

OCTOBER 30, 2017

EXCELLENCE IN RESEARCH AWARDS DINNER

FISCAL YEAR 2017



PURDUE
UNIVERSITY



SOCIAL HOUR MUSIC

Purdue Jazz Combo

Nathan Gasteyer, trombone

Alec McKeska, guitar

Peter Schulz, piano

Brandon Coventry, bass

Nick Bellapianta, drums

EXCELLENCE IN RESEARCH AWARDS DINNER

PURDUE
UNIVERSITY

OCTOBER 30, 2017

WELCOME

Suresh Garimella

Executive Vice President for Research and Partnerships

MORRILL AWARD

UNIVERSITY RESEARCH AWARDS

Jay Akridge

Interim Provost and Executive Vice President for Academic Affairs and Diversity

DINNER

SEED FOR SUCCESS AWARDS

Suresh Garimella

2017 PURDUE DISTINGUISHED RESEARCH AWARDS

Mitchell E. Daniels, Jr.

President

and

Suresh Garimella

ARDEN L. BEMENT JR. AWARD

HERBERT NEWBY MCCOY AWARD

RESEARCH AND SCHOLARSHIP DISTINCTION AWARD





MORRILL AWARDS

The Morrill Award recognizes those whose careers have demonstrated excellence in their teaching, research and engagement missions, as well as in demonstrating synergies among them.

BOEHLJE SELECTED FOR MORRILL AWARD

Michael D. Boehlje

Distinguished Professor of Agricultural Economics

Michael Boehlje, a distinguished professor in agricultural economics and the Center for Food and Agricultural Business, received Purdue's sixth annual Morrill Award. Named to honor the 1862 Morrill Act establishing land-grant universities and colleges, it recognizes excellence in teaching, research and engagement.

In keeping with the Morrill Act's objective of educational access, Boehlje shares his expertise with business leaders and policymakers on agricultural finance, farm and business strategy, management and the industry's changing structures. He emphasizes the importance of planning and positioning businesses for long-term success and covers topics such as systems analysis, process control, transaction costs and supply-and-value chain management.

Boehlje is a fellow of the American Agricultural Economics Association and the International Food and Agribusiness Management Association.



UNIVERSITY RESEARCH AWARDS

July 2016 through June 2017

COLLEGE OF AGRICULTURE

Maria Marshall

Corinne Alexander Spirit of the Land-Grant Mission Award

For her extensive work in impacting the livelihoods of small and family businesses.

Catherine Aime

Purdue University Agricultural Research Award

For significant contributions that combine exploratory fieldwork with modern research tools to understand complex relationships between the microbial world and higher plants.

COLLEGE OF EDUCATION

Dan Shepardson

Outstanding Faculty Discovery Award Scholarship, Professor Level

For his external funded grants totaling over \$7,000,000 for research in soundscape ecology, and for numerous publications.

Blake Allan

Outstanding Faculty Discovery Award, Assistant Level

For his superb record of publications with, 15 journal articles in his first year at Purdue. He also received a grant and has others pending review.

Eric Deemer

Outstanding Faculty Discovery Award, Associate Level

For his excellent record of publications and grant submissions bringing recognition to his research area with consistently high quality work.

Marcia Gentry

Outstanding Faculty Discovery Award, Professor Level

For her outstanding record of publications, grants, graduate student advisement and scholarship.

COLLEGE OF ENGINEERING

Song Zhang

Early Career Research Award

For his scientific and creative breakthroughs of optical high-precision processing techniques and high-speed, 3-D sensing that has led to numerous research collaborations across the 3-D imaging field.

Peide Ye

Research Award

For his internationally recognized discoveries and visionary contributions to the field of electronic materials and devices that have long-term impact on both academia and industry.

COLLEGE OF HEALTH AND HUMAN SCIENCES

David Purpura

Early Career Research Achievement Award

For excellence in scientific and scholarly contributions in his early years at Purdue.

Cleveland Shields

Career Research Achievement Award

For excellence in research throughout his career.

Karen Foli

Lorene Burkhart Award for Excellence in Research about Families

For outstanding research that serves to strengthen the capacity of families to provide a nurturing environment for their family members.

KRANNERT SCHOOL OF MANAGEMENT

Thanh Nguyen

Jay N. Ross Young Faculty Scholar Award

For significant scholarly accomplishment in research, and future research potential.

Mengshi Lu

John and Mary Willis Young Faculty Scholar Award

For significant scholarly accomplishment in research, and future research potential.

COLLEGE OF LIBERAL ARTS

Leonard Harris

Discovery Excellence in Research Award for the Humanities

For scholarship in philosophy and critical national and international leadership and academic engagement contributing to the creation of the subdiscipline of African American philosophy.

