

# Mathematics People

## Pestun Awarded Weyl Prize



Credit: MCV/IHES.

**Vasily Pestun**

VASILY PESTUN of the Institut des Hautes Études Scientifiques has been awarded the 2016 Hermann Weyl Prize for his groundbreaking results in the study of supersymmetric gauge theories, such as his ingenious computation of partition functions that led to the discovery of rich connections between four-dimensional and two-dimensional quantum field theories.

The chair of the Selection Committee, Edward Frenkel of the University of California Berkeley, said: “Vasily Pestun’s original contributions opened new opportunities for fruitful interaction between mathematics and quantum physics. It is quite fitting that his work is honored by the prize named after Hermann Weyl, a pioneer in both of these fields who used to say that in his research he always tried to unite the true and the beautiful.”

The Hermann Weyl Prize was established by the Standing Committee of the International Colloquium on Group Theoretical Methods in Physics in 2002 and is awarded every two years to recognize young scientists who have performed original work of significant scientific quality in the area of understanding physics through symmetries. The International Colloquium on Group Theoretical Methods in Physics takes place every two years. In 2016 it will be held in Rio de Janeiro, Brazil.

—Edward Frenkel

## 2016 Clay Research Fellows Chosen



Photo by Eduard Duryev.

**Simion Filip**

SIMION FILIP of the University of Chicago and TONY YUE YU of the Université Paris Diderot have been appointed Clay Research Fellows for 2016 by the Clay Mathematics Institute (CMI).

Filip will receive his PhD in June 2016 from the University of Chicago under the supervision of Alex Eskin. He is interested in the connections between dynamical systems and algebraic geometry, in

particular between Teichmüller dynamics and Hodge theory. His recent interests also involve K3 surfaces and their special geometric properties. He has been appointed as a Clay Research Fellow for a term of five years beginning July 1, 2016.

Yu received his PhD in 2016 from Université Paris Diderot under the supervision of Maxim Kontsevich and Antoine Chambert-Loir. He works on nonarchimedean geometry, tropical geometry, and mirror symmetry. He aims to build a theory of enumerative geometry in the setting of Berkovich spaces. Such a theory will give us a new understanding of the enumerative geometry of Calabi-Yau manifolds, as well as the structure of their mirrors. It is also intimately related to the theory of cluster algebras and wall-crossing structures. He has been appointed as a Clay Research Fellow for a term of five years beginning September 1, 2016.

—From a CMI announcement

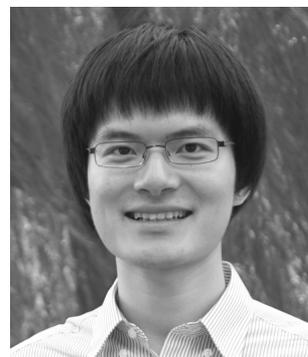


Photo by Jindie Mi.

**Tony Yue Yu**

## Salisbury Receives Graham Wright Award

THOMAS SALISBURY of York University has been named the recipient of the 2015 Graham Wright Award for Distinguished Service of the Canadian Mathematical Society (CMS). His service to the mathematics community includes terms as president of the CMS (2006–2008), as well as deputy director of the Fields Institute (2003–2006), editor in chief of the *Canadian Mathematical Bulletin* and associate editor of *Probability Theory and Related Fields*, *Potential Analysis*, and the *Canadian Journal of Statistics*. He has served on numerous CMS committees and organizing committees for CMS meetings and training camps. He is a Fellow of the Institute of Mathematical Statistics and of the Fields Institute. He and his wife, Kathy, have three grown children and enjoy hiking, music, books, and their cottage near Minden, Ontario.



Photo by Faculty of Science, York University.

