

The Math Log

Halcrow and Takahashi Join Tenure-Track Faculty



Shuzo Takahashi

Dr. Shuzo Takahashi joins the UND mathematics department this fall. Shuzo is originally from Iiyama, Japan. He received a Ph.D. in mathematics from the University of California-Berkeley, and the title of his dissertation is “Degrees of Parametrizations of Elliptic Curves by Modular Curves and Shimura Curves” Shuzo's area of interest is algebraic number theory, and his adviser at Berkeley was Kenneth Ribet, who is a well-known number theorist. Shuzo also holds a Ph.D. in philosophy from Stanford University. His studies at Stanford dealt with Logic and Foundations of Mathematics. Prior to coming to UND Shuzo worked at the University of Arizona for four years. Shuzo uses Mathcad in the classroom, and he is interested in the use of computers in mathematics education. Shuzo is married to Sue Kimber. In his spare time he enjoys hiking and birdwatching.

Dr. Cheryl L. Halcrow has joined the tenure-track faculty at UND. Cheryl is from Drayton, ND. She received a Ph.D. in teaching and learning from UND this year (2004). The title of Cheryl's dissertation is “The Perceived Function and Effectiveness of a Math Learning Center,” and her thesis adviser was Dr. Myrna Olson. Her current interests focus on elementary education. Many of you know Cheryl; she has served as a lecturer in the UND Mathematics Department for the past few years, and her M.Ed. and B.A. degrees are from UND. She has also previously worked for three years as a high school teacher in St. Cloud, Minnesota. Cheryl's hobbies include skiing, golf, and jogging. She has competed in two marathon races. Cheryl has three children.

We welcome Cheryl and Shuzo to the Mathematics Department!



Cheryl Halcrow

DEPARTMENT FACULTY AND STAFF FOR 2004-05

Anthony Bevelacqua	Assistant Professor
Donna Boe	Word Processing Operator
Gwennie Byron	Sen. Lecturer & Math Learning Center Dir.
Joseph Champion	Senior Lecturer
John Collings	Associate Professor
Bruce Dearden	Professor & Interim Dean of Arts & Science
Gerri Dunnigan	Associate Professor
Stuart Farm	Senior Lecturer
Thomas Gilsdorf	Professor & Interim Chair
Michael Gregory	Professor
Cheryl Halcrow	Assistant Professor
Joel Iiams	Associate Professor & Associate Chair
Michele Iiams	Assistant Professor
Mohammad Khavanin	Associate Professor
Anita Lesmeister	Part-Time Lecturer
Jerry Metzger	Professor
Richard Millsbaugh	Professor
David Morstad	Sen. Lecturer & Math Computer Lab Dir.
Kristi Orr	Lecturer
Lawrence Peterson	Associate Professor
Mary Rerick	Senior Lecturer
Thomas Richards	Assistant Professor
Michael Simmers	Visiting Assistant Professor
Lona Spicer	Administrative Secretary III
Shuzo Takahashi	Assistant Professor
Virginia Wiggen	Part-Time Lecturer
Ryan Zerr	Assistant Professor

CHAMPION AND ORR START AS LECTURERS

Joe Champion has started as a lecturer in our department as of Fall 2004. Joe earned his M.S. in Mathematics from UND in 2003. He returns to Grand Forks to be with his fiancée Melissa Landry. Joe and Melissa plan a July 2005 wedding.

Kristi Orr graduated with an M.Ed. degree this past summer and now works in the Mathematics Department as a lecturer. Her husband's name is Scott, and she has two children: Logan (age 6) and Ashlyn (almost 3 years old).

We extend our welcome to Joe and Kristi!

**Bruce Dearden
Appointed Interim Dean**

The Mathematics Department Chair, **Dr. Bruce Dearden**, is serving as interim dean of the College of Arts and Sciences here at UND for the 2004-2005 academic year. Bruce had served as Chair of the Mathematics Department since Fall Semester 1999. We miss Bruce, but we are excited about the opportunity for him to serve the University in this way. Bruce is substituting for Dean Marth Potvin, who is expected to return to her position as Dean. Dr. Gilsdorf is interim Chair of the Mathematics Department. Tom has served as Chair of the department in the past Regular readers of the Math Log will recall that Tom was the editor of the Math Log for several years.

FACULTY FOOTNOTES

In May of 2004 **Dr. Thomas Gilsdorf** attended a Joint Meeting of the American Mathematical Society and the Mexican Mathematical Society in Houston, Texas. He presented a Special Session talk titled, "Convenient vector spaces in the locally convex setting."

Dr. Lawrence J. Peterson has been promoted to Associate Professor as of Fall Semester, 2004. He has also been granted tenure.

