

45TH
ANNIVERSARY
INTERPHASE

HONORING THE LEGACY:
PAST, PRESENT, AND FUTURE

April 26, 2014

MUSEUM OF SCIENCE

1 SCIENCE PARK

BOSTON, MASSACHUSETTS

A Brief Evolution

OF THE INTERPHASE PROGRAM

- 1968** Project Epsilon: Precursor to Project Interphase founded in response to the assassination of Dr. Martin Luther King, Jr.
- 1969** Project Interphase (*A Legacy Begins*): A summer transition program that brought a cohort of primarily under-represented minority students to campus to acclimate them to MIT and the Cambridge/Boston communities.
- 1975** The Office of Minority Education (*OME*) is founded. Professor Wesley Harris becomes the first director.
- 2007** Project Interphase becomes Interphase with the recognition that the rich history of the program is no longer an experiment or “project”.
- 2012** Interphase is transformed into Interphase EDGE (*Empowering Discovery | Gateway to Excellence*): a two-year scholar enrichment program still including the original summer session as well as programming during the academic year.
- 2014** Over 2,200 participants (*which does not include the invaluable efforts of facilitators/TAs, instructors, program directors*) are part of the Interphase legacy and have gone on to impact various industry from academia to technology, government to entertainment, and business to medicine.

INTERPHASE EDGE

EMPOWERING DISCOVERY | GATEWAY TO EXCELLENCE

Interphase EDGE is a two-year scholar enrichment program which includes a seven-week summer session as well as programming during the academic year. The focus of the summer program is to give scholars an introduction to the MIT experience by exposing them to the rigors of a full subject load and to life on campus. In addition, the Interphase EDGE curriculum is uniquely designed to impart pivotal concepts that will increase long-term academic success. In other words, the program will not only give students an “edge” on their MIT experience; it will catalyze their success beyond MIT. During the summer and academic year, scholars participate in a range of personal and educational development seminars and activities designed to ensure their smooth transition to college life. Throughout the academic year, scholars continue to build upon the relationships created during the summer by attending bi-weekly meetings with EDGE advisors and monthly professional and academic enhancement events, including programs that expose them to various career pathways.

Order of Events

6:30PM COCKTAILS/MINGLING (Please explore the Green Wing or take photos)

Please be seated no later than 7:25pm

7:30PM PROGRAM

Selection 1 Interphase Choir
Welcome/Opening Response Tammy Stevens '96

INTERPHASE PAST

Interphase Video Reflections of Our Past
Toast to the Past Dr. Clarence Williams

INTERPHASE PRESENT

Student Introduction Sheldon Trotman '15
Interphase Video Senator Alex Padilla '94
Student Introduction Lilian Guevara '14
Keynote Speaker Kristala Prather '94
Special Recognition Tammy Stevens '96
Toast to the Present Kerry Bowie '94

DINNER (Menu on page 10)

INTERPHASE FUTURE

Selection 2 Interphase Choir
Interphase Video Envisioning Our Future
Introduction of Students Deolinda Rodrigues
Student Testimonials Alyssa Napier '16
Camilo Ruiz '16
Toast to the Future Devin Cornish '14
Special Recognition Massachusetts Institute of Technology
President Reif (Video)
Closing Remarks Tammy Stevens '96



SENATOR ALEX PADILLA

Senator Padilla is a member of the CA State Senate representing more than 1.1 million residents of Los Angeles. He is 41 years old and has been an elected official for 13 years. Both of his parents are immigrants from Mexico who together settled in the working class community of Pacoima, California. His father worked as a short order cook and his mother cleaned houses. He attended local public schools, and then went on to graduate from the Massachusetts Institute of Technology with a degree in Mechanical Engineering. Today he is a member of the Corporation, MIT's governing board.

California educates 1.5 million English Learners which accounts for a quarter of the K-12 population. Forty percent of California kindergarteners are English Learners. Unfortunately, just 11% of English Learners are reclassified Fluent English Proficient each year. Alex is working to address California's poor performance and help more students become fluent in English and realize greater academic success.

