nationally recognized for its leadership in a variety of innovative programs.*

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UMBC's Meyerhoff Scholarship Program is a national model for educating talented students from all backgrounds in science, engineering, mathematics and computer science. The university is a leading producer of blacks who go on to receive Ph.D.s and M.D./Ph.Ds. Over 50 Meyerhoff Scholars completed Ph.D.s or M.D./Ph.D.s, and as the program continues to mature, hundreds more will join the graduate school pipeline.

The university is joining with Princeton to create a new Engineering Research Center (ERC) expected to revolutionize optics. The ERC is one of a select number of interdisciplinary centers located at universities across the U.S. UMBC's optics expert, Anthony Johnson, professor of physics and computer science and electrical engineering, is the deputy director.

A collaboration between UMBC and IBM will create The Multicore Computing Center (MC2), a unique facility that will focus on supercomputing research related to aerospace/defense, financial services, medical imaging and weather/climate change prediction. IBM awarded UMBC a significant gift to support the development of this new center, which researchers describe as an "orchestra" of one of the world's most powerful supercomputing chips.

The university's Alex. Brown Center for Entrepreneurship received \$2 million from the Kauffman Foundation to build entrepreneurship education across the campus. The mission of the Kauffman Campuses Initiative is to catalyze entrepreneurship programs outside of business and engineering schools. The award acknowledges the success of UMBC's Alex. Brown Center for Entrepreneurship, created six years ago through a gift of \$1 million from the Alex. Brown Foundation to develop a leading university entrepreneurship center for the Baltimore region.

The University is among the top three Ph.D-granting universities in the U.S. in the production of IT degrees at the undergraduate, master's and doctoral levels, according to the National Science Foundation (NSF). According to current NSF education data, UMBC ranks second in degrees awarded by U.S. colleges that grant bachelor's, master's and Ph.D. degrees in the computing sciences. UMBC continues to be the largest producer of IT graduates in the Maryland area, according to the NSF.

The Princeton Review features UMBC in its new 2008 edition of the Princeton Review Guide: "Best 366 Colleges" and ranks UMBC 10th on its Diverse Student Populations list. Only 15 percent of four-year colleges in the U.S. and two Canadian colleges were chosen for the book, with "outstanding academics" as the primary criterion for inclusion.

The Howard Hughes Medical Institute has chosen UMBC as part of a collaborative network of 12 colleges and universities to teach a new, hands-on genomic course aimed at involving more U.S. first-year college students in authentic research. HHMI received 44 applications and selected 12 institutions for the initiative, the first from its Science Education Alliance.

## RESEARCH AND TECHNOLOGY DEVELOPMENT

*In terms of funding, UMBC is among the fastest-growing research universities, fueling knowledge creation through strategic partnerships and interdisciplinary discoveries.*

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**In terms of funding, UMBC is among the fastest-growing research universities.** The University's research funding has grown to \$87 million, up from \$36 million in 1996.

**UMBC ranks third among U.S. universities in NASA funding, according to U.S. Census Bureau data.** The university's NASA-funded centers are the Joint Centers for Earth Systems Technology, the Joint Center for Astrophysics, Goddard Earth Systems and Technology Center, the Center for Advanced Studies in Photonics Research and the Center for Research and Exploration in Space Science and Technology.

**UMBC's research park and technology incubator are playing a direct role in Maryland's economic development.** A study of the economic impact of bwtech@UMBC, the University's research park, and techcenter@UMBC, its technology incubator, shows 841 direct jobs at the facilities generating more than 2,000 total jobs in Maryland and an \$11 return on each state dollar invested.

**UMBC faculty are consistently among the winners of the NSF Career Awards,** grants made to young scientists who show exceptional promise in their research. In recent years (2001-06), 10 UMBC faculty received these prestigious awards, a rate of success that compares favorably to Georgetown, Brandeis and Tufts.

**According to Thomson Scientific's Science Watch, UMBC's geoscience research ranked third nationally in citation impact for 2001-2005.** The only other U.S. universities producing more frequently cited geoscience research papers were Harvard University and the Georgia Institute of Technology.

**The University is one of 22 select institutions, including Yale, Cornell and Duke, to receive a three-year grant from the Council of Graduate Schools (CGS) to support increased completion rates in doctoral programs.** UMBC will use the grant to collect and submit data on doctoral completion and attrition implement such support strategies as mentoring and financial assistance and develop rigorous assessment tools to measure the impact of these efforts.

