

View from the Chair...

Because of the tragic events of September 11, 2001, at this writing, the entire University community is in a somber but determined mood. The world has been changed forever; we can no longer take for granted our security and way of life.

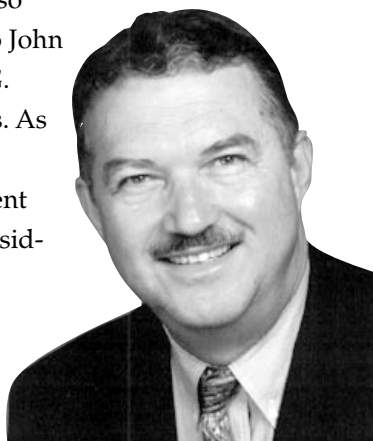
We are determined, however, that the University will return to "life as usual." It's been difficult for us to focus on teaching, research and service, but as the terrible events recede in time, the task of restoring normality becomes somewhat easier.

I am sorry to report that FSU Mathematics lost two of its retired faculty in the summer of 2001: Charles McArthur died on May 26 and Jim Snover died on June 8. In Ralph McWilliams' wonderful essay on the history of the Department, included in this issue, you will read about the accomplishments of Charles and Jim. They were wonderful colleagues who provided great leadership and service to the Department and they will be missed.

On a brighter note, 2000-2001 was the biggest hiring year in the history of the Department. Six new faculty members have joined our ranks, as the Dean explains in his introductory article. These individuals bring strength and vitality to both the traditional areas of mathematics and new interdisciplinary areas the Department has chosen to emphasize.

The 2000-2001 academic year also brought a named professorship to John Bryant, who became the Orville G. Harrold Professor of Mathematics. As you will read in Ralph's history, Orville was chair of the Department from 1964 to 1974, a period of considerable growth.

De Witt Sumners



Complete
History
see page 3

Don Foss

Welcome...

to the first issue of Volume II of the FSU Department of Mathematics newsletter. Because this is our University's sesquicentennial year, we have decided to focus on the Department's past and present – from its inception, when Florida State University grew from the excellence of Florida State College for Women, to the hiring of our newest faculty members, who have come to us with mathematical expertise not available to their predecessors.

Both the Department and the field of mathematics itself have experienced tremendous growth since the Second World War. In little more than fifty years, since its inception in 1947, the FSU Department of Mathematics has grown into an academic resource that conducts research on an international scale.

We have moved into an age when a man-made machine can compute in one second – 2.5 trillion calculations – what it would take a human 2 million years to complete. We have such a computer on our campus, available for faculty and student research – the RS/6000 SP Supercomputer.

Progress is about more than number crunching, however, even in mathematics. On our campus, it is about people. As you read, you will "meet" the newest members of our faculty team. Without men and women with a desire to share their quest for knowledge with their students, a university is a collection of buildings and equipment. Our instructors are the heartbeat of this institution and their students' best resource.

In previous issues, we have shared our triumphs – departmental improvements, extensive web services, innovative new programs (such as our computer-assisted liberal arts courses), alumni success stories, awards received for excellence and faculty/student research.

All who have participated in our programs can be proud of what we have accomplished in our brief history. Here, Ralph McWilliams offers an overview of the Department's accomplishments and Chris Hunter focuses on advancements in Applied Mathematics. We hope to continue these reflections in other areas with our Spring issue.

We invite you to sit back and reflect with us on these advancements and the excellent historical foundation upon which they are based. It is our hope that you will enjoy reading this newsletter as much as we have enjoyed compiling it for you.

**Introducing
our new**



Hurdal



Aldrovandi

ETTORE ALDROVANDI

Assistant Professor

Mathematical Physics

Aldrovandi received his Ph.D. from the International School for Advanced Studies, Trieste, Italy in 1992. His research interests are algebraic geometry, complex analysis and quantum computing.

"I'm a Mathematical Physicist. In particular, I study the mathematical implications of String Theory for the geometry of Riemann Surfaces – a classical topic in mathematics, but still a source for many beautiful results. We call this string theoretic-motivated approach "Quantum geometry of Riemann Surfaces." In the process, I deal with a series of new higher algebraic structures called "Gerbes," or "Sheaves of Categories."

RICHARD BERTRAM

Assistant Professor

Biomedical Mathematics

Bertram was awarded a Ph.D. from Florida State University in 1993. His research interests include biomedical mathematics, dynamical systems and applied mathematics.