Leigh Raymond

Discovery Excellence in Research Award for the Social Sciences

For award-winning research and interdisciplinary academic engagement on environmental research, policy and decision-making.

Randy Roberts

Discovery Excellence in Research Award for History

For nationally recognized scholarship as a leading authority on sports history in the United States.

Rick Thomas

Discovery Excellence in Research Award for Creative Arts

For visionary and internationally recognized sound design and musical composition, and his impactful work as a playwright and director.

Fenggang Yang

Discovery Excellence in Research Award for Sociology

For impactful scholarship and internationally recognized leadership on the fields of sociology and religion in the U.S., and in particular on the topic of religion in Chinese society.

LIBRARIES

Sammie Morris, Sharon Weiner and Larry Mykytiuk

College of Libraries Research Award

Through their work, two articles have been made available for the first time in the English-speaking world; a complete, or nearly complete, list of core competencies for history students in using archives.

COLLEGE OF PHARMACY

Karen S. Hudmon

Chaney Faculty Scholar Award

For outstanding research, scholarship, and professional accomplishments in pharmacy and the pharmaceutical sciences.

Wanqing Liu

Chaney Family Early Scholar Award

For the impact and potential of his research program during the first 10 years of his career.

COLLEGE OF SCIENCE

Darryl Granger

Research Award

For being an international authority in the field of cosmogenic nuclides applied to problems of landscape evolution; tectonic geomorphology; karst geomorphology; and archaeology, paleontology, and paleoanthropology.

Yulia Pushkar

Research Award

For careful and creative work on the structure and energetics of PS II, which is cutting-edge science that has and will continue to produce high impact results in biological physics.

Plamen Stefanov

Research Award

For research that provides a foundation of theoretical results in analysis and partial differential equations, which are used to develop and inform practical and efficient algorithmic methods with applications to many types of imaging, structure recovery in seismology, and quantum mechanics.

PURDUE POLYTECHNIC INSTITUTE

Nathan Mentzer

Outstanding Faculty in Discovery Award

For his discovery work at Purdue University, which is situated in STEM learning and teaching and has impacted the national landscape of secondary and post-secondary STEM education through engagement with the field.

COLLEGE OF VETERINARY MEDICINE

Sulma Mohammed

2017 Zoetis Research Award

For outstanding achievement and dedication in the field of comparative oncology and veterinary medicine.

Deborah W. Knapp

College of Veterinary Medicine Excellence in Research Award

For exceptional success in conducting innovative research in comparative oncology that has significant national and international impact and enhances the recognition of the College of Veterinary Medicine.

Donna Griffey

College of Veterinary Medicine Outstanding Research Staff Award

For excellence in laboratory work, commitment to clinical research, and contributions to discovery at the Purdue University College of Veterinary Medicine, as well as her valued contributions to teaching students of all skill levels, collegiality, and work ethics.

SEED FOR SUCCESS AWARDS

The Seed for Success Award is given in recognition of the accomplishments of investigators for their efforts in obtaining a \$1 million or more external sponsored award. The following acknowledges FY 2017 single-year and multi-year award notifications.

Ourania M. Andrisani, Elizabeth Tran, Jun Xie, from National Institute of Diabetes and Digestive and Kidney Diseases (NIH), *Mechanisms of Hepatocyte Transformation by the Hepatitis B Virus X Protein*, \$1,731,614

Regan K. Bailey, Anindya Bhadra, Heather A. Eicher-Miller, from National Cancer Institute (NIH), *Development of a Total Nutrient Index*, \$1,399,423

Lionel J. Beaulieu, Robert K. Goosen, from U.S. Department of Defense, *Defense Manufacturing Assistance Program — Phase II*, \$1,268,541

Edward J. Berger, Allison F. Godwin, from National Science Foundation, IUSE:HER: Collaborative Research: *The Role of Non-Cognitive and Affective Factors in Engineering and Computing Student Academic Performance*, \$1,035,728

Hari M. Bharadwaj, Michael G. Heinz, Keith R. Kluender, Jennifer M. Simpson, from National Institute on Deafness and Other Communications Disorders (NIH), *Individualized Assays of Supra-Threshold Hearing Deficits*, \$1,883,662

Sunil A. Bhave, from Defense Advanced Research Projects Agency, *MISC Clock: Miniaturized Silicon Carbide Clock*, \$1,124,418

Deborah I. Birch, from U.S. Department of Education, *Education through Success*, \$1,629,600



SEED FOR SUCCESS AWARDS *continued*

Darcy M. Bullock, from U.S. Department of Transportation, *Real Time Traffic Mobility Measures*, \$2,871,556

Darcy M. Bullock, from Indiana Department of Transportation, *2018 Joint Transportation Research Program Administration*, \$8,465,349