Alex also understood that the academic dreams of students were being crushed by an inconsistent college transfer process, so he authored the law that created a clear and certain pathway for community college students seeking to transfer to the California State University system. While this had been a goal in higher education for 30 years, it was Alex who was able to bring together competing factions and get it done - fundamentally reforming higher education in California. Also in higher education, Alex authored the bill requiring California's elite Pac-12 Conference sports programs to provide alternative scholarships to student-athletes who lose their athletic scholarships due to injury.

Alex is committed to the promise of science and advanced technology. To allay fears of how genomics will be used in our society, Alex expanded the civil rights of every Californian when he wrote the California Genetic Information Non-discrimination Act. He was named the 2012 "Tech Champion" by TechNet, Silicon Valley's leading trade group. He was also named 2012 "Legislator of the Year" by TechAmerica.

Meanwhile, Alex is using his chairmanship of the Senate Energy, Utilities and Communications Committee to address global warming and create a greener more sustainable economy. He has pursued an ambitious agenda in the areas of renewable energy, smart grid and broadband deployment. Alex wrote the law that made California the first state in the nation to require statewide smart grid deployment plans which is improving both grid stability and energy efficiency. He has also led efforts to improve air quality and water efficiency.

Alex is the President of the National Association of Latino Elected and Appointed Officials (NALEO) an organization that has a membership of more than 6,000 local, state and federal officials. Both President Obama and Governor Romney attended the 2012 NALEO conference. Alex lives with his wife Angela and their two sons in the San Fernando Valley.

Keynote Bio



KRISTALA L. PRATHER

Professor Prather is the Theodore T. Miller Career Development Associate Professor of Chemical Engineering at MIT. She obtained a Bachelor of Science degree in chemical engineering from MIT in 1994, and a Ph.D. degree from the University of California, Berkeley, in 1999. At Berkeley, she worked under the supervision of Prof. Jay D. Keasling on the development of expression vectors for metabolic engineering. Prof. Prather joined the faculty of MIT after 4 years in BioProcess Research and Development at Merck Research Labs (Rahway, NJ), first as a Senior Research

Biochemical Engineer and then as a Research Fellow. While at Merck, she worked on projects in the areas of biocatalysis for small molecule transformations, high-yield production of plasmids as DNA vaccines, and mammalian cell line development for production of therapeutic proteins.

Prof. Prather's research interests are centered on the design and assembly of recombinant microorganisms for the production of small molecules, with additional efforts in novel bioprocess design approaches. Research combines the traditions of metabolic engineering with the practices of biocatalysis to expand and optimize the biosynthetic capacity of microbial systems. A particular focus is the elucidation of design principles for the production of unnatural organic compounds within the framework of the burgeoning field of synthetic biology.

Prather is the recipient of a Camille and Henry Dreyfus Foundation New Faculty Award (2004), an Office of Naval Research Young Investigator Award (2005), a Technology Review "TR35" Young Innovator Award (2007), a National Science Foundation CAREER Award (2010), and the Biochemical Engineering Journal Young Investigator Award (2011). Additional honors include selection as the Van Ness Lecturer at Rensselaer Polytechnic Institute (2012) and a Young Scientist of the World Economic Forum Annual Meeting of the New Champions (2012).

Prather has been recognized for excellence in teaching with an Outstanding Faculty Award for Undergraduate Teaching in the Dept. of Chemical Engineering (2006), the Junior Bose Award for Excellence in Teaching given by the MIT School of Engineering (2010), and through appointment as a MacVicar Faculty Fellow (2014), the highest honor given for undergraduate teaching at MIT. Prather is also an investigator in the multi-institutional Synthetic Biology Engineering Research Center (SynBERC) funded by the National Science Foundation (USA).

Alumni Biographies

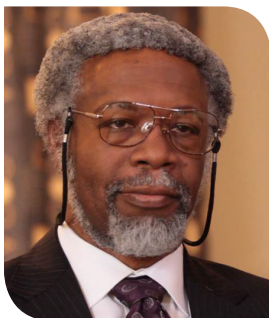


SHIRLEY ANN JACKSON, PH.D.

