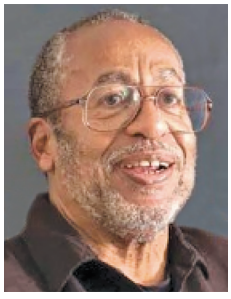
Mathematics People

Mickens Awarded Blackwell–Tapia Prize


Ronald E. Mickens

RONALD E. MICKENS of Clark Atlanta University has been awarded the 2018 Blackwell–Tapia Prize. The prize recognizes a mathematician who has contributed significantly to research in his or her field of expertise and who has served as a role model for mathematical scientists and students from underrepresented minority groups or has contributed in other significant ways to addressing the problem of the underrepresentation of minorities in math.

The prize citation reads in part: "Mickens' mathematical reach extends across multiple disciplines and has a significant global impact. He is well known for his contributions in multiple areas of applied mathematics generally related to the solution of differential equations, in particular, the areas of nonstandard finite differences (NSFD) and nonlinear oscillations. In fact, he created the field of NSFD which seeks to discretize dynamical systems while retaining properties of the system. Many researchers around the world have extended Mickens' pioneering work on NSFDs to a plethora of systems.

"Mickens' interest and engagement in issues around the underrepresentation of people of African American and Latinx descent in mathematics is sustained, significant, and substantial. He has been unearthing, celebrating, and publicizing the achievements of Black scientists for more than four decades. For example, he was elected a charter Fellow of the National Society of Black Physicists in 1992 and received the Edward Bouchet Award for Excellence in Research from the National Conference of Black Physics Students in 2004. His book *Edward Bouchet: The First African American Doctorate* was published in 2002 and is an important contribution to the history of the participation of African Americans in STEM fields."

Mickens received his PhD in theoretical physics from Vanderbilt University in 1968. He taught physics at Fisk University from 1970 to 1982 and at Atlanta University from 1982 to 1990 before joining the faculty at Clark Atlanta, a Historically Black College and University. He received a Ford Foundation Postdoctoral Fellowship for Minorities in 1980 and has been active in mentoring Ford Fellows of all disciplines. He is the recipient of the Edward Bouchet Award from the American Physical Society (APS, 2008) and is an elected Fellow of the APS. He tells the *Notices*: "My research engagement is with 'physical mathematics,' i.e., the creation, understanding, and application of techniques related to mathematics which can be used to model, analyze, and provide insightful understandings of systems based in the physical universe."

The prize will be presented at the Blackwell–Tapia Conference and Award Ceremony at the Institute for Computational and Experimental Research in Mathematics (ICERM) at Brown University in November 2018.

Previous recipients of the prize are:

- Mariel Vazquez (2016)
- Jacqueline Hughes-Oliver (2014)
- Ricardo Cortez (2012)
- Trachette Jackson (2010)
- Juan Meza (2008)
- William Massey (2006)
- Rodrigo Bañuelos (2004)
- Arlie Petters (2002)

—From a National Blackwell–Tapia Committee announcement

Bergner Awarded Michler Prize


Julie Bergner

JULIE BERGNER of the University of Virginia has been awarded the 2018–2019 Ruth I. Michler Memorial Prize of the Association for Women in Mathematics (AWM). She was selected for her "proposed project to connect some of her recent work with the research of Cornell faculty member Inna Zakharevich, including simultaneous developments by both women (and their respective coauthors) on algebraic K-theory constructions." Bergner's research has been in the areas of homotopy theory. Her proposed research will bring together several facets of her work: the theoretical framework of homotopical categories and generalizations, the realization of 2-Segal spaces as a form of algebraic K-theory, and looking at derived Hall algebras as algebraic

homotopical categories. Bergner received her PhD in 2005 from the University of Notre Dame under the direction of William Dwyer. She taught at the University of California Riverside before joining the University of Virginia.

The Michler Prize grants a mid-career woman in academia a residential fellowship in the Cornell University mathematics department without teaching obligations.

—From an AWM announcement

Prizes of the Mathematical Society of Japan

The Mathematical Society of Japan (MSJ) has announced a number of prizes for 2018.

Yoshikata Kida

YOSHIKATA KIDA of the University of Tokyo has been awarded the MSJ Spring Prize "for his outstanding contributions to the study of discrete groups and ergodic theory." The Spring Prize and the Autumn Prize are the most prestigious prizes awarded by the MSJ to its members. The Spring Prize is awarded to those of under the age of forty who have obtained outstanding mathematical results.

The Algebra Prizes have been awarded to TAKAYUKI HIBI of Osaka University for computational commutative algebra and combinatorics; to SATOSHI NAITO of the Tokyo Institute of Technology for representation theory of quantum affine algebras; and to KANETOMO SATO of Chuo University for a new cohomology theory for arithmetic schemes and its applications.