Marc W. Caffee, Darryl E. Granger, Nathaniel A. Lifton, Paul F. Muzikar, from National Science Foundation, *Facility Support: Accelerator Mass Spectrometry at PRIME Lab*, \$3,540,000

Brenda M. Capobianco, Robin S. Adams, David C. Eichinger, Kendra C. Erk, Siddika Guzey, Nobel S. Rebello, Minjung Ryu, from National Science Foundation, *UPDATE — Using Principles of Design to Advance Teacher Education*, \$1,596,118

David J. Cappelleri, Karthik Ramani, Song Zhang, from National Science Foundation, *NRI: Towards Dexterous Micromanipulation and Assembly*, \$1,000,000

Ann Christine Catlin, Muhammad A. Alam, Joseph Francisco, Santiago Pujol, Maria S. Sepulveda, Connie M. Weaver, from National Science Foundation, *CIF21 DIBBs: EI: Creating a Digital Environment for Enabling Data-Driven Science*, \$3,456,281

Srinivasan Chandrasekar, Scott D. Sudhoff, Kevin P. Trumble, from U.S. Department of Energy, *High-Silicon Steel Strip by Single-Step Shear Deformation Processing*, \$1,499,147

Yong P. Chen, Zubin Jacob, Xianfan Xu, from National Science Foundation, *EFRI New Law: Topological Thermal Transport*, \$1,963,939

Gabor A. Csathy, Michael J. Manfra, from U.S. Department of Energy, *Understanding and Controlling Phases with Topological and Charge Order in the Two-Dimensional Electron Gas*, \$1,412,000

Emily C. Dykhuizen, from National Cancer Institute (NIH), *The Tumor Suppressive Role of PBRM1, the Bromodomain-Containing Subunit of the PBAF Chromatin Remodeling Complex*, \$1,746,316

Nancy E. Edwards, Karen J. Foli, Sara A. McComb, Karla C. Ross, from Health Resources and Services Administration, Bureau of Health Workforce, Division of Nursing and Public Health Advanced Education Branch, *Advanced Nursing Workforce Education*, \$1,371,589

Levon T. Esters, Heidi A. Diefes-Dux, Neil A. Knobloch, from National Science Foundation, *Strategies: Enhancing Minority Middle School Student Knowledge, Literacy, and Motivation in STEM Using Contextualized Life Science Learning Experiences*, \$1,043,985

Aly El Gamal, James V. Krogmeier, David J. Love, Nicolo Michelusi, Borja M. Peleato-Inarrea, from Air Force Research Laboratory, *Adaptive Wireless Networks for Spectrally Efficient Communication*, \$1,980,722

Suresh V. Garimella, from Aavid Thermalloy, *Cooling Technologies Research Center (CTRC) Membership - Memo Match for 106029*, \$1,665,000

Suresh V. Garimella, from Eli Lilly and Co., *Lilly Planning Grant*, \$2,000,000

Stanton B. Gelvin, Lan-Ying Lee, from National Science Foundation, *TRANSFORM-PGR: Manipulating Agrobacterium-Mediated Transformation and T-DNA Integration for Plant Synthetic Biology and Genome Engineering*, \$1,467,146

Arun K. Ghosh, from National Institute of General Medical Sciences (NIH), *Design and Synthesis of Nonpeptide Protease Inhibitors*, \$2,558,400

Nicholas W. Gray, from U.S. Department of Education, *IPFW Upward Bound I*, \$1,287,500

Nicholas W. Gray, from U.S. Department of Education, *IPFW Upward Bound II*, \$1,287,500

Siddika Guzey, Lynn A. Bryan, Kari L. Clase, Muhsin Menekse, from National Science Foundation, *LifeSTEM: The Integration of Engineering Design and Life Science: Investigating the Influence of an Intervention on Student Interest and Motivation in STEM Fields*, \$1,838,015

Roy L. Hamilton, from U.S. Department of Education, *Purdue University Northwest Upward Bound Program*, \$2,811,900



SEED FOR SUCCESS AWARDS *continued*

Alka R. Harriger, Bradley C. Harriger, Weiling Li, Loran C. Parker, from National Science Foundation, *Curriculum and Assessment Design to Study the Development of Motivation and Computational Thinking for Middle School Students across Three Learning Contexts*, \$2,499,739

Marietta L. Harrison, Li Y Bermel, Edward A. Howell, Joseph F. Pekny, from Walther Cancer Institute Foundation Inc., *Walther Cancer Foundation Oncology Physical Sciences and Engineering Research Embedding Program*, \$1,000,000

Marlene O. Heeg, from Intercept Pharmaceuticals Inc., *2016-2017 PBC Centers of Educational Expertise*, \$1,878,797