## OUTREACH

*UMBC is a leader in outreach and advocacy at the local, state and national levels.*

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**The Shriver Center's Choice Program has become a national model for supporting at-risk youth.** This delinquency prevention program, administered by UMBC's Shriver Center, has provided support to 18,000 children throughout Maryland. Choice has been successfully replicated in Hartford, Connecticut in 1997, San Diego, California in 1998, and Syracuse, New York in 2003.

**UMBC's Center for History Education received four \$1 million grants from the U.S. Department of Education's Teaching American History Grant Program to invigorate the teaching of history in elementary, middle and high schools.** This is the fourth grant the Center has received from the Department of Education. Over the next few years, the Center will collaborate with Baltimore County Public Schools to enable 30 elementary, middle and high school teachers of American history to become Master Teachers. The Center is a resource for educators throughout Maryland and beyond – an online library of lesson plans, created by program participants, can be accessed by teachers across the country.

## STUDENT ACHIEVEMENTS

*UMBC students compete with the best for awards, championships, prestigious graduate school admissions and job offers from impressive employers.*

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### UNDERGRADUATE

**UMBC is a leader among Maryland public universities in sending one-third of our students directly to graduate and professional schools.** In the last two years, graduates were accepted to prestigious graduate programs at institutions such as Cambridge, Harvard, Stanford, Johns Hopkins, MIT, Yale, Columbia, Cornell, Vanderbilt, Duke and the University of Michigan.

**UMBC graduates join the private and public sectors in vital roles.** Students entering the workforce are recruited by such top companies as Booz Allen, Constellation Energy, DuPont, IBM, Lockheed Martin, Northrup Grumman, Microsoft, NASA, Xerox and T. Rowe Price. Public service-minded graduates go on to join Maryland public school systems, the National Security Administration, the Social Security Administration and other divisions of the federal government. Still others are building start-up companies such as [OpenPosting.com](http://OpenPosting.com), the first online classified advertising community for college students.

**Philip Graff, a senior physics major, has won one of the world's most selective academic awards, the Gates Cambridge Scholarship.** Graff, the second UMBC student to receive the award in the past two years, is one of just 45 U.S. winners chosen from more than 600 applicants and 119 finalists.

**During his senior year, Isaac Matthews '07, mechanical engineering, was named the 2007 Arthur Ashe Jr. Male Sports Scholar of the Year.** The award is given annually by *Diverse: Issues in Higher Education* magazine to the U.S. female and male athletes who best combine athletic and academic excellence with community activism. In fall 2007, Matthews will enter the M.S./Ph.D. in Nuclear Engineering and M.S. in Technology and Public Policy programs at M.I.T.

**UMBC undergraduates participated in a pioneering Digital Storytelling Project which received a Bronze Telly Award.** Funded by Retirement Living TV (RLTV), the project is the nation's first three-way partnership between a media company, a university and a retirement community. UMBC students teamed with residents from Charlestown Retirement Community to create a series of 17 digital short movies. The prestigious Telly Award cites the Digital Storytelling Project as being among the world's best in local, regional, and cable television, and video and film production. This year's awards received over 13,000 entries from all 50 states and five continents.

**UMBC earned a place in college chess history by winning the Pan-American Intercollegiate Team Chess Championship – the "World Series" of college chess – for a record-breaking seventh time in 2006.** UMBC's Chess Team won its fourth straight President's Cup or "Final Four" of college chess in 2006. In 2007, the team took first place in the College Chess League tournament.

**Sondheim Public Affairs Scholar Shane Spencer won first place in the national KaiserEDU.org 2007 Student Essay Contest** in the undergraduate category. Spencer, who is majoring in political science and media and communications studies, tied for first place out of a field of more than 60 undergraduate student entries in the health policy essay competition sponsored by the nonprofit Henry J. Kaiser Family Foundation.

**UMBC students are consistently recognized during the annual Goldwater Scholarship national competition.** In 2007, Philip Graff, an Honors College student with a dual major in physics and math, and Silpa Poola-Kella, a Meyerhoff Scholar majoring in biochemistry and molecular biology, received Honorable Mention recognition. Adjoa Smalls-Mantey, biochemistry and molecular biology, and Devin Burns, mechanical engineering, were named 2006 Goldwater Scholars. Named for former Arizona Senator Barry Goldwater, this is the premier undergraduate award of its type, given to outstanding students in the fields of mathematics, natural sciences and engineering.

**The UMBC Camerata was invited to participate as one of the college choirs singing at the 2007 Christmas in Washington,** which is attended by the President, his cabinet and other important political figures. The program also was broadcast on cable television's TNT. **In April 2007, the Camerata was invited to perform at Carnegie Hall with famed English choral conductor and composer John Rutter.**

The NCAA's most recent Academic Progress Report ranked UMBC's women's swim team and men's basketball and cross country teams in the top 10 percent of colleges and universities nationally.

