Van Vleck Notes

Spring 2009 Edition

The newsletter of the University of Wisconsin Math Department

FROM THE EDITOR

The past year brought many changes to the life of the department. We now have a new UW-Madison Chancellor and a new Chair. Carolyn (Biddy) Martin replaced John Wiley in that difficult job and Shi Jin took over from Leslie Smith as our Chair. We also saw four faculty members retire in the last year and we can now appreciate even more how much they have done for the Department and for the University in general. Luckily, most of them are still around attending seminars, supervising graduate students, and helping us all with their words of wisdom.

In spite of the global financial crisis, plummeting real estate market, and predicted State budget deficit, the department has done remarkably well in attracting new faculty, postdocs, and graduate students. The likely explanation for this phenomenon is an excellent research environment and the very friendly atmosphere that we all enjoy. The constant flow of visitors coming to give talks at the seminars and easy interaction between people working in different areas

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Inside

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create a perfect setting for any mathematician. In addition, we all enjoyed the lectures given by some of the brightest mathematicians in the country and from all over the world which were delivered in the annual distinguished lecture series. Much effort was made in promoting mathematics on different levels and in developing new courses, but first and foremost the success of the department can be measured by the quality of research done by the faculty and graduate students and by their dedication to teaching. All their efforts were distinguished by the many research and teaching awards that are listed below.

We were especially pleased this year by the feedback that we have had from our alumni. It is always great to hear all the nice memories they have to share. In this year's edition, we have included some of the messages from our former students. And, of course, they and all our friends are always welcome at Van Vleck and at the annual UW reunion.

Serguei Denissov

FROM THE CHAIR

This year's newsletter, the Van Vleck Notes, is appearing much earlier than before, thanks to the efficient work of Serguei Denissov and Yvonne Nagel.

This is my first year as the Chair. I would first like to thank my predecessors Richard Brualdi, David Griffeath, Alex Nagel, and most especially, Leslie Smith, for guiding me though the difficult learning period of my tenure. They have always been available to advise me, and tremendously generous in sharing with me their experience and wisdom.

The strength and vitality of the department are partly reflected by the articles in this newsletter. Our hiring in the last decade has been extremely successful. Our faculty continues to receive important international recognition and to deliver major lectures at high profile international conferences. Our graduate students are finding positions at top math departments in the world. The department's intellectual life is as rich as ever. I am particularly excited that, although many universities in the nation have announced hiring freezes, we are still hiring! I am very confident that we will be able to recruit top-notch mathematicians this year.

We are trying to strengthen the connections with our alumni. In this issue of the Notes you can find some letters from them. We are very much interested in hearing from you. Please feel free to send us your stories. Old photos taken at memorable historic moments or showing past department members are especially welcome. They will be documented in our department's homepage as a permanent monument in honor of our great mathematical tradition and as an inspiration to future generations to come.

Needless to say, as the university is facing a financial outlook as gloomy as the nation's economy, the generous support of our alumni is more important than ever. We highly appreciate your previous donations, which have contributed in a major way to the department's academic life. Your future contributions will be even more essential in keeping us together and to help us win the growing global competition for the best mathematical talent in the world.

As the Chair, I have gained a better perspective of the great tradition of our department, the enormous strength of our faculty, and the glorious achievements of our alumni. The more I have learned about the department, the more optimistic I am about our future, despite being Chair in the most difficult economic time of the nation. As the great English poet Percy Bysshe Shelley said:

O, wind, if winter comes, can spring be far behind?

Shi Jin

NEW FACULTY

The Mathematics Department hired two new tenure track faculty members in 2008.

Joseph Miller: Joseph received his PhD from Cornell University in 2002 where his advisor was Anil Nerode. He then took a three year VIGRE Postdoctoral fellowship in the Mathematics Department of Indiana University in Bloomington and spent one of those years visiting Victoria University in Wellington. After spending three years in a tenure-track position at the University of Connecticut he joined UW in Fall 2008 as an Assistant Professor. Miller's research interests are mostly in computability theory. He has done some deep work in Kolmogorov complexity and algorithmic randomness, reverse mathematics, and effective mathematics (primarily computable analysis and topology). These areas are at the interface of mathematical logic and theoretical computer science. He also has a substantial list of publications totaling around 20 papers and preprints.

Benedek Valko: Benedek received his undergraduate (2000) and graduate (2004) degrees in Mathematics in Budapest, Hungary. His PhD advisor at Technical University was Balint Toth and the title of his thesis was "Hydrodynamic behavior of hyperbolic two-component systems". After getting his PhD, Benedek spent one year as a junior researcher at the Hungarian Academy of Science and then joined the University of Toronto at Scarborough as a postdoctoral fellow. He started his position as an Assistant Professor at UW in the Fall of 2008. Valko's research interests are in probability and its applications: stochastics in space and time, interacting particle systems and random matrices. He made significant contributions to the study of various exclusion processes and in his recent papers with Virag he obtained very interesting results on the distribution of eigenvalues for different ensembles of random matrices.

Van Vleck Visiting Assistant Professors

Florian Betrand joined UW in Spring 2009. He received his PhD

from Université de Provence in 2008 and was a postdoctoral fellow at the Fields Institute at Toronto. His area of research is multivariable complex analysis and his thesis was "Local analysis on almost complex manifolds". Florian will be collaborating with Jean-Pierre Rosay and Xianghong Gong.

Riad Masri received his PhD in 2005 from the University of Texas, Austin working with Fernando Rodriguez Villegas. His research area is number theory, especially automorphic forms, L-functions,

and arithmetic geometry. After earning his PhD Riad spent a year at the Max-Planck Institute at Bonn and then was a postdoctoral fellow at Centre de Recherches Mathematiques in Montreal. He joined the UW Madison in the Fall and will work with Ken Ono and Tonghai Yang

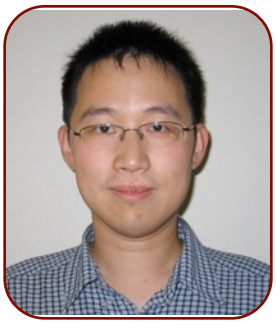
Jon Peterson started his Van Vleck Professorship in Fall. He received his PhD in 2008 from the University of Minnesota where his thesis advisor was Ofer Zeitouni. He is working in probability and the title of his thesis was "Quenched limit distributions for a one-dimensional random walk in random environment". Jon is interested in random walks on groups, finite state Markov chains,

coagulation-fragmentation chains, spectral analysis on groups and combinatorial games.

Adrian Tudorascu received his PhD from Carnegie Mellon where he worked under the supervision of David Kinderlehrer. His thesis title was "Optimal Mass Transportation Methods for Gradient Flows in the Weak Topology" and his research interests are very broad: partial differential equations, methods in the calculus of variations, numerical analysis, fluid dynamics, Monge-Kantorovich optimal mass transportation theory and applications to PDE's and calculus of variations (grain growth, protein motors). After getting his PhD Adrian spent three years as a

postdoc at the Georgia Institute of Technology. Adrian will work with Mikhail Feldman.

Dongming Wei received his PhD in 2007 from the University of Maryland. His thesis advisor was Eitand Tadmor and the title of his thesis was "Critical threshold phenomena in Euler dynamics". Dongming is interested in nonlinear partial differential equations: nonlinear convection diffusion problems, nonlinear conservation laws, fluid dynamics and materials science numerical analysis, image processing. He received his Bachelor's degree



from Tsinghua University in China and then his Master's degree from the Institute of Mathematics at the Chinese Academy of Sciences. Dongming will work with Shi Jin.