Marlene O. Heeg, from Salix Pharmaceuticals Inc., *2017 IBS Prime Initiative*, \$1,179,486

Randall A. Hountz, Natalie Stewart, from Centers for Medicare and Medicaid Services, *Statewide Medicaid — Eligible Incentive Meaningful Use Assistance*, \$3,267,685

Chang-Deng Hu, from National Cancer Institute (NIH), *Role and Targeting of PRMT5 in Prostate Cancer*, \$2,590,428

Fang Huang, from National Institute of General Medical Sciences (NIH), *Interferometric 3D Super-Resolution Imaging and Structure and Stoichiometry Mapping in Living Cells*, \$1,878,090

Greg J. Hunt, from National Institute of Food and Agriculture, *Increasing Survival of Honey Bees and Ensuring Sustainable Pollination by Breeding for Mite Resistance*, \$2,982,760

Wen Jiang, from National Institute of General Medical Sciences (NIH), *Midwest Consortium for High Resolution Cryoelectron Microscopy*, \$3,502,640

Carla C. Johnson, from U.S. Department of Education, *Indiana's GEAR UP Program* \$24,500,000

Ian Kaplan, Ricky E. Foster, Christian H. Krupke, from National Institute of Food and Agriculture, *Navigating the Trade-Off Between Pest Management and Pollinator Conservation in Cucurbits*, \$3,673,611

Regina A. Kreisle, from Indiana University, *FY16-17 IUSM-Lafayette General Fund*, \$2,404,863

Shihuan Kuang, Bennett D. Elzey, Stephen F. Konieczny, from National Cancer Institute (NIH), *Notch Signaling in Liposarcoma*, \$1,772,815

Shihuan Kuang, Xiaoqi Liu, Feng Yue, from National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIH), *PTEN Function in Satellite Cells*, \$1,705,000

Douglas J. LaCount, from National Institute of Allergy and Infectious Diseases (NIH), *Defining the Role of Host Factors in Ebola Virus RNA Synthesis*, \$1,356,250

Heather J. Leidy, from National Institute of Diabetes and Digestive and Kidney Diseases (NIH), *Increased Protein at Breakfast for Weight Management in Overweight Adolescents*, \$3,274,108

Wanqing Liu, Yava L. Jones-Hall, Min Zhang, from National Institute of Diabetes and Digestive and Kidney Diseases (NIH), *Fatty Acid Desaturase 1 (FADS1) Variants and Non-alcoholic Fatty Liver Disease*, \$1,912,508

Xiaoqi Liu, Timothy L. Ratliff, from National Cancer Institute (NIH), *Treatment of Castration-Resistant Prostate Cancer*, \$1,776,786

Xiaoqi Liu, Timothy L. Ratliff, from National Cancer Institute (NIH), *Improving Chemotherapy of Castration-Resistant Prostate Cancer*, \$1,772,815

Maureen C. McCann, Tom Adams, Peter Bermel, Gary Cheng, J. Eric Dietz, Hilikka Kenttamaa, Gozdem Kilaz, Vilas Pol, Timothée Pourpoint, Pankaj Sharma, Vikas Tomar, Rodney Trice, Justin Weibel, Peide Ye, Kejie Zhao, from Office of Naval Research, *NEPTUNE Center for Power and Energy Research*, \$2,997,000

Michael J. Manfra, from Microsoft Corporation, *Microsoft Quantum Computing*, Amount Withheld



SEED FOR SUCCESS AWARDS *continued*

Lisa J. Mauer, Mary C. Aime, Jan P. Allebach, Bruce M. Applegate, Euiwon Bae, Arun K. Bhunia, George T. Chiu, Amanda J. Deering, Joseph M. Irudayaraj, Charilaos Mousoullis, Haley F. Oliver, Dimitrios Peroulis, Robert E. Pruitt, Bartlomiej P. Rajwa, Joseph P. Robinson, Lia A. Stanciu, from Agricultural Research Service, *Advanced Development of Innovative Technologies and Systematic Approaches to Foodborne Hazard Detection and Characterization for Improving Food Safety*, \$1,959,200

Sabra R. Moulton, from Federal Aviation Administration, *Strengthen and Rehabilitate Runway 10-28: Base Bid (Runway 10 End) Only (Federal)*, \$2,935,278

Mathias J. Payer, Dongyan Xu, from Office of Naval Research, *Toward Transformation-Based Legacy Software Fitness: Usage-Driven Binary Debloating and Hardening*, \$1,049,028

R. Byron Pipes, Johnathan E. Goodsell, Ronald Sterkenburg, Ron Steuterman, Alejandro H. Strachan, Wenbin Yu, from U.S. Department of Energy, *Institute for Advanced Composites Manufacturing Innovation — BP3*, \$6,083,716