"I research in the field of mathematical biology and am currently working on three projects. The first, funded by the National Institute of Health, focuses on the development of computational methods for determining the 3-dimensional atomic structure of proteins using data from different sources, such as X-ray crystallography and nuclear magnetic resonance. The second, funded by the National Science Foundation, involves the development of mathematical models of insulin-secreting pancreatic beta-cells, with the ultimate goal of understanding problems leading to late-onset diabetes. The third project focuses on models of signal transduction and short-term memory in nerve cells. Efforts are underway to understand and model the G-protein signaling pathway, which plays an important role in how nerve cells filter information."

SERGIO FENLEY

Associate Professor

Geometric Topology

Fenley was awarded his Ph.D. from Princeton University in 1989. His research interests include foliations, 3-manifolds and Kleinian groups.

"My specific research involves interactions between foliation and geometric structures in 3-manifolds, particularly if the manifold is hyperbolic. This includes codimension one foliations, in general, as well as global structure of, and the universal circle for, foliations. I also focus on reometric structures and eometrization of 3-manifolds; dynamical systems (Anosov and pseudo-Anosov flows in 3-manifolds, particularly topological and geometrical structure of Anosov and pseudo-Anosov foliations); metric and homotopic properties of flows in 3-manifolds; laminations in surfaces and 3-manifolds; geometric group theory; contact geometry and topology (particularly in 3-manifolds) and relationships between contact structures and foliations."

MONICA HURDAL

Assistant Professor

Biomedical Mathematics

Hurdal earned a Ph.D. from Queensland University of Technology, Brisbane, Australia in 1999. Her research interests are biomedical mathematics and scientific visualization.

"My research involves modeling medical data, in particular, neuroscientific data. Using data from MRI (magnetic resonance imaging) scans, a team of researchers and I have developed a method to create a

3D reconstruction of the surface of the brain. I apply the methods we have developed and "unfold and flatten" this surface to create a flat map of the brain like you might create a flat map of the earth. We use these maps to compare functional brain activity across different subjects to study diseases such as cerebellar ataxia, schizophrenia and bipolar disorder."

ALEC KERCHEVAL

Associate Professor

Financial Mathematics

Kercheval earned a Ph.D. from the University of California at Berkeley in 1987. His research interests include financial mathematics and dynamic systems.

"I am interested in the mathematics of price and risk for financial instruments, with an emphasis on fixed income. Current projects include developing a method for efficiently aggregating risk models for multiple markets, modeling credit risk in Europe and the United Kingdom and developing a multifactor interest rate model for convertible bonds to be implemented with monte carlo simulation."

QI WANG

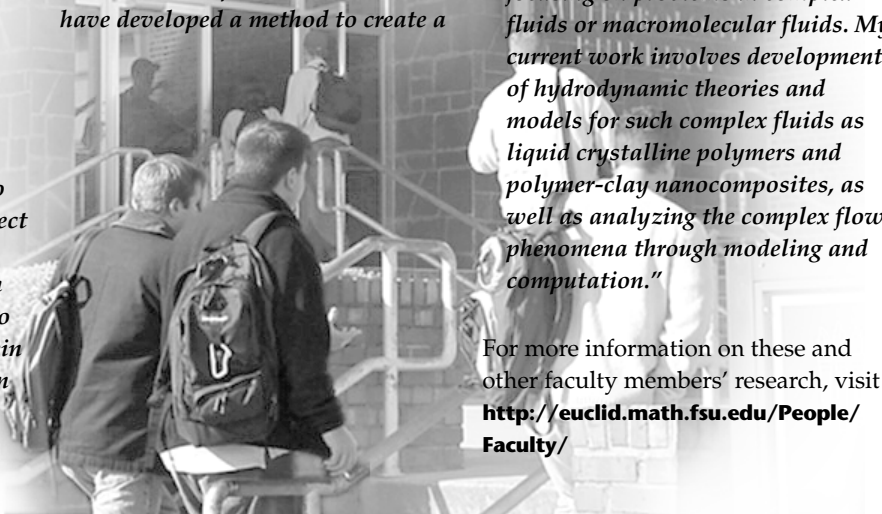
Associate Professor

Applied Mathematics

Wang received a Ph.D. from Ohio State University in 1991. Her research interests are applied mathematics, computational mathematics and fluid dynamics.

"My research is in applied and computational mathematics, focusing on problems in complex fluids or macromolecular fluids. My current work involves development of hydrodynamic theories and models for such complex fluids as liquid crystalline polymers and polymer-clay nanocomposites, as well as analyzing the complex flow phenomena through modeling and computation."