The Honorable Shirley Ann Jackson, Ph.D., is the 18th president of Rensselaer Polytechnic Institute, where she has led an extraordinary transformation since 1999. Described by Time Magazine as “perhaps the ultimate role model for women in science,” Dr. Jackson, a theoretical physicist, has held senior positions in government, industry, and research, as well as academe.

In 2009, President Barack Obama appointed Dr. Jackson to the President’s Council of Advisors on Science and Technology. Before taking the helm at Rensselaer, Dr. Jackson was Chairman of the United States Nuclear Regulatory Commission.

Dr. Jackson holds an S.B. in physics and a Ph.D. in theoretical elementary particle physics from MIT. While at MIT, she helped to found the Black Students’ Union, served as the student leader of the Task Force on Educational Opportunity, and helped to create Project Interphase. She is a life member of the MIT Corporation.



DR. SYLVESTER “JIM” GATES

Dr. Sylvester “Jim” Gates applied and was admitted to Massachusetts Institute of Technology (MIT). He earned his B.S. degrees in mathematics and physics in 1973. Gates remained at MIT for four more years, earning his Ph.D. degree in physics in 1977. His thesis, “Symmetry Principles in Selected Problems of Field Theory,” was the first at MIT to deal with supersymmetry.

In 1977, Gates went on to attend Harvard University as a junior fellow in the Harvard Society of Fellows. In 1982, Gates accepted a position as an assistant professor of applied mathematics at MIT. During this time, he also served as director of the Office of Minority Education. Gates joined the University of Maryland as an associate professor of physics in 1984, and became a full professor in 1988. In 1998, Gates was named the John S. Toll Professor of Physics at the University of Maryland, becoming the first African American to hold an endowed chair in physics at a major research university in the United States.

Sylvester Gates’s work in mathematics and theoretical physics has greatly contributed to knowledge about supersymmetry, supergravity and string theory. He has received numerous honors and awards. In 2009, President Barack Obama named Gates a member of the President’s Council of Advisors on Science and Technology. In addition to his research, Gates is known for advocating the importance of education and being able to easily explain complex physics theories to a non-physics audience.

REGINALD VAN LEE

Mr. Reginald Van Lee is an Executive Vice President at Booz Allen Hamilton's Washington DC location, where he leads the firm's Global Commercial business, with emphasis on the Energy, Financial Services and Health-care industries. For 30 years, he has helped numerous private and public organizations transform to better achieve their missions and assisted in driving growth in not-for-profit organizations.



He has co-authored a number of articles on the topic of strategy implementation. He is the co-author of the book, "Megacommunities- How Leaders of Government, Business and Non-Profits Can Tackle Today's Global Challenges Together." He has appeared on ABC-TV's "World News This Morning" and CNBC, and co-led the Urban Enterprise Initiative with the William Jefferson Clinton Foundation, which focused on driving enhanced competitiveness of small businesses in Harlem. He is a founding member of the Clinton Global Initiative.

Mr. Van Lee was appointed by President Obama to the Board of Trustees of the John F. Kennedy Center for the Performing Arts. He is a Trustee of the Studio Museum in Harlem board and of the Massachusetts Institute of Technology board. He is also a member of the Executive Leadership Council and sits on the board of The Washington Ballet and the MAC AIDS Fund.

Mr. Van Lee holds an MBA from the Harvard Business School as well as M.S. and B.S. degrees from the Massachusetts Institute of Technology.

DR. JAMES TURNER

Dr. James Turner was born in Washington, DC. He graduated from Gonzaga High School and Johns Hopkins University before attending MIT where he earned a Ph.D. in Physics. He was co-chair of MIT's Black Students Union. After graduating, he was on the Physics Faculty at Southern University and Morehouse College, both Historically Black Colleges. Dr. Turner had a distinguished career at the Department of Energy leading major programs in nuclear weapons safety and nuclear non-proliferation, including post-cold war assistance to the Former Soviet Union as a member of the Government's Senior Executive Service. Before retiring in 2013, he held leadership positions at NIST and NOAA in the Commerce Department. From 2011 to the present, he has led efforts to attract students to careers in STEM fields. Dr. Turner and his wife reside in Columbia, MD. He has five children and three grandchildren.