**Thomas Salisbury**

—From a CMS announcement

*An incorrect version of this announcement was printed in the December 2015 Notices. Following is the official announcement from the Royal Spanish Mathematical Society. Notices regrets the error:*

## Freitas Awarded Rubio de Francia Prize

NUNO FREITAS of the Max Planck Institute, Bonn, has been awarded the eleventh Rubio de Francia Prize of the Royal Spanish Mathematical Society (RSME). Freitas's contributions are in the fields of arithmetic and number theory. Freitas and his collaborators, B. V. Le Hung and S. Siksek, have proven that elliptic curves defined over real quadratic fields are modular, extending the pioneering work on Fermat's last theorem by Wiles and Taylor, who proved the same result for elliptic curves defined over the rational numbers. This result is a crucial step toward the general modularity conjecture. The jury also praised Freitas's recent work with S. Siksek, in which they prove that Fermat's equation  $x^n + y^n = z^n$  has no solution over a real quadratic field  $K$  once  $n$  is large enough, for an infinite and rather explicit set of real quadratic fields, which is then shown to have density at least  $5/6$ . Freitas received his PhD in Mathematics from the University of Barcelona in 2012.

The prize honors the memory of renowned Spanish analyst J. L. Rubio de Francia (1949-1988). The RSME awards the prize annually to a mathematician from Spain or who has received a Ph.D. from a university in Spain and who is at most thirty-two years of age. The prize is awarded for high-caliber contributions to any area of pure or applied mathematics. This year a three-year fellowship provided by the BBVA Foundation will also be awarded to the recipient, together with the prize.

The Rubio de Francia Prize is awarded by an international jury covering a range of mathematical areas. This year the prize committee was chaired by Jesús Bastero (Universidad de Zaragoza) and consisted of Ingrid Daubechies (Duke University), Timothy Gowers (University of Cambridge), Subhash Khot (Courant Institute, New York University), Marco A. López Cerdá (Universidad de Alicante), Álvaro Pelayo (University of California San Diego), and Claire Voisin (École Polytechnique). Recent prize winners include Angel Castro (2013), María Pe (2012), Alberto Enciso (2011), Carlos Beltran (2010), Álvaro Pelayo (2009), and Francisco Gancedo (2008).

—From an RSME announcement

## 2016 MAA Awards

The Mathematical Association of America (MAA) awarded a number of prizes at the Joint Mathematics Meetings in Seattle, Washington, in January 2016.

GEORGE BERZSENYI of Rose-Hulman Institute of Technology was awarded the Gung and Hu Award for Dis-

tinguished Service to Mathematics “for his remarkable career empowering generations of high school students to pursue their mathematical and scientific passions by promoting the art of problem solving, creating national and international mathematical talent searches, and supporting mathematical competitions.”

SUSAN MARSHALL and DONALD R. SMITH, both of Monmouth University, were awarded the Chauvenet Prize for their article “Feedback, Control, and the Distribution of Prime Numbers”, *Mathematics Magazine* 86 (2013), no. 3.

JORDAN ELLENBERG of the University of Wisconsin-Madison received the Euler Book Prize for his book *How Not to Be Wrong: The Power of Mathematical Thinking* (Penguin Press, New York, 2014).

The Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics were awarded to SATYAN DAVADOSS (Williams College), TYLER JARVIS (Brigham Young University), and GLEN VAN BRUMMELEN (Quest University, British Columbia).

—From MAA announcements

## 2016 AWM Awards

The Association for Women in Mathematics (AWM) presented a number of awards at the Joint Mathematics Meetings in Seattle, Washington, in January 2016.

NAOMI JOCHNOWITZ of the University of Rochester was honored with the M. Gweneth Humphreys Award for Mentorship of Undergraduate Women in Mathematics for her devotion “to the development and support of undergraduate students of mathematics, in addition to her activities with math graduate students and postdocs, with a particular impact on scores of women students.” Jochnowitz tells the *Notices*: “In addition to my mathematics, I have an interest in Talmudic studies, which despite significant progress in recent years remains a field of study that is to a large extent closed to women, even more so than math.”

JUDY WALKER of the University of Nebraska was awarded the Louise Hay Award for Contributions to Mathematics Education for “creating and adapting innovative courses at all levels”, from high school through graduate school, including practicing teachers.

MACKENZIE SIMPER of the University of Utah was awarded the Alice T. Schafer Prize for Excellence in Mathematics by an Undergraduate Woman for her “stellar academic track record, proven ability to do original



Naomi Jochnowitz

Photo by Carl Mueller.