FACULTY PROMOTIONS

Three faculty members were promoted from Associate to Full Professor and two Assistant Professors were promoted to Associate Professor.

PROMOTIONS TO FULL PROFESSOR

Lev Borisov. Lev joined the UW Math Department in 2001 as an Assistant Professor and was promoted to the position of Associate Professor in 2004. Lev received his Bachelor's degree from Moscow State University and his PhD from the University of Michigan (1996) under the supervision of Igor Dolgachev. After that he was a postdoc at MSRI for a year and a Ritt Assistant Professor at Columbia before coming to UW. Lev's research interests are in algebraic geometry and related fields. The top experts in the country describe his work as "very original" and that "he is able to work at the frontier between theoretical physics and mathematics with a clear understanding of the physical part involved". Lev received the Alfred P. Sloan Research Fellowship (2003-2005). He also has been the principal investigator of an individual NSF Grant since 2002. Borisov's list of publications totals around 30 articles in top research journals. Lev supervised one PhD student who graduated in 2007 and now has two more who are expected to graduate in Spring 2009. Unfortunately, Lev will leave us for Rutgers University in the Fall of 2009.

Alexandru Ionescu. Alexandru received his BS degree at MIT and then his PhD at Princeton under the supervision of Elias Stein. After spending a year at the Institute for Advanced Study (Princeton), he became a Moore Instructor in Mathematics at MIT. He joined UW as an Assistant Professor in 2002 and was promoted to an Associate Professorship in 2005. Ionescu has made spectacular contributions in the fields of Partial Differential Equations, Harmonic Analysis, and Ergodic Theory. He is regarded as one of the best experts in these areas and has won several very prestigious awards: an Alfred P. Sloan Research Fellowship (2003-05), the David and Lucille Packard Fellowship in Science and Engineering (2004-09) and a Romnes Faculty Fellowship (2008). Alexandru has a long list of publications in highly regarded mathematical journals, he is also supervising two graduate students, one of whom will be graduating in Spring 2009.

Fedor Nazarov. Fedor received his Bachelor's and PhD degrees from Saint-Petersburg University. His advisor was Vicktor Havin and the title of his thesis was "Local Estimates For Exponential Polynomials And Their Applications to Inequalities of the Uncertainty Principle Type" which was later published as a paper and quickly became one of the classical references in this area. After working at Saint-Petersburg University he spent one year at the Institute for Advanced Study and then joined Michigan State University as an Instructor. He was rapidly promoted to Assistant and then to Associate Professor positions. He moved to UW as an Associate Professor in Fall 2007 and soon became a Full Professor in 2008. Nazarov's primary research interests are in Harmonic analysis, Fourier series, and Combinatorial geometry but he has done groundbreaking work in many other areas such as probability and fluid dynamics. His work is very original and insightful and some of his papers are now widely recognized as classical. Fedor has received numerous awards: the Prize of the St.-Petersburg Mathematical Society for the best young mathematician of 1993 and the Salem prize of 1999 (a very prestigious prize in the area of Harmonic analysis). Nazarov has also held NSF Grants continuously since 1997. He is supervising one graduate student and is training the UW Putnam team.

PROMOTIONS TO ASSOCIATE PROFESSOR

Andrei Caldararu. Andrei received his BS in Mathematics in 1993 from Hebrew University in Jerusalem and his PhD from Cornell in 2000. Before coming to UW as an Assistant Professor he held postdoctoral positions at the University of Massachusetts, Amherst and at UPenn. Andrei works in the area of algebraic geometry, specifically he is interested in questions related to homological algebra, algebraic topology, and applications to theoretical physics (e.g. the string theory). He obtained some deep results in these fields and his contributions were rewarded by NSF postdoctoral fellowship and NSF research grant. Andrei is supervising several graduate students and is playing an active role in the Department's life.

Serguei Denissov. Serguei received his education at Moscow State University, BS in 1997 and PhD in 1999. After working for a year at Moscow State and spending a year at NYU, he joined Caltech as a Bateman Research Instructor. Then, after staying for a year at the Institute for Advanced Study (Princeton) he joined UW as an Assistant Professor in the Fall of 2005. Denissov is working in analysis with particular focus on problems in approximation theory and mathematical physics. He has also recently studied some problems in fluid dynamics. Serguei's contributions were recognized by the Popov Prize in Approximation theory and an Alfred P. Sloan Research Fellowship. He also has continuously had NSF Grants from 2005. Denissov serves as a member of the Editorial Board for two journals: the Journal of Approximation Theory and Constructive Approximation.

FACULTY AWARDS

Alex Nagel is one of seven UW faculty who have been selected as Fellows of the AAAS (American Association for the Advancement of Science) . Alex was honored "for fundamental work on singular Radon transforms, oscillatory and singular integrals, the Carnot metric with applications to subelliptic estimates and several complex variables." Alex came to Madison in 1970 as an Instructor, became an Assistant Professor in 1972, and was promoted to Associate Professor in 1974. He became a Full Professor in 1977 and was Chair from 1991 till 1993. Nagel is a well-known Harmonic Analyst, he received numerous awards and now holds Lipman Bers and Steenbock Professorships in Mathematics. Throughout his carrier Alex has done a tremendous job for the Department and for the University in general. In particular, he served as an Associate Dean (1993-1998) at College of Letters and Science.

Our former Chair, **Leslie Smith**, has been elected a fellow of the American Physical Society (APS) "for important and insightful contributions to the understanding of turbulence in engineering and geophysical flows through theory and numerical simulations". The APS's Division of Fluid Dynamics recommended the nomination, which was conferred at the APS council meeting in September 2008. Fellowship in the APS is limited to no more than one-half of one percent of APS membership. Leslie joined the UW in 1997 as an Associate Professor at Math and Engineering Physics and was promoted to a Full Professorship in 2002. Her area of expertise is in applied mathematics with a focus on computational fluid mechanics. Smith's contribution in these areas has been recognized by several NSF grants. Leslie also did a great job serving as a Chair for Math department from 2005 to 2008.

Ken Ono has been awarded a second endowed professorship by the University of Wisconsin. In August 2008 he was named the Hilldale Professor of Mathematics to accompany his designation as the Solle P. and Margaret Manasse Professor of Letters and Science.

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Awards - continued from page 6

A Hilldale Professorship is one of the highest honors that a faculty member at UW can achieve, and Hilldale Professors are selected through an extremely competitive University-wide process. Ken joined the UW in 2000 as an Associate Professor and was soon promoted to Full Professorship. In 2004 he was awarded the Solle P. and Margaret Manasse Professorship by the University. Ken has made outstanding contributions to number theory, his main area of research and received many highly prestigious awards: an NSF career award, Alfred P. Sloan Research Fellowship, David and Lucille Packard Fellowship, Presidential Early Career Award for Scientists and Engineers to name a few. Ono is also famous for nurturing excellent young mathematicians. He has organized several REUs in Number Theory and has had fantastic success in attracting students and getting them involved with current research. He definitely jumpstarted and influenced many talented young mathematicians.

Gloria Mari Beffa was awarded the Letters and Science Faculty Advising Award for 2007-2008. The award is granted to one Faculty advisor in the College of Letters and Science each year in recognition of outstanding performance and professionalism in advising L&S students.