The Outstanding Paper Prizes, given for papers published in the *Journal of the Mathematical Society of Japan*, were awarded to the following: JONATHAN BENNETT of the University of Birmingham, NEAL BEZ of Saitama University, and CHRIS JEAVONS and NIKOLAOS PATTAKOS, both of the University of Birmingham, for their paper "On Sharp Bilinear Strichartz Estimates of Ozawa-Tsutsumi Type," *Journal of the MSJ* **69** (2017), no. 2; to TOSHIYUKI TANISAKI of Osaka City University for "Modules over Quantized Coordinate Algebras and PBW-Bases," *Journal of the MSJ* **69** (2017), no. 3; and to YASUNORI MAEKAWA of Tohoku University and JONAS SAUER of Technische Universität Darmstadt for their paper, "Maximal Regularity of the Time-Periodic Stokes Operator on Unbounded and Bounded Domains," **69** (2017), no. 4.

—From MSJ announcements

Chen Awarded CAIMS-Fields Industrial Mathematics Prize

Zhangxing (John) Chen

ZHANGXING (JOHN) CHEN of the University of Calgary has been awarded the 2017 CAIMS–Fields Industrial Mathematics Prize of the Canadian Applied and Industrial Mathematics Society (CAIMS) and the Fields Institute "for his seminal contributions to industrial and applied mathematics, computational science, and modelling of flow in porous media." Chen's group uses modeling and simulation to develop new, more economical, and more sustainable ways to recover heavy oil and oil sands resources. Chen has led many collaborative projects with such industrial partners as Suncor, Nexen Energy, Petróleos Mexicanos, China National Petroleum Corporation, and Computer Modeling Group. His research has had major impact on practical applications in the oil and energy sectors. He has published sixteen books and more than 500 refereed journal papers covering such a range of problems as existence-uniqueness theory, finite element approximations, homogenization, and parallel algorithms, with applications to multiphase porous media flow, CO_2 sequestration, and semiconductor device simulations. He has supervised more than 100 graduate students and postdocs in industrial applications of mathematics and advanced computing algorithms.

Chen tells the *Notices*: "My favorite hobby is watching sports (NBA, NFL, and NHL) and playing sports (soccer). I am still playing soccer games and organizing soccer games to play with my grad students regularly, at least one game per week."

—From a CAIMS-Fields announcement

Traub Prize for Achievement in Information-Based Complexity

PAWEŁ PRZYBYŁOWICZ of AGH University of Science and Technology has been awarded the 2018 Joseph F. Traub Prize for Achievement in Information-Based Complexity. He will receive a cash prize of US$3,000 and a plaque at the UMI-SIMAI-PTM Conference in September 2018 in Wrocław, Poland.

—Joseph F. Traub Prize Committee announcement

Pevtsova Receives PIMS Education Prize


Julia Pevtsova

Julia Pevtsova of the University of Washington has been awarded the 2018 PIMS Education Prize of the Pacific Institute for the Mathematical Sciences (PIMS). According to the prize citation, she has "an astonishing record of local K–12 outreach," including starting a program for fourth and fifth graders called Math Challenge, running a Math Circle for seventh to ninth graders, and holding Math Hours and Math Hour Olympiads. Math Hour is a series of monthly lectures given by faculty members and open to a wide audience. The prize recognizes individuals in Western Canada and Washington State who have played a major role in encouraging activities that enhance public awareness and appreciation of mathematics, as well as fostering communication among various groups concerned with mathematical education at all levels.

—From a PIMS announcement

NCTM Lifetime Achievement Awards

The National Council of Teachers of Mathematics (NCTM) has chosen two educators to receive Lifetime Achievement Awards for 2018. They are Carole E. Greenes of Arizona State University and William R. Speer of the University of Nevada, Las Vegas.

The prize citation for Greenes states: "Throughout her distinguished career, Dr. Carole Greenes has dedicated herself to excellence in mathematics education. Known for her generous, creative, and encouraging approach, she has made a long-lasting impact on the field." Greenes has been professor of mathematics education at Boston University and dean of the School of Educational Innovation at Arizona State and is currently director of the PRIME Center at Arizona State. She is a member of the Massachusetts Mathematics Educators Hall of Fame and has received the Ross Taylor/Glenn Gilbert National Leadership Award in Mathematics Education, the Arizona Copper Apple Award in Leadership in Mathematics, and the Alfred D. Wilde Award.


William R. Speer

According to his prize citation, Speer "has spent most of his life working to improve mathematics education in more than fifteen different roles over the years at institutions across the country. He is known for his tireless efforts and contributions to advancements within the field." Speer received his PhD from Kent State University. He was a member of the 1991 writing team that helped create NCTM's Professional Standards for Teaching Mathematics. He served as the editor of the IDEAS section for *Arithmetic Teacher* and editor of the INVESTIGATIONS section of *Teaching Children Mathematics*, and he was the general editor for the final series of NCTM Yearbooks. He was also the recipient of two Fulbright Awards. Among his honors are Outstanding Service in Math Education Awards from both the Ohio Council and the Nevada Council and the University of Nevada, Las Vegas, Distinguished Teaching Award. He is past president of the Ohio Council of Teachers of Mathematics, the Ohio Mathematics Education Leadership Council, the Nevada Mathematics Council, and the Nevada Association of Teacher Educators. He tells the *Notices*, "I have traveled extensively to nearly 100 countries and lectured in 36 throughout my career. All the while, my wanderlust has not been evidenced by transient school affiliation, having only served as a professor at Bowling Green State University (for 25 years) and the University of Nevada Las Vegas (for 22 years), with brief sabbaticals at Northern Arizona University, the College of the Bahamas and the University of West Indies."