On August 1, 2004, **Dr. Lawrence (Larry) Peterson** presented the talk "Formulas for the Fefferman-Graham Ambient Obstruction Tensor" at the workshop on Conformal Geometry at the Banff International Research Station in Banff, Alberta, and in March he attended the Midwest Geometry Conference at the University of Arkansas. During the summer, Larry made another trip to the University of Auckland to work with his collaborator, Dr. Rod Gover.

WHERE THEY ARE, WHAT ARE THEY UP TO?

Kelly (McEnroe) Bach (B.S. 1990) has finished her Ph.D. at the University of Kansas in Lawrence, Kansas. She now works as an assistant professor at Benedictine College in Atchison, Kansas. (785-749-4657)

Jonathan T. Thompson (BS 1961, M.S.T. 1966) is now retired and living in Coon Rapids, Minnesota. Jonathan has taught in the Larimore, ND and Osseo, Minnesota school districts. He says that he had Glenn Prigge as a student teacher when he was teaching at Larimore from 1961 to 1964. "He did an excellent job," Jonathan says. (763-427-1994)

John A. Thompson, of Elmhurst, Illinois, passed away on April 14, 2004. He received a degree from the UND mathematics department in 1960. We express our sympathy to his wife Marilyn and the family. (630-279-3483)

Larry D. Ullrich (Bachelor of Philosophy 1963) is currently living in Houston and works as a salesman. His wife is Deloris. One of Larry's daughters is an RN, and the other two are CPA's. (713-271-0557)

Dwight Wendschlag (BSME 1971, MSME 1975) Dwight is retired and currently lives in Kalispell, Montana. His wife is Peggy. Dwight earned a graduate minor in mathematics while working on his M.S. in Mechanical Engineering at UND. He formerly worked for Amoco/BP as a reservoir engineer and technology manager. He writes "My mathematics education in Applied Math was invaluable. It permitted me to get involved in numerical simulation at a time when this was still a relatively new field. . . I still think fondly of Dr. Uherka for his support, both as a teacher and a member of my graduate advisory committee."

PROBLEM SOLVED

The Problem Section in the September 2004 issue of *Math Horizons* has recognized UND Mathematics students **Nathan Axvig**, **Jeremiah Bartz**, and **Robert Waddle** for having solved a problem on rational versus irrational numbers. *Math Horizons* is a well-known journal published by the Mathematical Association of America. Good work Nathan, Jeremiah, and Robert!



Here are the new Graduate Teaching Assistants (GTA's) for this semester:

Asare Adu Boampong is from Ghana. He did his undergraduate work at the University of Cape Coast, in Ghana, majoring in mathematics and statistics.

Jeremiah Bartz is from Bismarck, ND. He did his undergraduate work here at UND, majoring in mathematics and mechanical engineering, and minoring in statistics.

Sofokli Garo comes from Albania. As an undergraduate, he majored in mathematics and minored in education. Sofokli worked in Albania for twenty years as a high school math teacher and for ten years as a high school principal. He moved to the US two years ago, and last year he taught mathematics in a small high school not far from Grand Forks. Sofokli has a son attending college and a daughter attending Red River High School here in Grand Forks.

Daniel Perlov is from Winnipeg, Manitoba (Canada). Daniel's undergraduate major was mathematics. His mathematical interests include analytic number theory (the Riemann Hypothesis, the zeta function, and the Prime Number Theorem) as well as complex analysis.

Jason Smith is from Milroy, Minnesota. He earned his undergraduate degree at the University of Minnesota Morris, majoring in computer science and mathematics. His academic and scientific interests include cryptology and theoretical computer science. Jason also enjoys volleyball.

Michael B. Stafford is originally from South Dakota. He received his B.S. from Hillsdale College and his M.S. from Michigan State University. As an undergraduate, he majored in chemistry, mathematics, and German. He has taught in the northern and southern regions of the US, as well as in Australia (for three years) and in Africa (for eighteen years).

We welcome all of the new GTA's, and we hope your studies here are enjoyable and successful!



Dr. Milt Winger

MILT WINGER DISCUSSES THE PAST AND THE PRESENT

By Larry Peterson

I recently visited with former Mathematics Chair and Professor Emeritus, Dr. Milton E. Winger. Many of you know Milt, since he was with our department for many years. We discussed the past as well as some of the things Milt is doing right now. I would like to share some of his thoughts and comments with you.

Milt grew up in Mayville, North Dakota, where his family ran a chick hatchery. Milt graduated from what is now known as Mayville State University with a B.S.Ed. degree with majors in mathematics and natural science. Upon his graduation from Mayville, Milt volunteered for the US Army. This was during the Korean War, and most US soldiers at the time went to Korea. But it had also been only a few years since the end of World War II, and Milt's assignment was to serve in the army that was occupying Germany. He was stationed near Stuttgart. In addition to performing his regular duties, Milt taught some night classes in mathematics and English. The students in these classes were mostly GI's.