For more information on these and other faculty members' research, visit <http://euclid.math.fsu.edu/People/Faculty/>



A History

By Ralph McWilliams

Mathematics at Florida State University has developed tremendously since the early days of the University and the even earlier days of Florida State College for Women (FSCW). Yet, today's Department of Mathematics owes much to the dedication and quality of all those who have labored through the years.

A former dean of the College of Arts and Sciences, Bob Lawton, used to say that because of the faculty's commitment to building a great university, the College was better than one would expect on the basis of its allocated resources. That statement was true when it was spoken three decades ago, and it is true today, both of the College and of its Department of Mathematics.

Through the years, mathematics faculty have carried full, and often heavy, teaching assignments, usually at all levels. At the same time, they have generally maintained, and often accelerated, their research productivity, moving into new or expanded directions and applying theoretical expertise to extremely significant applications.

While generously and wisely advising students at all levels (Nick Heerema was Burt Reynolds' adviser when the actor was a basic studies student), our faculty members have also completed a gigantic amount of committee work within the Department, the College, the University and many professional societies.

The Early Years

Until 1946, Mathematics had only two faculty members and was housed in the History Building, now the Williams Building.

For many years, the Department head was Elmer Riggs Smith, who joined the faculty in 1905 and served as Secretary of the Faculty of FSCW. He retired in 1942 and Smith Hall is named in his honor. The second faculty member was Olga Larson, who came in 1915 and taught until 1952.

The program for an undergraduate major required a prescribed number of hours above 100-level mathematics and approved collateral courses in other areas.

The 1940s were almost as exciting for FSCW and its mathematics department as for the world at large. In 1942, Edward Conradi retired as University president and was succeeded by Doak Campbell. The College offered special courses to meet

war needs, including a rapid review of mathematics.

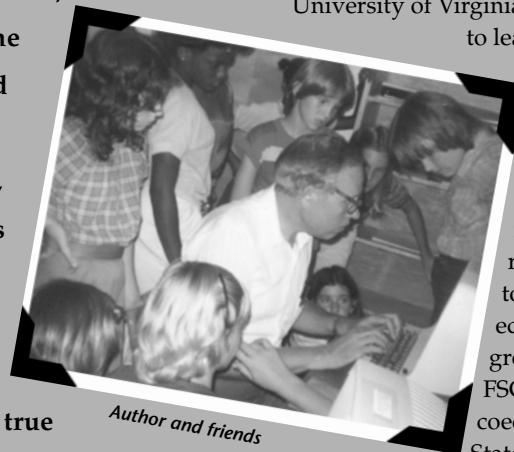
In 1943, Thomas Wade, an algebraist who had received his Ph.D. from the University of Virginia, came from Mercer

to lead the Department through twenty years of growth and development. Male students first appeared on campus in 1946 when veterans returned from the war to continue their education. The faculty grew also, and in 1947, FSCW became the coeducational Florida State University.

The master's program in mathematics was first offered in 1948. By 1949, there were thirteen faculty members, including five instructors. Even during those earliest faculty appointments and curricular developments, the goal was to become a comprehensive university in which research, graduate and undergraduate programs and service to the state were of supreme importance.

The Department has taken its undergraduate and service responsibilities seriously. One or two mathematics courses have always been required of all undergraduates. Students of many other departments or colleges have also sought advanced mathematics. The Department offered a two-year pre-engineering curriculum in the early years, and until 1959, when Statistics became a separate department, provided those courses, as well.

By the late 1940s, most of the Department was housed in a former classroom on the third floor of Westcott Building. Two of the faculty shared an "office" dressing room adjacent to the Auditorium that was so narrow one of them had to stand for the other to reach his chair. Most mathematics classes were



Author and friends

taught in the History or Westcott Buildings.

Mathematics has always shared the Love Building with other departments and, for many years, with the University's computing center. The Department has found offices and classrooms wherever it could in other buildings, including World War II relics and doublewides.

One of the "49ers" faculty, who joined the University that year, was functional analyst Dwight Goodner. He and his wife established fellowships that are still awarded annually to outstanding graduate teaching assistants. He also served for several years as associate dean of the Graduate School.

The Fifties

By the early fifties, the Department occupied the second floor of a white wooden house called Parkside, located on the south side of Jefferson Street. Space was at such a premium that the Head's office was a former sleeping porch. Another senior faculty member occupied a small, still-tiled former restroom.