—From NCTM announcements

Raymond J. Carroll Young Investigator Award in Statistics

Eric B. Laber of North Carolina State University has been awarded the 2017 Raymond J. Carroll Young Investigator Award in Statistics for his research, which includes the areas of reinforcement learning, data-driven decision making, causal inference, statistical computing, optimization, empirical processes, and bootstrap. The award is presented biannually by the department of statistics at Texas A&M University to an outstanding young researcher in statistical science.

—From a Texas A&M announcement

NEWS

Borodin, Corwin, and Ferrari Receive Inaugural Alexanderson Award

Alexei Borodin of the Massachusetts Institute of Technology, Ivan Corwin of Columbia University, and Patrik Ferrari of the University of Bonn have been chosen to receive the first Alexanderson Award, given by the American Institute of Mathematics (AIM). They were honored for their article, "Free Energy Fluctuations for Directed Polymers in Random Media in 1 + 1 Dimensions," *Communications in Pure and Applied Mathematics* **67** (2014).

The prize citation reads, "This work began during the October 2011 AIM workshop 'The Kardar-Parisi-Zhang equation and universality class.' The paper concerns the extreme behavior of certain models for polymers—long chains of molecules that occur in nearly every manufactured product. The authors discovered that the behavior of such polymers is governed by universal laws, including the Tracy-Widom distribution and the Kardar-Parisi-Zhang equation. These results may have implications in the fields of physics, engineering, materials science, biology, ecology, and other areas."

The new award is given in honor of Gerald Alexanderson, professor of mathematics at Santa Clara University and founding chair of AIM's Board of Trustees. His leadership has extended nationally, contributing to the work of both the Mathematical Association of America (MAA) and the American Mathematical Society (AMS). The Alexanderson Award recognizes outstanding research articles arising from AIM research activities that have been published within the past few years.

—From an AIM announcement

AWM Essay Contest Winners Announced

The Association for Women in Mathematics (AWM) has announced the winners of its 2018 essay contest, "Biographies of Contemporary Women in Mathematics." The grand prize was awarded to Jacob Slaughter of Thetford Academy, Thetford, Vermont, for the essay "Running the Numbers," about Rosa Orellana of Dartmouth College. This essay also won first place in the high school category and will be published in the *AWM Newsletter*. First place in the undergraduate category was awarded to Francesca Paris of Williams College for the essay "Dr. Bhramar Mukherjee: Balance and Big Data," about Bhramar Mukherjee of the University of Michigan. First place in the middle school category was awarded to Bronwen Roosa of Harvard-Westlake Middle School, Los Angeles, for the essay "Excellence = Math Circle^2" about Olga Radko of the University of California Los Angeles/Los Angeles Math Circle.

—From an AWM announcement

MathWorks Math Modeling (M3) Challenge

The 2018 MathWorks Math Modeling (M3) Challenge (formerly called Moody's Mega Math Challenge) was held in New York City in April 2018. This year's challenge was to use mathematical modeling to recommend solutions to the issue of food security in the United States.

The Challenge Champions Team Prize of US$20,000 in scholarship money was awarded to a team from Los Altos High School, Los Altos, California. The team members were Ryan Huang, Michael Vronsky, Daniel Wang, Justin Yu, and Joanne Yuan. They were coached by Carol Evans.

The First Runner-Up Team Prize of US$15,000 in scholarship money went to a team from Marvin Ridge High School in Waxhaw, North Carolina. The team members were Tyler Bolo, Andrew Claxton, Daniel Haller, Jainith Patel, and George Rateb. They were coached by Robin Filter.

The Third Place Team Prize of US$10,000 in scholarship money was awarded to a team from Pine View School in Osprey, Florida. The team members were Chloe Harris, Dylan Hull, Tristan Lee, Zoe McDonald, and Sarah Mihm. They were coached by Mark Mattia.

Finalist Team Prizes of US$5,000 were awarded to three teams. The team from Adlai E. Stevenson High School in Lincolnshire, Illinois, consisted of Albert Cao, Andrew Hwang, Deepak Moparthi, Joshua Yoon, and Haoyang Yu. Their coach was Paul Kim. The team from High Technology High School in Lincroft, New Jersey, consisted of Eric Chai, Kyle Lui, Steven Liu, Adithya Paramasivam, and Yihan Wu, and they were coached by Raymond Eng. The team from Middlebury Union High School in Middlebury, Vermont, consisted of Janet Barkdoll, Ezra Marks, Bastiaan Phair, Julian Schmitt, and Laura Whitley; their coach was Perry Lessing.

The M3 Challenge invites teams of high school juniors and seniors to solve an open-ended, realistic, challenging modeling problem focused on real-world issues. The top five teams receive awards ranging from US$5,000 to US$20,000 in scholarship money. The competition is sponsored by MathWorks, a developer of computing software for engineers and scientists, and is organized by the Society for Industrial and Applied Mathematics (SIAM).

—From a MathWorks/SIAM announcement

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