Other Faculty News

Two books by **Richard Brualdi**: *A Combinatorial Approach to Matrix Theory and its Applications* by Richard A. Brualdi and Dragos Cvetkovic (CRC Press (Taylor & Francis Group)) and *Introductory Combinatorics*, 5th edition, by Richard A. Brualdi (Prentice-Hall)

Shi Jin gave an invited Address at the 2008 AMS Spring Central Section Meeting in Bloomington, Indiana.

Shi Jin and **Alexander Kiselev** also delivered plenary lectures at the "12th International Conference on Hyperbolic Problems: Theory, Numerics, Applications", held at the University of Maryland, College Park, June 9-13, 2008. This is the most important conference in hyperbolic problems, held every other year.

Alexandru Ionescu gave an invited lecture on October 17-19, 2008 at the AMS Fall Central Section Meeting in Kalamazoo, MI.

David Griffeath and **Steffen Lempp** co-chaired the math liaison committee, which developed a new math/science minor course for elementary education majors (esp. for future middle school math and science teachers). The course was a great success with the number of students rising rapidly. This course and the minor is supported by a scholarship from the Brookhill Foundation.

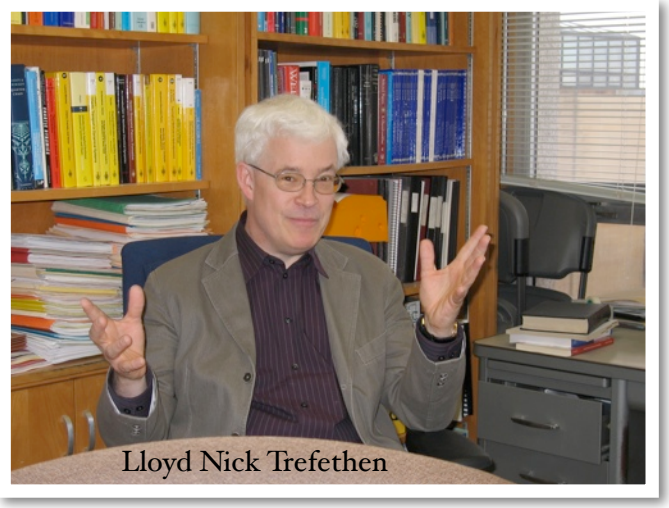
Ken Ono was a plenary lecturer at the 2008 Harvard-MIT Current Developments in Mathematics Conference. He delivered two one hour lectures on his theory of harmonic Maass forms, and its applications to Donaldson invariants, combinatorics, and the Birch and Swinnerton-Dyer Conjecture. Ono also gave an AMS Invited Address at the Joint Meetings in Washington DC. Ken delivered the following named lectures: Maxson Lectures (Texas A&M), Gentry Lectures (Wake Forest University), Prosser Lectures (Dartmouth College), Distinguished Lecturer (University of Hawaii), Kempf Lectures (Johns Hopkins University).

David Anderson , Gheorghe Craciun, Tom Kurtz , Paul Milewski and Julie Mitchell Develop New Courses in Mathematical Biology

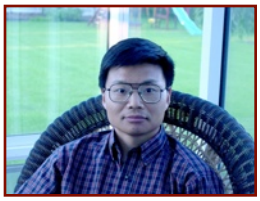
The Mathematics Department will be introducing four new courses in Mathematical Biology at the advanced undergraduate and beginning graduate level (Math 605, 606, 608, 609). The courses will cover biological topics that range from atomic level models of molecules, to systems level models of metabolic and regulatory processes, to statistical models of cells and organisms. The mathematics used in these subjects includes partial differential equations, numerical optimization, dynamical systems, and stochastic analysis, in addition to some more basic mathematical tools. The courses are designed to appeal both to mathematicians and those in the biological sciences who would like to reach a common ground in quantitative modeling of biological systems.

SPECIAL LECTURES

LAA Lecture. In the Spring of 2008 we had the pleasure of hosting **Lloyd Nick Trefethen** from Oxford as our Distinguished LAA Lecturer. These lectures are supported by the LAA and organized by Hans Schneider and Richard Brualdi. Nick is a well-known applied mathematician and numerical analyst who is famous for his accessible presentation style and interactive computer-driven seminars. He gave a talk for the graduate students on pseudospectra and non-normal matrices, and a Colloquium on numerically representing functions using Chebyshev polynomials. The lively audience tried to stump Nick's program by asking him to take the numerical derivative of a discontinuous function: lo and behold, a perfect spike appeared on the computer screen, complete with an arrow pointing to infinity!


Lloyd Nick Trefethen

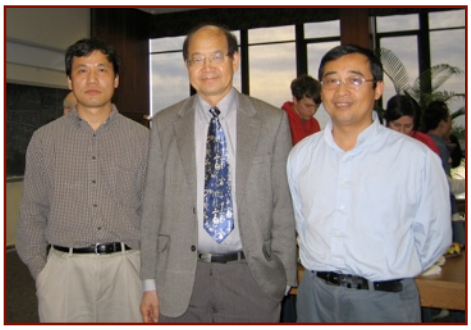
Distinguished Lecture Series. The spring distinguished lecture series were given by **Weinan E** from Princeton University.



The titles were: "Linear scaling algorithms for model reduction", "Mathematical chalenges in multiscale modeling", and a "Multiscale algorithm for capturing the macroscale behavior of a system with the help of a microscopic models". Weinan is a famous mathematician with very broad research interests that span across modeling, analysis and computations of problems arising in fluid dynamics, material science, stochastic PDEs, solid mechanics and more recently, chemistry and biology.

In Fall 2008, **Professor Blaine Lawson** gave a talk as a speaker for distinguished lecture series. The title of his talk was "Calibrated geometry". Besides his enormous mathematical achievement, he is also well known to give beautiful lectures which are accessible to non-experts. Lawson gave a chalk presentation (which is a bit unusual nowadays but very good for the audience) and the talk was easily accessible to graduate students and non-experts. Professor Lawson is a famous mathematician who was one of the founders of the calibrated geometry, an important area of differential geometry with many applications to gauge theory and mirror symmetry. He also had a great influence in other areas of mathematics where some of his papers are regarded now as classical.

Professor Yum-Tong Siu from Harvard University delivered the 2008 Wolfgang Wasow lecture "Multiplier ideal sheaves in algebraic geometry and partial differential equations". In his inimitable style, Siu made the first talk very interesting and accessible to the general audience and postponed the details and technical part to the second talk which was addressed to the experts. Siu is a prominent mathematician working primarily in several complex variables, differential geometry, and algebraic geometry. He is a member of US National Academy of Sciences, The American Academy of Arts and Sciences. Siu also delivered three invited addresses at International Congresses of Mathematicians and has had much recognition for his excellent work.


Yum-Tong Siu with Professors Xianghong Gong (on left) and Chair Shi Jin (on right).

Conferences

CONFERENCE IN HONOR OF GEORGIA BENKART

A three-day conference, affectionately known as *Georgia Fest*, was held February 16-18, 2008, in honor of Georgia Benkart, who retired from teaching in 2006. There were fifteen talks given by Georgia's collaborators, students, and friends. These talks covered many of the wide-ranging areas of Lie theory that Georgia helped to pioneer and which she continues to actively shape.