Among the faculty hired in 1950 was Howard Taylor, a complex analyst who served as associate chair of the Department for several years. Algebraist Nick Heerema, who came in 1951 and still teaches each semester, despite his "retirement" in 1990, loves teaching and his students enjoy his classes. Analyst Jim Snover, for many years the coordinator of basic mathematics courses, and topologist Bob Plunkett, who came in 1954 and remained for more than a decade, were immortalized in the couplet, "Flunk it with Plunkett; take it over with Snover."

Others who came and stayed were topologist H. C. Griffith in 1955 and functional analyst Charles McArthur in 1956, a major professor to 17 Ph.D. students, Department chair (1974 to 1980) and member of the Board of Governors of the Mathematical Association.



In 1958, E. P. Miles began in partial differential equations and directed FSU's computing center for more than a decade. Algebraist Marion Tinsley, who stayed for several years, held the distinction of being the

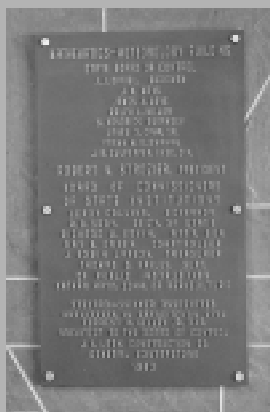
checkers champion of the world. In those days, our faculty participated in FSU's Eglin Air Force Base Graduate Program.

As the years rolled on, research and the graduate program continued to be the Department's focus. The doctoral program was established in 1959. Faculty/student research was mainly in the pure mathematics areas of functional analysis, algebra and topology, but already the need for applied mathematics was being felt. The first Ph.D. was granted in 1962. By 1969, forty-one had been earned. In the year 2000, that number increased to 143 doctoral degrees.

In 1956, there were no research grants. By 1961, there were seven, mostly from the National Science Foundation. For comparison, it may be noted that in the five-year period just before 1990, there were 37 from several different agencies and companies.

Early on, mathematics faculty participated in National Science Foundation institutes; Jim Snover directed several. The Department has always worked closely with Mathematics Education, and for many years, Gene Nichols was a designated lecturer. The Department now participates in the Arts and Sciences interdisciplinary major in Secondary Science and/or Mathematics Teaching.

Faculty, staff and students have always held social functions, such as receptions, parties, picnics, bridge and athletic teams. Once, in the early days, the Department's poker group was raided by Tallahassee's finest. The Love Building re-earned its name when a wedding was held there, uniting mathematics and statistics graduate students. The second- and third-floor coffee rooms have always contributed to



departmental camaraderie.

Joining the faculty in 1959 were topologist Morton Curtis, a senior faculty member who influenced the Department more than his few years here would suggest, and functional analyst Ralph McWilliams, who later served as associate chair (1969 to 1984), chair (1984 to 1990) and coordinator of basic courses (1990 to 1994).

The Sixties

In 1961, the Department moved into the newly completed Love Building. It was delightful, but crowded from the beginning. The daughter of James Jay Love, who had served as chairman of the Board of Control that oversaw the State University System, participated in the formal dedication ceremony. A highlight of the event was her reference to her father and FSU president Robert Strozier sitting on the veranda of heaven, smoking their cigars and discussing the future of the University.

Bob Storey came to the Department in 1960, a young man of great promise who died of cancer just four years after joining the faculty. In a show of compassion, the Department and dean assigned him to team-teaching long before that practice became popular so that he could teach on the days he felt well enough and remain on the active faculty as long as possible.

During the next decade, there were many appointments, including those of several people who played important parts in the development of the Department before moving on. Among those who came to stay were topologist Jim Andrews in 1961, algebraist Fred Kreimer in 1962 and algebraist Robert Gilmer in 1963. Kreimer later served as president of the Faculty Senate and chair of the Department (1990 to 1993). Gilmer, who was the first of three Lawton Distinguished Professors from the Department (1982), bore much of the work of creating its bylaws.

In 1964, topologists Orville Harrold and Shinichi Kinoshita joined us, with Harrold serving as Department chair (1964 to 1974) and going on to serve as an Associate



Secretary of the American Mathematical Society. Algebraist Joe Mott, functional analyst Wilbur Stiles and E. C. Young in partial differential equations came in 1965, as did Tom Hallam in ordinary differential equations and others. Mott has served as director of graduate studies and Stiles has been director of basic mathematics since 1994.

Topologist John Bryant, who came to us in 1966, later served as chair (1980 to 1984), was named the Orville G. Harrold Professor of Mathematics in 2000, is a Distinguished Research Professor and serves as an Associate Secretary of the American Mathematical Society.