Judy Walker

Photo by UNL Communications.

mathematical research,” and her commitment to “excelling in her mathematical career.”

BETTYE ANNE CASE of Florida State University was honored with the AWM Life Time Service Award for her many services, including her decades-long role as meetings coordinator, as well as being on the executive committee from 1978 through 2015. HEATHER LEWIS of the University of Richmond, HEATHER RUSSELL of Nazareth College, and REBECCA SEGAL of Virginia Commonwealth University also received service awards for their involvement in AWM programs and activities.

—From AWM announcements

## Sloan Research Fellows Announced

The Alfred P. Sloan Foundation has announced the names of the recipients of the 2016 Sloan Research Fellowships. Each year the foundation awards fellowships in the fields of mathematics, chemistry, computational and evolutionary molecular biology, computer science, economics, neuroscience, physics, and ocean sciences. Grants of US\$55,000 for a two-year period are administered by each Fellow’s institution. Once chosen, Fellows are free to pursue whatever lines of inquiry most interest them, and they are permitted to employ the Fellowship funds in a wide variety of ways to further their research aims.

Following are the names and institutions of the 2016 awardees in mathematics.

STEFANOS ARETAKIS, Princeton University  
 RINA FOYCEL BARBER, University of Chicago  
 VENKAT CHANDRASEKARAN, California Institute  
 of Technology  
 ARTEM CHERNIKOV, University of California,  
 Los Angeles  
 THOMAS CHURCH, Stanford University  
 JEFFREY DANCIGER, University of Texas, Austin  
 BENJAMIN ELIAS, University of Oregon  
 ELENA FUCHS, University of Illinois, Urbana-Champaign  
 ADRIANNA GILLMAN, Rice University  
 VADIM GORIN, Massachusetts Institute of Technology  
 ZAHER HANI, Georgia Institute of Technology  
 MATTHEW J. HIRN, Michigan State University  
 ZONGMING MA, University of Pennsylvania  
 MATTHIAS MORZFELD, University of Arizona  
 MARCEL NUTZ, Columbia University  
 WESLEY PEGDEN, Carnegie Mellon University  
 CLAUDIU RAICU, University of Notre Dame  
 NIKHIL SRIVASTAVA, University of California Berkeley  
 KEVIN TUCKER, University of Illinois at Chicago  
 LU WANG, University of Wisconsin, Madison.

—From a Sloan Foundation announcement

## National Academy of Engineering Elections

The National Academy of Engineering (NAE) has elected a number of new members and foreign associates for 2016. Following are the new members whose work involves the mathematical sciences:

DAN BONEH of Stanford University for contributions to the theory and practice of cryptography and computer security.

EMILY A. CARTER of Princeton University for development of quantum chemistry computational methods for the design of molecules and materials for sustainable energy.

GÉRARD P. CORNUÉJOLS of the Tepper School of Business, Carnegie Mellon University, for contributions to the theory, practice, and application of integer programming.

DAVID S. JOHNSON of Columbia University for contributions to the theory and practice of optimization and approximation algorithms.

CHARLES E. LEISERSON of the Massachusetts Institute of Technology for theoretically grounded approaches to digital design and parallel computer systems.

Elected as foreign members were:

PETER STOICA of Uppsala University for contributions to array signal processing in communications, sensing, and imaging.

PETER WHITTLE of the University of Cambridge for contributions to the mathematics of operations research and statistics.

—From an NAE announcement

### Corrections

Notices regrets the following error that appeared in the 2016 March issue:

The Mathematics People section within the March issue had incorrect placements of Rahul Singh and Lesley Sibner’s photos.

RAHUL SINGH of Yale University was awarded a Marshall Scholarship for 2015 and will study econometrics and mathematical economics at the London School of Economics, and computational statistics and machine learning at University College London.

LESLEY SIBNER unexpectedly passed away on September 11, 2013. Lesley was the Eastern Section Associate Secretary of the AMS from 1993 to 2009. She was also in the inaugural class of Fellows of the AMS.