Carol B. Post, from National Institute of Basic Medical Sciences (NIH), *NMR Structure of Peptide and Protein Complexes*, \$1,295,718

Terry L. Powley, Robert J. Phillips, from National Institute of Diabetes and Digestive and Kidney Diseases (NIH), *Autonomic Control of Body Weight and Feeding*, \$3,484,570

Terry L. Powley, Pedro Irazoqui, Zhongming Liu, Robert J. Phillips, Bartlomiej P. Rajwa, Jenna L. Rickus, Joseph P. Robinson, Matthew P. Ward, from Office of the Director (NIH), *Mapping Stomach Autonomic Circuitry and Function for Neuromodulation of Gastric Disorders*, \$2,004,446

Karthik Ramani, Ananth V. Iyer, Sanjay G. Rao, from National Science Foundation, *PFI: BIC MAKERPAD: Making Everyone a Maker Through Intuitive Shape-Modeling and 3-D Printing Service Platform*, \$1,000,000

Julio Alfonso Ramirez, Antonio Bobet, David R. Johnson, from National Science Foundation, *NHERI Network Coordination Office*, \$4,100,000

Timothy L. Ratliff, from Walther Cancer Institute Foundation Inc., *Walther Collaborative Core for Cancer Bioinformatics*, \$1,000,000

Michael G. Rossmann, from National Institute of Allergy and Infectious Diseases (NIH), *Structure and Function of Icosahedral Viruses*, \$2,407,670

Jimmie L. Sanders, from U.S. Department of Education, *Educational Talent Search Program*, \$1,783,200

Mohamed Seleem, from National Institute of Allergy and Infectious Diseases (NIH), *Repurposing Aurano-fin and Ebselen for Treatment of Multidrug Resistant Pathogens*, \$2,251,541

Maria Sepulveda Soledad, Jason T. Hoverman, Linda S. Lee, from Department of the Army, *Development of Amphibian Poly- and Perfluoroalkyl Substances Toxicity Reference Values for use in Ecological Risk Assessment at Aqueous Film Forming Foam Sites*, \$2,465,781

Gregory M. Shaver, Daniel A. DeLaurentis, Shaoshuai Mou, Srinivas Peeta, Neera J. Sundaram, from U.S. Department of Energy, *Enabling High-Efficiency Operation through Next-Generation Control Systems Development for Connected and Automated Class 8 Trucks*, \$4,770,000

Preeti M. Sivasankar, Sarah Calve, Abigail C. Durkes, Zhongming Liu, from National Institute on Deafness and Other Communication Disorders (NIH), *Pathobiology and Biomechanics of Vocal Fold Dehydration*, \$1,574,925

Carson D. Slabaugh, Stephen D. Heister; Guillermo Paniagua Perez, from National Energy Technology Laboratory, *Advanced Turbine Components for Combined Cycle Power Applications*, \$1,165,006

Sara A. Schmitt, James G. Elicker, David J. Purpura, from Family and Social Services Administration, *Evaluation of the Indiana Early Learning Pilot Grant Program*, \$1,400,607



SEED FOR SUCCESS AWARDS *continued*

Xiaohui Carol Song, from National Science Foundation, *XSEDE 2.0: Integrating, Enabling and Enhancing National Cyberinfrastructure with Expanding Community Involvement*, \$1,879,312

Christopher J. Staiger, from U.S. Department of Energy, *Regulation of Actin Stochastic Dynamics: Actin and Myosin Involvement in Delivery of Materials to the Cell Wall*, \$1,160,000

Scott D. Sudhoff, Steven D. Pekarek, from Office of Naval Research, *Purdue 2017-21 ESRDC Efforts*, \$2,500,000

Elizabeth Tran, Pete E. Pascuzzi, Weiguo A. Tao, from National Institute of General Medical Sciences (NIH), *The Role of Dead-box Proteins in Gene Expression*, \$1,270,293

Satish V. Ukkusuri, Seung Yoon Lee, Shreyas Sundaram, from National Science Foundation, *CRISP Type 2: Collaborative Research: Critical Transitions in the Resilience and Recovery of Interdependent Social and Physical Networks*, \$2,204,202

Shelley MacDermid Wadsworth, from Lilly Endowment Inc., *Transforming Transitions for Military and Veteran Families*, \$3,821,906

Haiyan Wang, Edwin R. Garcia, Xinghang Zhang, from Office of Naval Research, *Explore the Fundamentals for Field-Enhanced Mass Transport Phenomena in Ceramics*, \$3,000,000