The speakers were Susan Montgomery, Edward Frenkel, Vera Serganova, Joseph Wolf, Arun Ram, Vyacheslav Futorny, Stephen Berman, Alberto Elduque, Seok-Jin Kang, Bertram Kostant, Yuri Bahturin, Tom Halverson, Dan Britten, Kailash Misra, and Sarah Witherspoon, many of whom have visited Georgia and UW-Madison over the years.

The conference was held in the Mathematics Department at the University of California San Diego and was organized by Efim Zelmanov of UCSD. Six of Georgia's 21 students were in attendance: Chanyoung Lee-Shader (1992), Tom Halverson (1993), Dongho Moon (1998), Cheryl Grood (1998), Michael Lau (2004), and Matt Ondrus (2004).

At the bankquet, several of Georgia's collaborators and friends gave tributes, including UW colleagues Don Passman and Louis Solomon. Her Ph.D. students praised her as a teacher and mentor and presented her with a book of memories that was assembled by Rob Leduc (1993). All of the speeches and presentations were predictably upstaged by Georgia's closing remarks.

In attendance were mathematicians from the many places around the world where Georgia has traveled, given talks, taught, advised, and collaborated. Most noteworthy were the large groups of friends from Brazil, Korea, Spain, Russia, and Canada.

submitted by Tom Halverson

CONFERENCE IN HONOR OF PETER ORLIK

On August 19-22, 2008, The Fields Institute hosted a conference celebrating the career of **Peter Orlik**. Peter received his PhD from the University of Michigan and was at UW for more than forty years (1966-2007). His work influenced many areas of mathematics: his focus has included Seifert manifolds, singularities, reflection groups and invariant theory, braids, hyperplane arrangements, and hypergeometric integrals. Orlik's work with Hiroaki Terao and Louis Solomon on hyperplane arrangements became classical and attracted the interest of mathematicians from many areas. When at UW, Peter supervised at least nine PhD students. The conference features twenty invited talks with lectures by mathematicians working primarily in hyperplane arrangements and related areas. The speakers included two former students of Orlik (Falk and Randell) and a number of young mathematicians.

Peter Orlik with Mario Salvetti (Pisa) and Daniel Mattei (Bucharest)

Second Graduate Student Conference in Probability
May 2-4, 2008

Since the first grad student conference in probability in 2007 was such a success, the UW graduate students from the Probability group decided to organize a second one in the same spirit, but slightly larger. They invited two well-known probabilists, Davar Khoshnevisan and Amir Dembo, to give the keynote talks. We were happy to see them sharing their experiences with the other conference participants. All the other 33 talks were presented by grad students or postdocs, and covered a wide range of topics and applications in probability. The conference provided a great opportunity for young probabilists to meet others in their field and learn what they are doing. The next conference will be in 2009. This time it will be organized by a group of students from Duke University and University of North Carolina, Chapel Hill.

Davar Khoshnevisan

Number Theory Conference on Pro-P Groups and Algebras
April 3, 2008

On April 3, 2008, UW hosted the second annual miniconference on pro-p groups and pro-p algebras in number theory, organized by Professor **Nigel Boston** and Associate Professor **Jordan Ellenberg**. This year's conference brought three distinguished speakers who covered a wide range of topics in the theory of profinite groups. Miklos Abert, of the University of Chicago, spoke on "The ergodic theory of profinite actions," explaining how the great success of dynamical methods in the study of discrete groups finds analogues in the theory of profinite groups. Farshid Hajir, of the University of Massachusetts, spoke on "Asymptotically good families." There are many contexts in which "optimal" examples -- say, curves with many rational points over finite fields, 3-manifolds with extreme invariants -- are naturally related to families parametrized by a profinite or pro-p group. Finally, John Wilson of Oxford discussed universal properties enjoyed by solvable groups.

In addition, the spring group theory seminar had a special emphasis on the theory of profinite groups and monodromy groups, featuring lectures by Matt Day of the University of Chicago, Chris Hall of the University of Michigan, and Charles Leedham-Green of QM London.

GRADUATE STUDENT AWARDS


Andrea Medini, Nicos Georgiou, Diana Sarb

Math Department TA Teaching awards: Erik Andrejko, Sam Eckels, Nicos Georgiou, Sabrina Guettes, Ed Hanson, Jesse Holzer, David Milovich, Diana Sarb, Christelle Vincent, Boyd Worawannotai

Excellence in mathematical research award: Frank Thorne, Bing Wang

John A. Nohel Prize in Applied Mathematics Scholarship: Benjamin Akers

Elizabeth Hirschfelder awards for Women Graduate Students: Sabrina Guettes, Ekin Ozman, Christelle Vincent, Christine Lien

Mary Ellen Rudin Scholarship: Marie Jameson, Elizabeth Magness

Campus-wide awards: the 2007-2008 L&S Teaching fellow and the 2008-09 UW-Madison Capstone PhD TA awards went to Adam Berliner. Dan McGinn received a campus-wide TA "exceptional service" award in 2007 and was the 2008-09 L&S Teaching fellow from the Math Department. Winners of the 2008 UW Teaching Assistant awards were Samuel Eckels, Benjamin Ellison, Matthew Felton and Daniel McGinn

UNDERGRADUATE AWARDS


Gloria congratulates Tess and Renee

AMEP Leadership Prize: Nicholas Ballering and Erick Butzlaff.

Irma L. Newman Scholarship: Andrew Bolanowski.

Prof. Linnaeus Wayland Dowling Scholarship: Rebecca Yale and Ken Ueda.

Higgitt Scholarship: Daniel Lecoanet, Tarek Elgindi and Aaron Veith.

Frank D. Cady Scholarship: Tess Anderson and Renee Schuppener.

R. Creighton Buck Scholarship: Damon Alexander.

Mark H. Ingraham Scholarship: Jason Malinowski and Xiao Yu Wang.

Paul Milewski congratulates Nicholas Ballering

RETIREMENTS

RICHARD BRUALDI retired at the end of the fall semester of 2007-08. Richard came to UW-


Mona and Richard Brualdi

Madison in 1965, so he has been in our department for 42 years. Although he has officially retired, he has certainly not disappeared; indeed he has five graduate students still working with him. So that is 42 years and counting .... In 2004 Richard became the UW Foundation Beckwith Bascom Professor of Mathematics. He served as department Chair from 1993 to 1999, the only person in recent years who served two 3-year terms in succession. Richard got his PhD in 1964 at Syracuse, where he worked with Herbert Ryser, himself a UW-Madison PhD from 1948 working with Professors MacDuffee and Everett. (The mathematical world is sometimes small: Ryser is also known for the Bruck-Ryser theorem and Richard Bruck was in this department for a great many years.) He was at the National Bureau of Standards for a year before coming to Madison. His research has centered on Combinatorics, Graph Theory, Linear Algebra, and Coding Theory. Richard has nearly 200 journal publications, 5 books, and 33 PhD students completed. In the spring of 2005 the Brualdi-Fest conference was held here in Madison in his honor, arranged by his students and colleagues. At Richard's website, http://www.math.wisc.edu/~brualdi, you can see pictures from that conference as well as a picture of Richard on an elephant .... He is Co-Editor-in-Chief of the journal **Linear Algebra and its Applications** and is one of the Editors-in-Chief of the Electronic Journal of Combinatorics. He has received the Euler Medal for lifetime achievement from the Institute of Combinatorics and its Applications, the prize for lifetime contributions from the International Linear Algebra Society, and the Outstanding Alumni award from the University of Connecticut where he was an undergraduate. Richard continues to be an active runner, competing in the Crazylegs Classic here in Madison this spring. He has 5 Gold and 2 Silver medals in the Madison Meriter-Hospital-sponsored 5K run for his age group.