Shortly before the end of his military service in 1955, Milt sent a handwritten letter to Dean Kieffer, of the Graduate School here at UND, to apply for admission. Milt began his graduate studies in mathematics

here during the summer session of 1955, almost immediately after his return from the military. There were no GTA's at the time, but Milt was paid to teach a remedial-type mathematics course.

Milt finished his master's degree at the end of the summer session of 1956. The Mathematics Chair at this time was Dr. Raymond C. Staley. Staley had been the Chair since the 1930s. At this time two employers contacted Dr. Staley, asking for people to fill openings. Staley passed out these opportunities to the graduating students of his choice. He sent one student to apply for a job in Montana, and he sent another student to apply for a job at Hamline University, in St. Paul, Minnesota. Milt wondered why Staley was giving these jobs to the other students. But then Staley offered Milt a job right here at UND, which Milt took.

Staley retired in 1959, and Philip A. Rognlie served as acting Chair for the 1959-1960 academic year. Most of the Mathematics faculty of this era did not have Ph.D.'s. The situation was changing, however. One day Rognlie came to a meeting and said "The handwriting is on the wall. If you want to teach at the college level, you have to get a Ph.D." George Starcher was the president of UND at the time. Starcher's policy was that no one could be promoted to the rank of full professor without a Ph.D. This was the period of Sputnik (the first space satellite, which the Russians launched). There was a renewed interest in science and education. The US National Science Foundation (NSF) was created at about this time. This may have accounted for Starcher's policy.

In the years following the "handwriting on the wall" comment, many UND Mathematics faculty took leaves of absence to study for the Ph.D. Milt did not do so immediately, however. But beginning in 1959, Milt began to attend special NSF-funded summer institutes. In 1959, Milt attended a summer statistics institute in Laramie, Wyoming, which was staffed by people from Iowa State University. In the years to follow, Milt attended summer institutes at such places as the University of South Carolina, New Mexico State University, Michigan Tech, and Virginia Tech.

From the fall of 1968 to the summer of

1970, Milt studied for his Ph.D. in statistics at Iowa State University in Ames, Iowa. For the first year, he had been given a sabbatical leave from UND, and he worked as a part-time instructor at Iowa State. He was in charge of large lecture sections of elementary statistics courses. An NSF program called COSIP funded Milt for the 1969-1970 academic year. This period, of course, was during the Vietnam War. Milt told me some interesting stories about how the war seemed to affect the campus life at the time. But for reasons of brevity and relevance to mathematics, it is probably better that I not include these stories here!

After Milt returned to Grand Forks in the fall of 1970, he took a preliminary exam for his Ph.D. Although Milt was still an Iowa State student, the exam took place here at UND. It went on for eight hours a day and for three days. Throughout the period from 1970 to 1972, Milt frequently traveled to Iowa State to consult with his adviser, and he spent the summer of 1971 at Iowa State. Milt received his Ph.D. in the spring of 1972 at the age of 40. He says that his fellow graduate students used to call him "Uncle Milty." In 1979, Milt was promoted to the rank of full professor. It was at about this time that Milt served as an associate editor for the College Mathematics publication of the Mathematical Association of America (MAA).

Over the course of Milt's career at UND, the Mathematics Department has undergone significant changes. One such change involved the role of the department Chairperson. During the first part of Milt's career here, it was assumed that the person appointed as Chair would hold this position permanently. Around 1980, however, the Mathematics Chair, Dr. Ron Bzoch, led in the establishment of a set of departmental bylaws that included the election of a Chairperson every three years with a limit of two successive terms. In 1984, Milt became the first elected Chair of the Mathematics Department, replacing Ron Bzoch, who had been Chair for the previous eighteen years. Milt served as Chair for six years. Ron continued with the department as a regular faculty member until 1992, when Milt and Ron both retired.

I first met Milt in 1989 when I visited the depart-

ment. We had a very positive meeting, and Milt introduced me to several people in the department. I enrolled in the M.S. program here a few months later at the start of the new semester in January 1990. It was at about this time that Milt established the Math Log newsletter that you are now reading.

Looking back, Milt has positive thoughts about many things. He thinks highly of the NSF, saying that the NSF is one of the best of all programs funded by the government. He also thinks very highly of the "GI bill," which allowed many students to attend college who would have been unable to attend college otherwise. Milt admires the early members of the Mathematics Department who struggled through the depression of the 1930s and kept the department going afterwards. He also expressed high regard for three particular World War II veterans: Phil Rognlie, Ken Hankerson, and Ed Nelson. Finally, he also expressed pride in the achievements of many of his past students, and he is happy to think that he may have influenced them in a positive way.