Nine UMBC athletic and support teams posted grade point averages of 3.00 or higher in the fall of 2007. Forty-nine percent of all students in the program (total of 441) had grade point averages of 3.00 or higher, while 29 percent were over 3.50. Thirty-nine program participants recorded 4.0 grade point averages in the fall. The women's basketball team has a team grade-point average of 3.32. The only team in the department with a higher GPA is women's tennis, at 3.49.

Men's basketball has advanced to the 2008 America East Championships. It is UMBC's first-ever appearance in a league title game in 22 years at the NCAA Division I level. The Retrievers earned their 23<sup>rd</sup> victory (23-8) of the season, tying the all-time (41 years) school record. The team advanced to the semi-finals in 2007.

Other UMBC sports teams have won multiple championships. The men's basketball team has advanced to the 2008 America East Championships. The women's basketball team won the 2007 America East Championships and advanced to the first round of the NCAA tournament. Men's and women's swimming and diving won both the 2007 and 2008 American East Championships. Men's lacrosse won the 2006 America East Championships and advanced to the NCAA quarterfinals.

## GRADUATE STUDENTS

Kristi Harris, Ph.D. candidate in physics, is UMBC's first Department of Energy Computational Science Fellow. The fellowship will fund her doctoral studies through 2010. Harris conducted research in nanowire technology at Sandia National Labs in New Mexico in summer 2007.

Vikas Behl '04, English, a student in the M.A. in Instructional Systems Design program, received a 2007 Fulbright Award to teach in Turkey.

## FACULTY

*In head-to-head comparisons with top scholars across the nation, UMBC faculty compete at the top level of research and scholarship.*

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Michael Summers, professor of chemistry and biochemistry, is one of only two Howard Hughes Medical Investigators at Maryland public universities. Summers is conducting groundbreaking AIDS research with both undergraduate and graduate students. He is the recipient of a 2000 Presidential Award for Excellence in Science, Mathematics and Engineering.

UMBC ranks 76th in the nation for prestigious faculty awards, including a Mellon Research Fellow and Presidential Early Career Award for Scientists and Engineers to a Guggenheim Fellow in the humanities and a Woodrow Wilson Career Enhancement Fellow in the social sciences.

Books by faculty members are published by such prestigious presses as Harvard University Press, Oxford University Press, Cornell University Press and Simon & Schuster. Recent faculty books include: *A Biography of No Place: From Ethnic Borderland to Soviet Heartland* by Kate Brown, assistant professor of history; *Never Married: Single Women in Early Modern England* by Amy Froide, associate professor of history; and *Charles Darwin, Geologist* by Sandra Herbert, professor of history; and *Whistling Past Dixie: How Democrats Can Win Without the South* by Thomas Schaller, associate professor of political science.

In 2006, Assistant Professor of Biological Sciences Rachel M. Brewster was one of just three biologists in the U.S. to receive the nation's top honor for promising young scientists, the Presidential Early Career Award for Scientists and Engineers (PECASE). Brewster is researching the causes of birth defects of the brain and central nervous system, the most common of which is spina bifida, the leading cause of childhood paralysis in the U.S.

**Professor of History Sandra Herbert was the 2006-07 "Distinguished Visiting Scholar" at Christ's College, University of Cambridge.** The author of *Charles Darwin, Geologist*, Herbert is the recent winner of several major awards and was elected a Fellow of the American Association for the Advancement of Science. She received the American Historical Association's 2007 George L. Mosse Prize, the Council of the Geological Society of America's 2006 Mary C. Rabbitt Award, the History of Science Society's 2006 Suzanne J. Levinson Prize and the North American Conference on British Studies' 2006 Albion Book Prize. In addition, she received the 2007 University System of Maryland Board of Regents Award for Research/Scholarship/Creative Activity.

**Associate Professor of Organic Chemistry Katherine Seley-Radtke was one of only six 2006 Jefferson Science Fellows in the nation.** The Jefferson Science Fellows program at the U.S. Department of State is establishing a new model for engaging the American academic science, technology and engineering communities in the formulation and implementation of U.S. foreign policy. An expert in anticancer, antiviral, antibiotic and antiparasitic medical agents, Seley-Radtke spent the 2006-07 academic year with the Department of State and abroad, working on biosafety and biosecurity programs in Indonesia and assessing chemical and biological sciences priorities in Russia.