Acknowledgments

SPECIAL THANKS TO:

Office of the President
Institute Community and Equity Office
Dennis Freeman, Dean for Undergraduate Education
Office of Engineering & Outreach Program

THE INTERPHASE CHOIR:

Luther V. Banner '16
Monique Brewster '10
Juan D. Castrillon '16
Oluwatobi Lanre-Amos '15
Tiandra M. Ray (*co-director*) '15
Emily M. Salvador '16
Jamila Smith-Dell '16
Anthony Q. Thomas (*co-director*) '15

MUSIC:

Louis Fouché '07
Romail Collin
Zwelakh-Duma Bell Le Pere
Charles Burchell

VIDEO PROJECT:

Chris Boebel, *Producer*
Jean Dunoyer, *Producer/Editor*
Wesley Isaac Richardson, *Cameraperson*
Barry Pugatch, *Cameraperson*
Danielle Olson, *OME Student Ambassador* '14

LOGO DESIGN:

Douglas Sanchez '14

OFFICE OF MINORITY EDUCATION STAFF:

DiOnetta Crayton	Timothy Robertson '10
Tammy Stevens '96 *	Cheryl Mottley
Elsie Otero	Somiya Kalloo *
Antonio C. Perry *	Gregory Torrales *
Deolinda Rodrigues *	Jamina Coleman
Anu Meacham	

SPECIAL THANKS TO THE FOLLOWING INDIVIDUALS:

Dr. Sylvester "Jim" Gates '73	Senator Alex Padilla '94
Dr. Shirley Ann Jackson '68, '73	President Rafael Reif
Reginald Van Lee '79, '80	Dr. James Turner '71

* *Interphase EDGE Staff*

Gala Sponsors

THE REGINALD VAN LEE FOUNDATION



Menu

LATIN STATION

Avocado and Black Bean Salad

Island Rice

Churasco Steak with Assorted Sauces:

Chimichurri Sauce, Yellow Pepper Puree, Mango Chutney

Grilled Bass with Braised Greens and Carrot Puree

Spicy Jerk Chicken with Black Beans

Fried Plantains with Brown Sugar and Butter

SOUTHERN STATION

Baby Greens with South Carolina Goat Cheese, Candied Pecans and Peppercorn Dressing

Popcorn Shrimp with Spicy Mayonnaise

“Honey Stung” Fried Chicken

Barbecued Spare Ribs

Mashed Potatoes and Gravy

Sweet Buttered Corn

Baked Macaroni and Cheese

DESSERT

Red Velvet Twinkie

Fuji Apple Tarts

Miniature Pecan Pies

Vanilla Bean Panna Cotta with Wild Strawberries and Fresh Mint

BEVERAGES

Coke (Diet and Regular)

Sprite

Dasani

S.Pellegrino

Tonic Water

Club Soda

Orange and Cranberry Juice

Coffee

Tea

ALCOHOLIC BEVERAGES* (Valid ID required)

Sycamore Lane Chardonnay

Sycamore Lane Merlot

Canyon Road Pinot Grigio

Red Sangria

**Alcohol Served Until 10pm*



Office of Minority Education

Photo credit: MIT Museum



The OME's mission is to promote academic excellence, build strong communities, and develop professional mindsets among students of underrepresented minority groups, with the ultimate goal of developing leaders in the academy, industry, and society.

OFFICE OF MINORITY EDUCATION
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
77 MASSACHUSETTS AVENUE, BUILDING 4-107
CAMBRIDGE, MASSACHUSETTS 02139
617-253-5010 | OME@MIT.EDU | OME.MIT.EDU



**THE LEGACY
CONTINUES...**