KEN KUNEN retired the spring of 2008. Ken came directly to Madison on finishing his PhD at Stanford in 1968. While he is frequently described as a set theorist, working also on applications of set theory in general topology and measure theory, many people have commented that there is


Leslie with Ken and Anne Kunen

virtually no area in mathematics where Ken is not near the cutting edge. Ken has published 115 journal articles and graduated 23 PhD students. He has been editor of several journals and is currently Editorial Advisor to the Journal of Computation and Mathematics. His honors include the Romnes Fellowship and an Alfred P. Sloan Fellowship. At our end-of-year dinner where we recognize retirees, Leslie Smith described Ken as the opposite of a "high maintenance" faculty member. "I don't think he ever came to the Chair's office during the entire 3 years I was Chair, and if he did it was certainly not to complain.

Retirements, continued

TOM KURTZ retired in the spring of 2008. Like Ken, he came directly here from Stanford in 1967, partly because of Peter Ney who was on our faculty. (He originally intended to go into both math and chemical engineering but decided chemical engineering was too dirty and smelly. Of such things are great careers made!) He has been the Paul Levy Professor of Mathematics and Statistics since 1996. He served both as Chair of the math department and director of the Center for Mathematical Sciences. Tom has published 90 journal articles and produced 25 PhD students. His research has been in probability theory and stochastic processes. Tom was awarded the Romnes Fellowship, is an elected member of the International Statistics Institute, and is a fellow both of the Institute of Mathematical Statistics (and also President) and the American Academy of Arts and Sciences. He was Editor of the Annals of Probability. Tom has also been very active in UW administrative matters and local politics. He chaired the Madison City Parking Utility Committee, made an (unsuccessful) run for the County Board, chaired campus-wide committees, and most recently ran the department Budget Committee which has reorganized and clarified our financial situation.


Tom and Carolyn Kurtz

DIETRICH UHLENBROCK retired at the end of the fall semester of 2007-08. Growing up and finishing his undergraduate education in mathematics and physics in Germany, Dietrich came to the US and got his MS and PhD (1963) in theoretical physics in just four years from NYU. He stayed there, at the Courant Institute, for one year, and then went to the Institute for Advanced Study at Princeton. He came to Madison in 1966. His research has been in Quantum Statistical Mechanics, Quantum Field Theory, Non-abelian Gauge Theories, and Non-commutative Differential Geometry, published in journals such the Journal of Mathematical Physics, Physical Review, Physics of Fluids, and Annals of Physics. He has held visiting positions, in Berlin, Michigan, Mexico, and France. (Dietrich was an exchange student from Germany to the US when he saw the movie Blackboard Jungle. In part because it involves inspiring teaching, he says that was an omen.) Dietrich has had three PhD students. He has also played a major role in running this department: he was Associate Chair for ten years, where (among other things) he had to construct the timetable and to deal with student complaints, and he supervised all of the teaching assistants for three years. He has a reputation as a master at taming hysterical students, parents, and even faculty.


Dietrich and Sarah Uhlenbrock

SABBATICALS

Four faculty members were awarded sabbaticals for the 2008-09 academic year.

Alexander Kiselev: is on sabbatical for the whole year. He is collaborating with Professors V. Seregin and I. Popov from St. Petersburg State University (Russia) on some problems in partial differential equations. Kiselev also plans to compare the undergraduate Calculus programs with the goal of enhancing the calculus instruction at UW. In the Spring, he will visit Stanford University and the University of Chicago.

Andreas Seeger: will be on sabbatical in Spring 2009. He will use this opportunity to collaborate with his colleagues at UCLA, in Spain, and in UK on some problems of harmonic analysis. The new results will be incorporated into a graduate course. Andreas will also spend this time supervising his graduate students who are close to graduation.

Paul Milewski: plans to visit Ecole Normale in Cachan, France and make some short visits to other institutions: e.g., Courant Institute (NYU), African Institute for Mathematical Sciences. When at AIMS, Pauls will deliver a three-week long course on Geophysical fluid dynamics. This is an excellent opportunity to build connections with AIMS and, possibly, attract good African graduate students to UW. Paul will be on sabbatical for the whole academic year.

Timo Seppalainen: will be on sabbatical during Spring 2009. He will spend some time at the Institut Mittag-Leffler in Sweden, and organize a workshop on Interacting Particle Systems at the Centre de Recherches Mathematiques in Montreal as part of a theme year on Probabilistic Methods in Mathematical Physics. He will also develop material for graduate and undergraduate level courses.

MATHFEST REUNION

Since the MAA's national summer meeting, **Mathfest**, was in Madison last summer, we were able to have a reunion like the ones we have every year at the Joint Mathematics Meetings in January but this time right at home in Van Vleck Hall. About a hundred friends of the department, ex-students (graduate and undergraduate), faculty (present and retired), visitors, etc., got together on the ninth floor lounge for snacks and conversation.

There were a lot of comments like "This is what I remember!", where

"This" might be anything from talking with others in the lounge to a broken Chair leg. We talked about math, about students we knew or students we have now, about politics, and about how good it was to get back together. The reunion went on for a couple of hours officially but there were some people still there a lot later.

You can see some photos of the Reunion below. If you weren't able to get there, do come by Van Vleck the next time you come to Madison!

Mary Ellen Rudin and Mike Starbird

2008 INCOMING GRADUATE STUDENTS

Claudia Alfes	Rheinisch Westfalische Technische Hochschul Aachen
Sriram Alladi	Indian Institute of Technology Bombay
Maria Soledad Benguria Depassier	Pontifica Universidad Catolica de Chile
Andrew Bridy	Cornell University
Charles Burnette	Arcadia University
Yongtao Cheng	University of Illinois at Chicago
Christina Durfee	Wesleyan University
David Dynerman	University of Wisconsin-Madison
Sari Ghanem	Université Denis Diderot Paris VII
Alison Gordon	Universtiy of Delaware
Diane Holcomb	George Washington University
Sara Jensen	Carthage College
Mushfeq Khan	Cornell University
James Knapp	University of Missouri-Columbia
Ashutosh Kumar	Indian Institute of Technology Kanpur
Jaeho Lee	Seoul National University
Jae-Ho Lee	Pohang University of Science & Technology
Robert Lemke Oliver	Rose-Hulman Institute of Technolgy
Michael Lock	Columbia University
Kayla McMahon	Ohio State University
Alex Rice	University of Georgia
Brian Rice	Harvey Mudd College
Anna Saputera	Purdue University
Irena Wang	Harvard University
Zhan Wang	Nanjing University
Qian You	China University of Science &Technology

2008 Mathematics PhDs

Ben Akers Advisor: Milewski
On Model Equations for Gravity - Capillary Waves
Position: Research Assistant Prof, University of Illinois at Chicago

Matt Darnall Advisor: Boston
Results on Low Discrepancy Point Sets
Position: : Associate,Credit Suisse

Diego Galindo Advisor: Slemrod
Self Similar Solutions of Cold Ion Plasma Equations

Anders Hendrickson Advisor: Isaacs
Supercharacter Theories of Finite Cyclic Groups
Position: Assistant Professor of Mathematics,Concordia College

Chris Holden Advisor: Boston
Mod 4 Galois Representations and Elliptic Curves
Position: Assistant Professor of Mathematics,University of New Mexico

James Hunter Advisor: Lempp
Higher - Order Reverse Topology
Position: Software Developer,Oracle Corp.

