
Mathematics People

Hakobyan Awarded Artin Junior Prize

HRANT HAKOBYAN of Kansas State University has been awarded the 2010 Emil Artin Junior Prize in Mathematics. Hakobyan was chosen for his joint paper with David A. Herron, “Euclidean quasiconvexity”, published in the *Annales Academiæ Scientiarum Fennicæ Mathematica* **33** (2008), 205–230. Established in 2001, the Emil Artin Junior Prize in Mathematics carries a cash award of US\$1,000 and is presented usually every year to a student or former student of an Armenian university under the age of thirty-five for outstanding contributions to algebra, geometry, topology, and number theory—the fields in which Emil Artin made major contributions. The prize committee consisted of A. Basmajian, Y. Movsisyan, and V. Pambuccian.

—Victor Pambuccian

Tirole Awarded CME/MSRI Prize

JEAN TIROLE of the Industrial Economics Institute and the Toulouse School of Economics has been awarded the 2010 CME Group-MSRI Prize in Innovative Quantitative Applications. The prize recognizes individuals “who contribute original concepts and innovation in the use of mathematical, statistical or computational methods for the study of the behavior of markets and, more broadly, of economics.” According to the prize selection committee, Tirole’s “use of game theory and information theory in his economic analysis of markets, institution regulation, and financial crises represents the forefront of mathematics applied to real-world contexts.” The award carries a cash prize of US\$25,000.

—From a CME/MSRI announcement

NDSEG Fellowships

Fourteen young mathematicians have been awarded National Defense Science and Engineering Graduate (NDSEG)

Fellowships by the Department of Defense (DoD) for 2010. The fellowships are sponsored by the United States Army, Navy, and Air Force. As a means of increasing the number of U.S. citizens trained in disciplines of military importance in science and engineering, DoD awards fellowships to individuals who have demonstrated ability and special aptitude for advanced training in science and engineering.

The following are the names of the fellows in mathematics, their institutions, and the offices that awarded the fellowships: ADAM BACKER, Office of Naval Research (ONR); SARAH CONSTANTIN, Yale University, Air Force Office of Scientific Research (AFOSR); MAX ENGELSTEIN, Yale University, Army Research Office (ARO); MICHAEL FLEDER, Courant Institute of Mathematical Sciences, New York University, AFOSR; JASON LEE, ONR; SHAUN MAGUIRE, AFOSR; ANDREW MANION, Princeton University, ARO; ALISON MILLER, Princeton University, ARO; RAMI MOHIEDDINE, University of California, Los Angeles, AFOSR; SHRENIK SHAH, Princeton University, ARO; NIKE SUN, Stanford University, AFOSR; NEAL WADHWA, Massachusetts Institute of Technology, ONR; TEGAN WEBSTER, Rensselaer Polytechnic Institute, AFOSR; JOSHUA ZAHL, University of California, Los Angeles, ONR.

—From an NDSEG announcement

NSF Postdoctoral Fellowships Awarded

The Mathematical Sciences Postdoctoral Research Fellowship program of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) awards fellowships each year for postdoctoral research in pure mathematics, applied mathematics and operations research, and statistics. Following are the names of the fellowship recipients for 2010, together with their Ph.D. institutions (in parentheses) and the institutions at which they will use their fellowships.

SCOTT ARMSTRONG (University of California, Berkeley), University of Chicago; JAMES BIRD (Harvard University), Massachusetts Institute of Technology; JEFFREY CASE (University of California, Santa Barbara), Princeton University; JONATHAN CHAIKA (Rice University), University of Chicago; STEPHEN CURRAN (University of California, Berkeley), University of California, Los Angeles; KIRIL DATCHEV