Dana Weinstein, Sunil A. Bhave, from Defense Advanced Research Projects Agency, *NiNJA: Nitride-on-Niobate Jammer-Resistant Architecture*, \$1,136,854

Michael K. Wendt, Emily C. Dykhuizen, from National Cancer Institute (NIH), *Overcoming Metastatic Resistance to Erbb-Targeted Therapies*, \$1,746,049

Andrew J. Whelton, from Environmental Protection Agency, *Right-Sizing Tomorrow's Water Systems for Efficiency, Sustainability and Public Health*, \$1,989,000

Yu Xia, from National Institute of General Medical Sciences (NIH), *Mass Spectrometry Method with C=C Location Specificity for Qualitative and Quantitative Lipid Analysis*, \$1,645,763

Dongyan Xu, Xinyan Deng, Xiangyu Zhang, from Office of Naval Research, *A Cross-Layer Framework for Retrofitting Robotic Vehicle Controllers*, \$3,000,000

Xianfan Xu, Bryan W. Boudouris, Liang Pan, from National Science Foundation, *SNM: Continuous and Scalable 3-D Nano printing*, \$1,250,000

Danzhou Yang, from National Cancer Institute (NIH), *Modulating c-MYC Transcription by G-Quadruplex-Interactive Small Molecules*, \$1,150,798

Michael G. Zentner, Mihaela Vorvoreanu, from National Science Foundation, *S2I2: Impl: The Science Gateways Community Institute (SGCI) for the Democratization and Acceleration of Science*, \$3,130,055

Zhong-Yin Zhang, from National Cancer Institute (NIH), *Development of SHP2 Inhibitors for Targeted Anti-Cancer Therapy*, \$2,268,776



ARDEN L. BEMENT JR. AWARD

Mikhail J. Atallah

Distinguished Professor of Computer Science

Purdue University is proud to present the Arden L. Bement Jr. Award to Mikhail Atallah for his significant contributions in the design and implementation of efficient processing and security protections for computer-based technologies.

HISTORY OF THE AWARD

Established in 2015 by Professor Emeritus Arden Bement and his wife, Mrs. Louise Bement, the Arden L. Bement Jr. Award recognizes a Purdue faculty member for recent outstanding accomplishments in pure and applied science and engineering.

Bement achieved international recognition as director of the National Science Foundation and director of the National Institute of Standards and Technology. He has a long and distinguished career with Purdue, having served as the Basil S. Turner Distinguished Professor of Electroceramics, the David A. Ross Distinguished Professor of Nuclear Engineering, the Chief Global Affairs Officer and inaugural director of the Global Policy Research Institute.



HERBERT NEWBY McCoy AWARD

Jean A. Chmielewski

Alice Watson Kramer Distinguished Professor of Chemistry

Purdue University is proud to present the Herbert Newby McCoy Award to Jean Chmielewski for her pioneering impact on fields of chemical biology and drug discovery, having designed novel chemical approaches and therapeutics to solve significant issues in human health and disease.

HISTORY OF THE AWARD

The Herbert Newby McCoy Award was established in 1964 by Mrs. Ethel Terry McCoy in honor of her husband, a distinguished Purdue University alumnus. A native of Richmond, Indiana, Herbert Newby McCoy studied chemistry at Purdue (BS 1892; MS 1893). He received his PhD from the University of Chicago in 1898.

To support her husband's lifelong interest in science Mrs. McCoy designated the Herbert Newby McCoy Award for a student or faculty member making the greatest contribution of the year to the natural sciences.



RESEARCH AND SCHOLARSHIP DISTINCTION AWARD

Michele R. Buzon

Professor, Department of Anthropology

Purdue University is proud to present the Research and Scholarship Distinction Award to Michele Buzon for her groundbreaking work in bioarchaeology that combines state-of-the-art research methods with theoretical knowledge and has answered significant questions about ancient societies.

HISTORY OF THE AWARD

The Purdue University Research and Scholarship Distinction Award, launched in 2013, is an annual award established by Purdue University in recognition of a member of the faculty who has made a major impact on their field. The award is the most prestigious award given by the University in the humanities and social sciences.