**Two members of UMBC's faculty received 2006-07 Fulbright Awards.** Associate Professor of Visual Arts Tim Nohe completed a research project titled, "Sounding Botany Bay," a surround-sound DVD audio-work, and teach at the School of Art and Design of the University of Wollongong, New South Wales. Associate Professor of Modern Languages & Linguistics John Stolle-McAllister conducted research and taught at the Universidad Andina Simón Bolívar in Quito, Ecuador.

**Dan Fabris, assistant professor of chemistry and biochemistry, is one of just 14 researchers nationally to receive a NIH National Center for Research Resources (NCRR) High-End Instrumentation grant.** The \$1.5 million grant funded the purchase of a 12 Tesla Q-FTICR, a powerful, high-resolution instrument for analysis of nucleic acids and protein-nucleic acid complexes. UMBC will be one of a handful of U.S. locations to own this type instrument, which supports our research on drug resistance by HIV-1 and other retroviruses, and could lead to the development of new and more effective inhibitor drugs for AIDS therapy.

**Anne Rubin, associate professor of history, received a 2007 American Council of Learned Societies' Digital Innovation Fellowship.** The fellowship is intended to recognize excellence in and help advance digital humanities scholarship. Rubin will use her fellowship to work with UMBC's Imaging Research Center Director Dan Bailey to create a book and digital Web site on General Sherman's march to the sea during the Civil War. In 2006, Rubin received the Avery O. Craven Prize from the Organization of American Historians for her book, *Shattered Nation: The Rise and Fall of the Confederacy, 1861-1868* (University of North Carolina Press). The award is given annually "for the most original book on the coming of the Civil War, the Civil War years or the Era of Reconstruction."

**Marie des Jardins, assistant professor of computer science and electrical engineering, received a 2006 NSF Career Award,** which recognizes a young researcher's dual commitment to scholarship and education.

## **ALUMNI**

*UMBC alumni hold major positions in business, government, education and non-profit organizations. From prestigious award winners to Presidential advisors, UMBC alumni are helping to shape the future.*

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**Diane Auer Jones '88, M.S. applied molecular biology, is assistant secretary for postsecondary education at the U.S. Department of Education.** She was previously deputy associate director in the White House Office of Science and Technology Policy.

**Adrienne Jones '76, psychology, is the Maryland House of Delegates Speaker Pro Tem,** the second highest ranking member of the House.

Ian M. Ralby '02, modern languages and linguistics, M.A. intercultural communication, has received the 2007 Gates Cambridge Scholarship, one of the most selective academic awards in the world. Funded by the Bill and Melinda Gates Foundation, Gates Cambridge recipients are chosen based on "intellectual ability, leadership capacity and desire to use their knowledge to contribute to society throughout the world by providing service to their communities and applying their talents and knowledge to improve the lives of others." Ralby will begin a M.Phil. in International Relations at Cambridge in fall 2007.

Matthew Loftus '07, chemistry, and Hadi Gharabaghi, '06, visual arts, have received the prestigious Jack Kent Cooke Graduate Scholarship. Only 34 students in the nation received this year's scholarship, which honors high achieving students with financial need. Considered one of the most generous U.S. academic awards, it provides up to \$50,000 per year for up to six years of graduate or professional study in any field.

Jason Reid '07, mechanical engineering, was awarded the 2007 National Science Foundation (NSF) Graduate Research Fellowship, which will fund tuition, fees and living expenses for his pursuit of a Ph.D. at M.I.T.

Three members of the Class of 2007 – Joseph Maher, political science and environmental studies; Allen McFarland, political science and economics; and Bridget Wessel, modern languages and linguistics – and Kevin J. Mulroe '98, M.A., Instructional Systems Design, won Fulbright Awards for international graduate study, research or teaching. This is the second year in a row that three UMBC students received the award. Vikas Behl '04, English, a student in the M.A. in Instructional Systems Design program, also received a 2007 Fulbright Award.

Two UMBC alumni received the 2007 National Science Foundation Graduate Research Fellowship. Both are from the Class of 2005: Oni Mapp, biochemistry and molecular biology, and Chad McCormick, biochemistry and molecular biology, philosophy.

## **STAFF**

*UMBC staff demonstrate exemplary leadership and dedication on campus and in the community.*

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Director of Undergraduate Admissions Dale Bittinger was named one of "10 Admissions Deans Who Are Shaping Their Field" by the *Chronicle of Higher Education* in 2007.

Vice President for Institutional Advancement Sheldon Caplis is a member of the Council for Advancement and Support of Education's Board of Trustees.

Randy Monroe was named 2008 America East Men's Basketball Coach of the Year.