Hye-Won Kang Advisor: Kurtz
Multiple Scaling Methods in Chemical Reactions
Position: Postdoctoral Associate, University of Minnesota

Noah Kieserman Advisor: Oh
The Liouville Phenomen in the Deformation Problem of Coisotropics
Position: Faculty Fellow,Colby College

Yeon Hyang Kim Advisor: Ron
Representations of Almost Periodic Functions Using L^2-Frames
Position: Assistant Professor, Central Michigan University

Stefan Mueller Advisor: Oh
The Group of Hamiltonian Homeomorphisms and Co-Symplectic Topology
Position: Postdoctoral Research Fellow, KIAS

Sangnam Nam Advisor: Ron
Construction and analysis of local wavelet pyramidal representations in several dimensions
Position: SIG

Robert Owen Advisor: Kunen
Outer Model Theory and the Definability of Forcing
Position: Software Developer,Epic Systems

Matt Petro Advisor: Robbin
Moduli Spaces of Riemann Surfaces
Position: Computer guru,UW-Madison College of Engineering

Dilip Raghavan Advisors: Kunen & Kastermans
Madness and Other Topics in Set Theory
Position: Postdoc,University of Toronto

Patrick Rault Advisor: Ellenberg
On Uniform Bounds for Rational Points on Rational Curves and Thin Sets
Position: Assistant Professor of Mathematics,SUNY Geneseo

Robert Rhoades Advisor: Ono
The Interplay Between Weak Maass Forms and Modular Forms and Statistical Properties of Number Theoretic Objects
Positions: Postdoctoral Fellow, Ecole Polytechnique Federale de Lausanne and 3 year Postdoctoral Fellow at Stanford.

Mehmet Haluk Sengun Advisor: Boston
Serre's Conjecture over imaginary quadratic fields
Position: Postdoctoral Fellow, University of Duisburg-Essen

Yudong Tang Advisor: Chen
Geodesic Rays and Test Configurations
Position: Associate,Goldman Sachs International

Frank Thorne Advisor: Ono
Extensions of Results on the Distribution of Primes
Position: NSF Postdoctoral Fellow, Stanford

Jernej Tonejc Advisor: Gong
Formal Normal Forms for almost complex structures
Position: Postdoctoral Fellow, Dept of Biochemistry, UW-Madison

Bing Wang Advisor: Chen
On the Conditions to Extend Ricci Flow
Position: Postdoctoral Fellow at Princeton

Xu Yang Advisor: Jin
Numerical Methods for Multiscale Kinetic Transport and High Frequency Waves
Position: Postdoctoral Fellow at Princeton

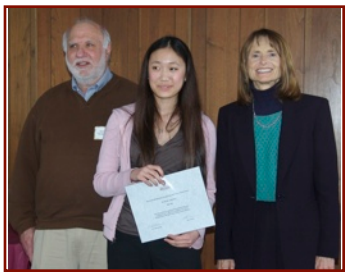
WISCONSIN MATH TALENT SEARCH HONORS DAY

On May 1, 2008 the Math Department and College of Engineering hosted the winners of the 2007-08 Talent search for Wisconsin High School students. The refreshments and a group photo were followed by two lectures. Bob Wilson from Math Department gave a talk "Where'd this stuff come from: a look at how mathematical ideas have evolved over the centuries". Then, Wendy Crone from Engineering Physics Department spoke about "Exploring the nanoworld". The celebration concluded with a guided tour at the Ingersoll Physics Museum at Chamberlin Hall.

Students honored for their achievements on talent search problems: Walter Cai, Willa Cai, Ian Guinn, Edward Hou, Amy Hua, Lingfeng Huang, Alex Knoespel, Anthony Kirckof, Suhas Kodali, Evan Liang, Thomas Morgan, Christopher Pieper, Zef RosnBrick, Matthew Wage, Peter Wear, Noah Williams, Iris Xu, Michelle Yang.

The winner of the prestigious Van Vleck scholarship was Iris Xu from Madison Memorial High School.

Don Passman distributed the prizes with the assistance of Wisconsin's first lady, Jessica Doyle.



Don Passman, Iris Xu and Jessica Doyle

REU IN NUMBER THEORY

Last summer **Ken Ono** ran an REU "Modular forms and number theory" and it was a great success again. The instructors for this program were **Ken Ono, Amanda Folsom, Rob Rhoades,** and **Frank Thorne**. The participants included eight undergraduate students and two high-school students. The students attended an introductory lecture course and then worked on several projects related to modular forms and other topics in number theory. They wrote five papers and one of them has already been accepted for publication in the Proceeding of the American Mathematical Society. The students participating in this program were recognized nationwide for their achievements. Three of them have won national prizes at the 2009 Joint Math Meeting in Washington DC. Aaron Pixton, an undergraduate from Princeton, was awarded the Frank and Brennie Morgan Prize. The Morgan Prize is awarded to one undergraduate math major each year. Maria Monks, an undergraduate at MIT, has been awarded the Alice T. Schafer Prize for outstanding research by an undergraduate woman. Doris Dobi, also from MIT, has been awarded Honorable Mention in the Schafer Prize competition. Pixton wrote two papers on p-adic modular forms in Ono's 2006 REU, and Dobi was in Ono's 2007 REU. Monks participated as a special student in Ono's 2008 REU.

UW Math Alumni

ALUMNI NEWS

Olga Holtz (PhD 2000, Hans Schneider) is one of 10 recipients of the European Math Society's 2008 prize. The prize is given every four years. Awardees must be below 35 years age, and to be either born or work in Europe. She was recognized for making substantial contributions to several mathematical areas including algebra, numerical linear algebra, approximation theory, theoretical computer science, and numerical analysis. Olga holds positions at UC Berkeley and at Technische Universitat Berlin.

Yiming Long (Ph.D 1987, Paul Rabinowitz), currently Professor and Director of the Chern Institute of Mathematics, Nankai University Tianjin, China, was recently elected a fellow of the Academy of Sciences for the Developing World (TWAS). According to the citation, "Long has made fundamental contributions to Hamiltonian dynamics. In particular, he is acknowledged for his iteration theory for symplectic matrix paths, and for his deep studies on periodic solution orbits of Hamiltonian systems. A member of the Chinese Academy of Science, he has received the 2004 TWAS Prize in Mathematics, the Natural Sciences Award (first class), the SS Chern Prize and the Qiushi Foundation Prize".

Debraj Chakrabarti (PhD 2006, J.P. Rosay) is starting a second post doc at Notre Dame, after 2 years in Western Ontario.

Jeremy Haefner (PhD 1986, L. Levy) is now Provost and Senior Vice President for Academic Affairs at Rochester Institute of Technology.