(University of California, Berkeley), Massachusetts Institute of Technology; MARK DAVENPORT (Rice University), Stanford University; GABRIEL DRUMMOND-COLE (City University of New York), Northwestern University; DANIEL ERMAN (University of California, Berkeley), Stanford University; PASCAL GETREUER (University of California, Los Angeles), École Normale Supérieure de Cachan; JAMES GILL (Washington University, St. Louis), University of Washington; NATHAN GLATT-HOLTZ (University of Southern California), Indiana University; THOMAS GOLDSTEIN (University of California, Los Angeles), Stanford University; MATT HOLZER (Boston University), University of Minnesota; KIMBERLY HOPKINS (University of Texas, Austin), University of California, Los Angeles; RYAN HYND (University of California), Courant Institute, New York University; ZACHARY KILPATRICK (University of Utah), University of Pittsburgh; STEPHEN KLEENE (Johns Hopkins University), Massachusetts Institute of Technology; ROBIN KOYTSCHEFF (Stanford University), Brown University; BRIAN LEHMANN (Massachusetts Institute of Technology), University of Michigan; GUOYING LEI (University of California), California Institute of Technology; ADAM LEVINE (Columbia University), Brandeis University; KATRINA LIGETT (Carnegie Mellon University), Cornell University; RICKY LIU (Massachusetts Institute of Technology), University of Minnesota; CARL MAUTNER (University of Texas, Austin), Harvard University; WESLEY PEGDEN (Rutgers University), New York University; EMILY PETERS (University of California, Berkeley), Massachusetts Institute of Technology; JONATHAN POTTHARST (Harvard University), Boston University; AMANDA REDLICH (Massachusetts Institute of Technology), Rutgers University; LISA ROGERS (Rensselaer Polytechnic Institute), New York University; BENJAMIN ROSSMAN (Massachusetts Institute of Technology), Tokyo Institute of Technology; ANNE SHIU (University of California, Berkeley), Duke University; CHARLES SMART (University of California, Berkeley), Courant Institute, New York University; KELLI TALASKA (University of Michigan), University of California, Berkeley; KEVIN TUCKER (University of Michigan), University of Utah; BIANCA VIRAY (University of California, Berkeley), Brown University; CATHERINE WILLIAMS (University of Washington, Seattle), Columbia University; and PAULETTE WILLIS (University of Iowa), University of Houston.

—NSF announcement

B. H. Neumann Awards Given

JOHN DOWSEY of the mathematics education department, University of Melbourne, has received a B. H. Neumann Award from the Australian Mathematics Trust. He has been a member of the Problems Committee of the Mathematics Challenge for Young Australians, for which he served as deputy chair, helping to develop materials. He has been a member of the committee that composes the problems for the Australian Intermediate Mathematical Olympiad (AIMO), essentially the national Olympiad for students up to year 10. CHERYL PRAEGER of the University of Western Australia was also honored with a Neumann

Award; she is best known for her work in group theory, algebraic graph theory, and combinatorial designs.

—From an Australian Mathematics Trust announcement

Pi Mu Epsilon Student Paper Presentation Awards

Pi Mu Epsilon (PME), the U.S. honorary mathematics society, makes annual awards to recognize the best papers by undergraduate students presented at a PME student paper session. This year PME held a session in conjunction with the Mathematical Association of America MathFest in Pittsburgh, Pennsylvania, August 4–7, 2010. The AMS and the American Statistical Association sponsor awards to student speakers for excellence in exposition and research. Each awardee received a check for US\$150. The names, chapters, institutions, and paper titles of the award-winning students follow.