Past McCoy Award Winners

2016 JIAN-KANG ZHU

Horticulture and Landscape Architecture, and Biochemistry
For his groundbreaking contributions to our understanding of the mechanisms and role of epigenetics in stress biology

2015 ARUN K. GHOSH

Chemistry and Medicinal Chemistry
For contributions in broad areas of organic, bioorganic and medicinal chemistry, and his extensive work in the field of structure-based molecular design

2014 H.J. MELOSH

Earth, Atmospheric, and Planetary Sciences
For his pioneering work on the subject of meteorite impact cratering, planetary tectonics, and the physics of earthquakes and landslides

2013 ANDREW M. WEINER

Electrical and Computer Engineering
For advancements in the programmable generation of arbitrary ultrashort pulse waveforms, which has found application both in fiber-optic networks and in ultrafast optical science laboratories around the world

2012 CONNIE M. WEAVER

Nutrition Science
For defining the factors in food that influence calcium bioavailability and for work on calcium metabolism in adolescents and the impact of race on calcium utilization

2011 CLINT C. CHAPPLE

Biochemistry
Worldwide recognition as a trailblazer in the mapping of the metabolic pathways that drive plant biomass production as a result of his innovative and prolific research program

2010 DAVID E. SALT

Horticulture and Landscape Architecture
Pioneering and innovative efforts in the use of genome-scale biological approaches and information technologies to define and drive the field of ionomics

2009 VLADIMIR M. SHALAEV

Electrical and Computer Engineering and Biomedical Engineering
Seminal contributions to both the theoretical framework and experimental realization of optical metamaterials with strong magnetic response and negative refractive index at optical frequencies

2008 RICHARD J. KUHN

Biological Sciences
Contributions to the molecular and structural understanding of the viral infection process

2008 SCOTT A. MCLUCKEY

Chemistry
Development of ion/ion reactions that greatly simplify and extend the use of mass spectrometry in proteomics

2007 JOSEPH S. FRANCISCO

Earth and Atmospheric Sciences and Chemistry
Contributions to the application of new tools from theoretical and experimental physical chemistry to atmospheric chemical problems to bring about an understanding of the various chemical processes in the atmosphere at a molecular level

2006 SUPRIYO DATTA

Electrical and Computer Engineering
Contributions to the theory of quantum transport in nanoscale electronic devices and molecular electronics

2005 DAVID D. NOLTE

Physics
Pioneering contributions in the field of photorefractive effects in semiconductors and their heterostructures that have led to the development of the most sensitive dynamic holographic recording materials documented to date

2004 STANTON B. GELVIN

Biological Sciences
Outstanding achievements regarding the biology of DNA transfer from the soil bacterium *Agrobacterium tumefaciens* to plant genomes

Past McCoy Award Winners, *continued*

2003 PHILIP L. FUCHS

Chemistry
Outstanding achievements in the field of synthetic organic chemistry

2002 ROBERTO COLELLA

Physics
Outstanding achievements in structural, electronic and vibrational properties of condensed matter exploiting X-ray, electron and neutron diffraction techniques

2002 ALEXANDRE EREMENKO

Mathematics
Contributions in geometric function theory

2001 JANET L. SMITH

Biological Sciences
Outstanding achievements in the field of protein X-ray crystallography and their application to elucidate the structure and function of enzymes

2000 NICHOLAS A. PEPPAS

Chemical Engineering, Biomedical Engineering
Many research contributions in mass transfer, kinetics and reaction engineering, polymers, biomedical engineering, biomaterials, pharmaceutical engineering and drug delivery

1999 RAY A. BRESSAN

Horticulture
Many research accomplishments relating to disease resistance in plants

1998 EI-ICHI NEGISHI

Chemistry
Significant research contribution toward the development of new metallic catalysts with broad application in synthetic organic chemistry

1997 GREGORY B. MARTIN

Agronomy
Landmark contributions toward understanding the molecular genetic basis of disease resistance in plants

1996 TIMOTHY S. BAKER

Biological Sciences
Contributions to the field of structural virology

1996 BEN S. FREISER

Chemistry
Contributions to gas-phase metal ion chemistry and Fourier transform ion cyclotron resonance mass spectrometry

1995 JOHN H. CUSHMAN

Agronomy and Mathematics
Contributions toward the fundamentals of the physics of fluids in porous media

1994 ANANT K. RAMDAS

Physics
Contribution, along with Professor Sergio Rodriguez, toward the fundamentals of the electrical properties of semiconductors

1994 SERGIO RODRIGUEZ

Physics
Contribution, along with Professor Anant K. Ramdas, toward the fundamentals of the electrical properties of semiconductors

1993 PHILIP S. LOW

Chemistry
Contributions in folate-assisted transfer of the physics of fluids in porous media

1992 NICHOLAS J. GIORDANO

Physics
Contributions in understanding the behavior of mesoscopic systems

1991 WILLIAM J. RAY JR.

Biological Sciences
Contribution to modern enzymology

1990 R. GRAHAM COOKS

Chemistry
Contribution in fundamentals, instrumentation and applications of mass spectrometry

1989 THOMAS K. HODGES

Botany and Plant Pathology
Contribution in transferring recombinant genetic information into plants

1988 WILLIAM A. CRAMER

Biological Sciences
Contributions to understanding the relation between structure and function in biological membranes