A LETTER FROM AN ALUMNUS

This year we are including a letter from an alumnus:

Dear Professor Jin,
I graduated from UW-Madison in 1982 with a degree in math. This is the first time I've received the Van Vleck newsletter in the last 26 years! It was fun to reflect back to my time there. I'm not sure how I've finally made it onto this mailing list, but it was fun to read. After graduating, I went to Medical School at Madison and then did a Neurology residency at the University of Utah. I then did a fellowship in Human Genetics with Ray White and employed some of my math skills in doing genetic linkage analysis in human families with hereditary neurological diseases. In looking through the old papers of Newton Morton (that laid down the statistical algorithm for analyzing genetic marker alleles for linkage) from the mid 20th century, I was delighted to learn that work was done while he was on the faculty at UW. While my group continues to map and clone human disease genes, we've become more invested in studying proteins encoded by some of the human disease genes we've cloned and to develop animal models to study disease pathogenesis. My work is in the areas of episodic neurological disease (including epilepsy and migraine) and human circadian rhythm/clock function. Thus, I'm not using mathematics in the way that you do, but my early training has been valuable in shaping the way I approach problems and try to solve them. I'm currently on the faculty of the University of California, San Francisco. I'm an Investigator of the Howard Hughes Medical Institute and was elected last year to the Institute of Medicine at the National Academies of Science and to the American Academy of Arts and Sciences.
Good luck in your new role as Chair. Keep up the good work!

Sincerely, Louis J. Ptacek

OUTREACH

For several years now we have had a close working relationship with schools in Belleville, WI, a small town about 20 miles southwest of Madison. This cooperation was initiated by **Cindy Van Bogaert**, who got her undergraduate degree from our department and is now a lawyer with the Boardman Law Firm in Madison. Groups of mathematically interested elementary, middle, and high school students from Belleville schools have come to Van Vleck for mathematical programs, and for the last couple of years graduate student **Adam Berliner** (a student of **Brualdi**) has been making weekly trips to Belleville to coach their high school math team.

UW again played host to 180 rambunctious and math-minded 5th and 6th graders at the Mega Math Meet on May 19, 2008. Twenty teams wrestled with a tough set of problems compiled by the MMM committee: Associate Professor **Jordan Ellenberg** and Ph.D. students **Meghan DeWitt, Christine Lien, Rob Rhoades**, and **Mike Woodbury**. Professor **Robert Wilson** reprised his traditional role as Master of Ceremonies, keeping the middle-schoolers entertained while the graduate students graded the exams. The participants had both quick-response timed questions (such as having just a few seconds to work out

$$5 \times 6 + 5 \times 7 + 5 \times 8 - 5 \times 11$$

an d lengthier problems) which they worked on in small groups. In the end, the Swallow School of Waukesha County and Kromrey Middle School in Middleton shared top honors.

Several members of the math department have been working with the Madison Metropolitan School District in a program called EMK (**E**xpanding **M**athematical **K**nowledge) MMSD teachers in grades 3 through 5 had an intense week last summer with either **Shirin Malekpour** or **Bob Wilson** (there were two groups, one focused on algebra and the other on geometry) and continued about once a month during the year with Shirin, Bob, and grad student **Dan McGinn**. The program will continue in the summer of 2009 and probably on into the next academic year also. **Carrie Valentine** of MMSD is the math resource teacher working with us on this project. **Concha Gomez** and **Bob Wilson** worked with undergraduate **Fawn Houck** on a combined teaching enhancement and mathematics education project called "Ethnomathematics: Engaging Students of Color for Academic Success". With funding from a prestigious Wisconsin Idea Undergraduate Fellowship, and after getting approval from both UW's and the school district's committees that regulate research involving human subjects, Fawn ran afternoon sessions for students at Madison's Wright Middle School.The goal was to link math and culture to help students, particularly children from groups usually under-represented in math and science, take a greater interest in math, and increase their academic self-esteem, with the hope that they would both learn math and be more likely to continue in math and science. The sample size was so small that statistics don't say much, but the students did seem to get "turned on" to math as more than something they have to do in school.

UW-Madison has for decades had a leading program in mathematics distance education. Some of it traces to the US military distance education programs that were based in Madison at the end of WWII. Students can take mathematics courses ranging from the high-school level through upper-level undergraduate courses and even courses that can carry graduate credit. Instruction for these courses is centered in another UW department, the Department of Liberal Studies and the Arts: Responsibility for math courses is presently in the hands of **Sharad Chandarana** (PhD **Wainger**, 1993). Others who have supervised them include **Bob Wilson** (**Schneider**, 1969, and recently retired from this department) and **Jim Hall** (**Nohel**, 1965). The college level courses parallel campus math courses and carefully cover the same material at the same level, typically using the same textbooks, and are recognized by universities all over as equivalent to the courses taught in person. Over the decades the courses have evolved from purely correspondence to include email contact with instructors and other influences of modern technology!

continued on next page

Outreach continued

MATH MENTORING PROGRAM

During the past five years **Gabi Meyer, Leslie Smith and Gloria Mari Beffa** have run a mentoring program for young women who are interested in Math and Science. The program brings together students from any high school in the Madison Metropolitan School District (MMSD) and undergraduate and graduate students in math who collaborate on projects that go far beyond what students normally see in school. It is inclusive and open to all female high school students. Students often return to the program and some of them have participated during each one of their four high school years. During 2007-2008 students worked on these projects: "Introducing Calculus using the modeling of epidemics", "The Lorentz model for the weather and Chaos" and on "Dominoes, Trominoes, Tetrominoes and other games" (a project using combinatorial math). The program ends with a presentation by students to parents, teachers and faculty.

EXTENDED MATH TIMETABLE

In cooperation with the Madison schools, the department has started running sections of some courses very early in the morning to allow talented local high school students who have finished Calculus BC to come to UW to study more advanced math courses without missing too many of their regular high school classes. After the success of last year, the program will include courses up through linear algebra during this coming year.

The classes include both high school and college students with about 40 in total. More than 20 high school students took advantage of this opportunity last Fall.

Doretta (Dee) Frana Retires

Doretta (Dee) Frana retired from the Mathematics Department on December 30, 2008. Dee's career with the State of Wisconsin began in 1969 in the Clinical Labs Department at the former University Hospitals located on University Avenue.

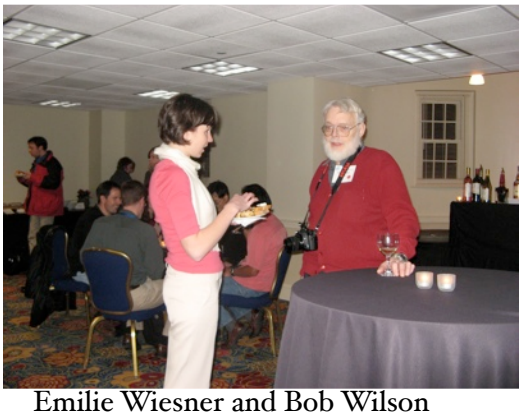
In 1978 she joined the Mathematics Department as a technical typist. Using a 1930's typewriter equipped with interchangeable type bars, exams and publications were produced. Any needed changes and corrections were typed, cut and taped onto the document. At times the "layers" of changes that covered each other seemed to resemble Bascom Hill.

Since 2004, Dee also served as technical editor of the Department's Van Vleck newsletter. She found her job to be challenging and rewarding and as she "puts down her pencils" she wants her colleagues and professors to know how much she enjoyed working with them through the years.

Although Dee has spent most of her life in Wisconsin she remains loyal to her home state of Iowa and the Iowa Hawkeyes. Her skills and fun personality will be greatly missed.

Annual Wisconsin Reunion in Washington, D.C.