Milt currently lives in Grand Forks with Marjorie, his wife for the past fifty years. For a few years after his retirement, Milt and Marjorie would go to Arizona for a couple of months each winter. Because of health problems, however, the two usually stay in Grand Forks throughout the year now.

Milt keeps in touch with us here in the Mathematics Department. He is in good health, and he does his own yard work. He attends the picnics and lunches that we have here periodically, and he helps out with the Math Track Meet, a mathematics competition for public school students in the area, which the Mathematics Department hosts in February of each year. Milt continues his membership in the MAA, a membership which he began in 1956. He has been a volunteer tax consultant for the AARP/IRS program for twelve years.

I asked Milt if he had any advice for the young people of today. He responded by giving some advice about careers: "Find something you really like and are reasonably good at. Not everyone is an Einstein. Don't make your choice based on what will make the most money."



THE PSEUDO-SUM

By Larry Peterson

Those of you who are familiar with the Math Log will notice a different face next to this column. For several years Tom Gilsdorf has written the "Pseudo-Sum" column and edited the Math Log. Tom is just as active in the Mathematics Department as ever. In fact, he is now our acting Chairperson. But he wanted to spend more time on other things, so last spring Tom asked if anyone else was interested in editing the Math Log. After some hesitation, I volunteered for the job. The quality of the jokes in the Math Log may never be the same again! But Tom has given me some very valuable help and advice on how to prepare the Math Log, so many of the features of the Math Log will continue as in the past.

We are trying some new things as well. With help from Donna, here in the Mathematics Department, we are using a new computerized desktop publishing pro-

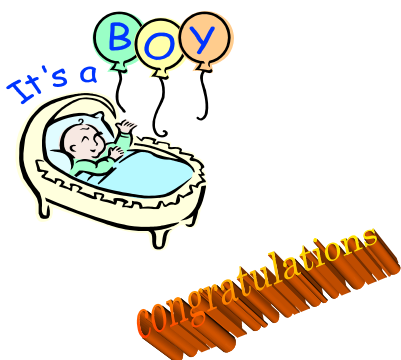
gram to prepare the Math Log. This program allows us to include special graphics in each issue, and we can embed photographs right into the Math Log file. The publishing program allows us to adjust the brightness and size of each photograph. Our hope is that this will make the photos look better after we have the Math Log duplicated. Feel free to let us know what you think of the Math Log's new format. We hope to put the Math Log onto the department Web site (which is located at

<http://www.und.nodak.edu/dept/math>).

In the future you may be able to view color versions of the photographs that you see here! But in any case, the paper version of the Math Log will continue as well.

I hope you enjoyed reading the little write-up on my visit with Milt Winger. Look for more things like this in the future. I hope to provide you with additional information on interesting things that people are currently doing right here in the department and around university as well as news and information from other retired members of the Mathematics Department. Let me know what types of things you like the most!

I wish you all the best of luck in what you are doing. Keep us posted on any big (or small) developments! And as usual, if you are in the Grand Forks and East Grand Forks area, feel free to stop by the Mathematics Department. We still have the coffee pot, and it is always on (at least during normal working hours)!



Carter Andrew Byron was born at 11:05 A.M. on Saturday, July 10, 2004. He weighed 8 lbs, 9.5 oz and measured 20.25 in. His parents are Gwennie and Andy Byron. Gwennie is a lecturer here in the Mathematics Department. Congratulations to Gwennie and Andy!

As of publication time, the following persons are responsible for monetary gifts to the UND Alumni Association specifically designated for the improvement of the Department of Mathematics.

Mr. and Mrs. Paul J. Lee
Richard and Alta Starr
Mr. and Mrs. Ulric Q. Johnson
Drs. Lee and Deann Christianson
Biju L. Chen (in memory of Ted)
Annette F. Kohlmeier
Dr. Mary P. Bryngelson
Rodney B. McKinney

Mr. and Mrs. Rodney C. Kjellberg
Irving D. Thompson
Mr. and Mrs. Joseph A Guzek
Harriet T. Hager
Steven and Cabrini Leno
Young Jun Choi
A T & T Foundation (matching Thomas P. Wirtz)
Cynthia Gunnarson

BJERKAAS SCHOLARSHIP FUND
Col. Carlton Bjerkaas

BZOCH SCHOLARSHIP FUND
Bob Tomper
Raytheon Company (matching Maryanne Romero)

THANK YOU

Your generosity is gratefully acknowledged and sincerely appreciated.

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FOR THE MATH LOG