MATT ALEXANDER, Ohio Xi Chapter, Youngstown State University, “Discrete consideration of Aleksandrov’s projection theorem”; ERICA EVANS, Ohio Iota Chapter, Denison University, “Knot mosaics: Results and open questions”; RICHARD FREEDMAN, North Carolina Lambda Chapter, Wake Forest University, “Understanding hailstone sequences using a new coding process”; JENNIFER GARBETT, Ohio Pi Chapter, Kenyon College, “Modeling the *Manduca sexta* midgut”; MICHAEL JOSEPH, Ohio Lambda Chapter, John Carroll University, “Patterns in primitive Pythagorean triples”; SEPIDEH KHAVARA, Ohio Xi Chapter, Youngstown State University, “Modeling of regulation of gene expressions in the presence of toxic selenite in modeling gastric emptying”; KELLEY MORAN, Maryland Theta Chapter, Goucher College, “Modeling gastric emptying”; JOSEPH PATT, Ohio Iota Chapter, Denison University, “Putting numbers on the board: Enumeration of knot mosaics”; SCOTT POWERS, North Carolina Beta Chapter, University of North Carolina, Chapel Hill, “Evaluating statistical methodology for gene set analyses”; and LINDSAY VAN LEIR, Virginia Delta Chapter, Roanoke College, “Mapping the liberal arts: The graph theory behind your degree”.

—From a Pi Mu Epsilon announcement

My Recollections of Dirk Struik

Editor’s Note: *These recollections of Dirk Struik (1894–2000), written by his last doctoral student, appear here to mark the tenth anniversary of Struik’s death. A full obituary appeared in the June/July 2001 issue of the Notices.*

It was in 1959, as a graduate student in the mathematics department of the Massachusetts Institute of Technology, that I first met Dirk Struik. Having made some progress as an undergraduate at New York University in solving the century-old unsolved problem of creating a general, yet elementary, geometric definition of the concept of surface area in any number of dimensions, I asked Dr. Struik to

be my mentor for a doctoral thesis on the origins and development of the infinitesimal calculus.

Dirk's unexpected retirement from MIT in 1960 put a hold on my plans, but a decade later our paths crossed again, and with the opportunity made available through a special doctoral program developed by Fairleigh Dickinson University in New Jersey, I was able to pursue my doctoral plans under MIT Professor Emeritus Dirk Struik.

At my first doctoral advisement meeting, held in Dirk's study in Belmont, MA, he suggested that my thesis should be used to enrich the education of advanced undergraduate mathematics majors by designing and developing a sequence of course units based upon selected key episodes in the history of the calculus. Dirk's role as a great teacher could not have been revealed in any better way than this!

On the other hand, Dirk the researcher strongly encouraged me to complete my work in solving the century-old problem on surface area and then publish a paper that could be incorporated into one of the episodes in my thesis. With Dirk's urging, in 1972 I published (with L. V. Toralballa, my undergraduate mentor) an eight-page paper in the *Pacific Journal of Mathematics* that essentially solved this problem. (The problem had its roots in 1868 with the publication of J. A. Serret's "incorrect" definition of surface area, which was discredited by H. A. Schwarz's famous counterexample published in 1882.)

Though outstanding in so many areas, the three things that particularly impressed me about Dirk and that I will always remember were his acute insights into the history of mathematics, his truly remarkable memory, and, most importantly, the consideration and humanity he showed in our working relationship over the years.

At one of our many meetings, Dirk loaned me a copy of Lacroix's *Differential and Integral Calculus* and suggested I read it from cover to cover. Dated December 12, 1816, it was an early edition translated from the French that Dirk had acquired in 1940 from a bookstore in Harvard Square.

At our final meeting in the late 1970s, Dirk approved my thesis while we shared a bottle of his favorite sherry, and then, as I was leaving, he presented me with his coveted early edition of Lacroix's famous book—a gift I shall always cherish from a man I will always remember!

For a number of years after our final meeting, I would receive and respond to occasional handwritten notes from Dirk in which he would inquire about my work and publications. When I first learned of the plans for his 100th birthday celebration to be held at Brown University on September 30, 1994, I decided to surprise him with a special birthday gift of my latest publication on early Greek mathematics. This article was dedicated to Dirk and appeared in the fall 1994 issue of the *New York State Mathematics Teachers' Journal* just prior to his birthday celebration. Indeed, this was a very small repayment for Dirk's years of friendship and support!

—Louis Alpert
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