We had a grand reunion of Wisconsinites at the Joint Mathematics Meeting in Washington, DC, in January, 2009. There were people who had been visitors in Van Vleck, retired and current faculty, past and current graduate students, past and present undergraduates, and even a few who were considering coming to Madison as graduate students and found this a good place to get to know us. Bob Wilson, officially the host, says there were more than 100 people there at one time or another, enjoying the food and drink, catching up with friends, making new friends, and even occasionally talking some mathematics. Here are some of the many photos from the reunion: There are additional reunion pictures at http://www.math.wisc.edu/~wilson/



Emilie Wiesner and Bob Wilson

Yong Geun Oh with Fred and Esther Brauer

Yong Geun Oh and Suzanne Doree

Ken Ono with Paul Jenkins and Kathrin Bringmann

Carlos Castillo-Chavez, Fred Brauer, Roger and Sylvia Wiegand and Esther Brauer

Stephanie Edwards and baby Maya talk to Tom Roby. Behind them are Warren Johnson, Paul Fishback and Jeff Hildebrand

GIFTS AND DONATIONS

GIFT FROM UW MATH ALUMNUS RICHARD GOOD

The UW Math Department has received a $100000 gift from the estate of **Richard Good**. Professor Good received his AB from Ashland College in Ohio, and his MA and PHD from our department in 1940 and 1945 (his Ph.D. advisor was **Richard Bruck**). He taught at the University of Maryland. His wife also was a UW graduate who earned a master's and PhD degree from another department.

Prof Good receiving the CC MacDuffee award at MathFest in 1980

MATH LIBRARY

The UW Foundation maintains a newly created gift account for the Mathematics Library. University Librarian, **Ken Frazier**, initially opened the account with $1000 from gifts to the General Library System. The S.C. Kleene Mathematics Library Fund supports mathematics resources not otherwise available to the campus community. Funds held over from the closing of the Center for Mathematical Sciences contributed an additional $10,000 to the fund. The fund's intent is to support those items which the Library could not otherwise provide to the campus community. The fund continues to grow through the UW Foundation's Giving from Within program and will be included in the Department's annual fund drive. Further questions can be directed to the head of the Kleene Mathematics Library, **Travis Warwick**.

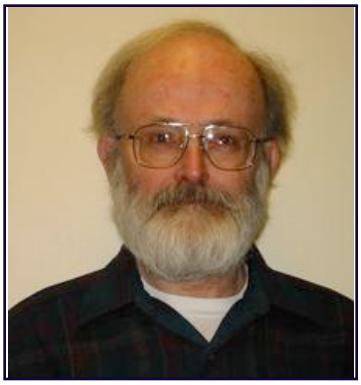
FELICE LEVIN

Felice Levin, a 1949 grad with a BA in Journalism who earned a master's degree in journalism in 1967, recently decided to make an estate gift to UW. Felice's gift will be used for either undergraduate or graduate student support with no other restrictions.

The funds will be shared equally by the English and Mathematics departments, the Law School (in honor of her late husband Joe Goodman) and the School of Library & Information Studies (to honor Harry Levin, her second husband).

IN MEMORIAM

Daniel G. Rider passed away on July 11, 2008. He received his PhD in mathematics from the UW-Madison in 1964, specializing in Harmonic analysis, with Walter Rudin as his advisor. Dan was C.L.E. Moore instructor at MIT, Assistant Professor at Yale, and professor of mathematics at UW-Madison. Among many awards and recognitions, Dan received the Alfred P. Sloan Research Fellowship. He was also an invited speaker at the International Mathematical Congress of Mathematicians in Nice. Throughout his career Dan provided great service to the University: he served on the TA evaluation committee for 20 years, was TA coordinator and he was also on the University TAA Bargaining Team for several years. Rider was a dedicated teacher serving at UW for nearly forty years. Dan retired in 2003 as Professor Emeritus.



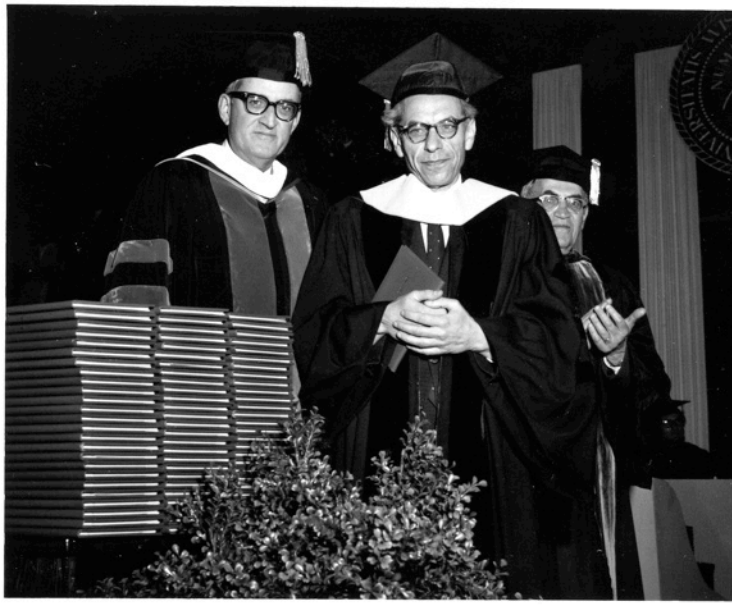
Daniel G. Rider

PHOTOS FROM OUR ARCHIVES

1962 Ground-breaking Ceremony for Van Vleck Hall
Stephen Kleene is second from the right

Noetherian Ring in 1998: Yvonne Nagel, Susan Hollingsworth, Sylvia Wiegand, Stephanie Edwards and Cheryl Grood

Franc Forstneric with Mary Ellen and Walter Rudin around 1990



Paul Erdos received an honorary degree from UW in 1973. Pictured are President Warren Weaver, Erdos and Isaac (Iso) Schoenberg.

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Department of Mathematics Annual Fund

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UW Foundation Accounts (Department of Mathematics)

- ☐ Department of Mathematics General Fund - serves as the department's "general" account
- ☐ R. Creighton Buck Prize Fund - awards an undergraduate prize for creativity in mathematics.
- ☐ Wallace J. Hilliard Fund - provides support for the Wisconsin Emerging Scholars Program (WES).
- ☐ Elizabeth Hirschfelder Fund - for Graduate Women in Mathematics, Chemistry & Physics.
- ☐ Mark Ingraham Math Scholarship Fund - provides a scholarship for a mathematics major above freshman standing.
- ☐ Mary Ellen Rudin Fellowship Fund - scholarship to support bright and talented female mathematics students.
- ☐ John Nohel Prize in Mathematics - a prize for the best PhD thesis in applied mathematics.
- ☐ Wolfgang Wasow Memorial Lecture Fund - supports a lecture by an eminent mathematician in a distinguished lecture series.
- ☐ Van Vleck Math Talent Search - provides funds for our annual math talent competition.
- ☐ S. C. Kleene Mathematics Library Fund provides mathemetical resources not otherwise available to the Mathematics Community.

For donations to the above funds, please make checks payable to UW Foundation and send to:

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Serguei Denissov, editor (denissov@math.wisc.edu)
Yvonne Nagel, technical editor

2009 Calendar

April 3-5 Kunenfest
April 4-5 Midwest PDE Seminar
April 18-19 Graduate Student Topology & Geometry Conference
June 3-5 Conference in Honor of I.M Isaacs in Valencia, Spain