1987 C. AUSTEN ANGELL

Chemistry
Contributions to the fundamental chemistry of glassy substances

1986 STANLEY A. BARBER

Agronomy
Contributions to soil chemistry and plant nutrition

1985 LOUIS DE BRANGES

Mathematics
Contributions in the field of functional analysis

1984 ROLF P. SCHARENBERG

Physics
Combined contributions, with Professor Lazlo J. Gutay, in the fields of nuclear and particle physics

1984 LASZLO J. GUTAY

Physics
Combined contributions, with Professor Rolf P. Scharenberg, in the fields of nuclear and particle physics

1983 DALE W. MARGERUM

Chemistry
Contributions to our knowledge of the kinetics and mechanisms of metal ion interactions

1982 WILLIAM L. PAK

Biological Sciences
Pioneered use of a unique combination of genetics, physiology and biochemistry to analyze mechanisms of a visual photoreceptor — a sensor that transforms light into electrical signals

1981 HEINZ G. FLOSS

Medicinal Chemistry
Contributions to the biochemistry of natural products

1980 PHILIP F. LOW

Agronomy
Contribution to the understanding of the nature and properties of water on mineral surfaces

1979 LEONARD E. MORTENSON

Biological Sciences
Outstanding authority in the area of the biochemistry of nitrogen fixation

1978 ALBERT W. OVERHAUSER

Physics
Significant achievements in solid state physics

1977 R. STUART TOBIAS

Chemistry
Contributions to the field of organometallic chemistry and achievements in developing Raman methods and their application to problems of inorganic biochemistry

1976 KING-SUN FU

Electrical Engineering
Contributions to the area of pattern recognition and his pioneering work in applying these techniques to the medical sciences

1975 MICHAEL LASKOWSKI JR.

Chemistry
Contributions to the world of chemistry

1974 MICHAEL G. ROSSMANN

Biological Sciences
Significant accomplishments in molecular biology, and, in turn, bringing great credit to Purdue University

1973 SHREERAM S. ABHYANKAR

Mathematics
National and international standing in the area of algebraic geometry

Past McCoy Award Winners, *continued*

1972 ROBERT A. BENKESER

Contributions to the world of chemistry

1972 HUBERT M. JAMES

Physics
Contributions to the world of physics

1971 JOHN B. BANCROFT

Botany and Plant Pathology
Bringing about a better understanding of the structural organization of viruses and their self-replicating functions

1970 H. EDWIN UMBARGER

Biological Sciences
International recognition as a distinguished biologist

1969 HSU Y. FAN

Physics
Achievements in solid state physics

1968 HARRY BEEVERS

Biological Sciences
Contributions in plant physiology

1967 EDWIN T. MERTZ

Biochemistry
Combined research discovery, with Professor Oliver E. Nelson Jr., of the genetic regulation of the lysine composition of corn

1967 OLIVER E. NELSON JR.

Botany and Plant Pathology
Combined research discovery, with Professor Edwin T. Mertz, of the genetic regulation of the lysine composition of corn

1966 HERBERT C. BROWN

Chemistry
Contributions to the world of chemistry

1965 SEYMOUR BENZER

Biophysics
Contributions in molecular biology and genetics

Past Bement Award Winners

2016 ARVIND VARMA

Chemical Engineering
For his pioneering contributions to the discipline of chemical-reaction engineering

2015 WOJCIECH SZPANKOWSKI

Computer Science
For development of innovative analytic methods for the Shannon information theory, leading to solutions for open problems in analytical information

Past Research and Scholarship Distinction Award Winners

2015 RONNIE WILBUR

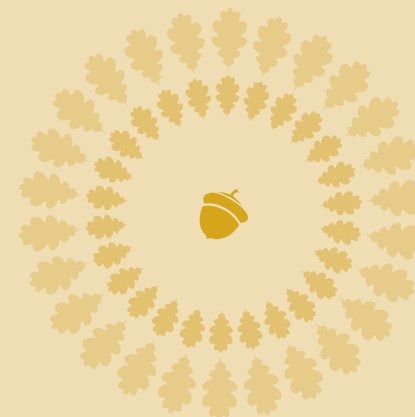
Speech, Language, and Hearing Sciences
For pioneering research in the area of sign language, specifically the linguistic structure of American Sign Language (ASL) and its perception and production by native deaf signers

2014 MARIANNE BORUCH

Professor of English
For her contribution to American poetry and for advancing poetry as an artistic, philosophical and spiritual force

2013 THOMAS W. HERTEL

Agricultural Economics
For important and unique contributions to the quantitative analysis of global economic issues, specifically recent innovations in the analysis of global land use in the context of changing economic and environmental conditions





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Office of the Provost
Office of the Executive Vice President for Research and Partnerships*

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