DeWitt Sumners and Perrin Wright, both topologists, arrived in 1967. Sumners, Department chair since 1999, is a Distinguished Research Professor and was the 1997-98 Lawton Distinguished Professor. Wright served as associate chair from 1984 to 1999. In 1968, new faculty included topologist Chris Lacher, applied mathematician Dave Loper

and analyst Phil Novinger. Loper, who later moved to Geology, is a Distinguished Research Professor who has served as director of applied mathematics and director of the Geophysical Fluid Dynamics Institute. Lacher, a Sloan Fellow, has moved to the Department of Computer Science, which he has served as chair.

Applied mathematician Steve Blumsack and logician Hilbert Levitz joined the faculty

in 1969. Levitz, who later moved to Computer Science, sometimes teaches logic courses today. Blumsack has served as the director of graduate studies and has been active in the Institute and program in Geophysical Fluid Dynamics.

The Seventies

The need for applied mathematics became more critical as time went on. In 1970, after consultation with C. C. Lin of M.I.T., Chris Hunter was appointed the director of Applied Mathematics. For a few years, he was also the Department's associate chair, was named a McKenzie Professor in 1991 and served as chair from 1993 to 1999. Topologist Wolfgang Heil also joined the Department in 1970.

New courses and degree options were

added during these years. For the bachelor's and master's degrees, the options were Mathematics and Applied Mathematics; the master's option was College Teacher Training in Mathematics and doctoral options included Algebra, Analysis or Topology and Applied Mathematics, including Computer Science. Differential equations became generally regarded as part of Applied Mathematics.

In 1971, complex analyst Jack Quine and applied mathematician Chris Tam joined the faculty. Quine now directs the master's option in Biomedical Mathematics jointly with Sumners. Tam is a Distinguished Research Professor and was named the University's Lawton Distinguished Professor for 2000-2001.

Beginning in the early 1970s, a number of computer scientists were appointed to the applied mathematics group within the Mathematics faculty – Ted Baker, current chair of computer science; Abe Kandel, who was director of Computer Science within the Mathematics Department and later was the first chair of Computer Science, and Lois Hawkes and Greg Riccardi.

In 1974, the Department adopted a system of bylaws calling for an elected chair, an elected faculty evaluation committee, an executive committee and a curriculum committee. Charles McArthur became the first elected chair. Functional analyst Steve Bellenot and complex analyst Dan Oberlin joined the faculty in 1974, as did Warren Nichols in 1978.

The Eighties

Around 1980, there were separate degree options in computer science for the bachelor's and master's degrees, and there was a broadly based master's option in mathematical sciences. In 1980, the name of the Department changed to Mathematics and Computer Science; four years later, Computer Science became a separate department and the name of the parent department again became Mathematics. Although Levitz and Lacher moved to Computer Science, they hold courtesy appointments in Mathematics, as does Loper, who moved to Geology.

Louis Howard, an applied mathematician and member of the

National Academy of Sciences, joined the Department in 1981. In 1986, when he was named a McKenzie Professor, the "McKenzie" was not immediately attached: Lou was fond of saying that he was a named professor, but that he didn't know what his name was.

In 1982, applied mathematician Mike Mesterton-Gibbons and complex analyst Bettye Anne Case joined our faculty. Case was coordinator of basic mathematics for several years, which included the planning and setting up of the Mathematics Help Center. She now directs the bachelor's degree program in actuarial science and the master's option in financial mathematics. She has also served on several national committees of professional societies.

Applied Mathematician Jerry Magnan came to the Department in 1983 and topologist Phil Bowers joined the faculty a



year later. Bowers has served as associate chair of the Department since 1999. Applied mathematician Dave Kopriva and complex analyst Craig Nolder arrived in 1985. Kopriva is currently the director of applied mathematics, is active in the School of Computational Science and Information Technology and holds an appointment in Mechanical Engineering.

Sam Huckaba, analyst David McMichael and applied mathematician Ionel (Mike) Navon arrived in 1987. Huckaba currently serves as associate chair for graduate studies. Navon has served as director of applied mathematics and is now program director in the School of Computational Science and Information Technology. After serving for more than a decade in the Department, McMichael has accepted a position in the insurance industry.

Photos provided from the archives of Robert Gilmer

A History of the Program in

By Chris Hunter

The 1960s were heady growth years for the Mathematics Department. The first Ph.D. degree was awarded in 1962. The doctoral program in mathematics was at first limited to specialization in algebra, analysis or topology, which reflected the predominantly pure mathematical interests of the faculty at that time, typical of many U.S. mathematics departments.

There was much federal support for graduate students in the post-Sputnik days: universities were expanding rapidly and there were many academic positions for new Ph.D.s. However, the Department's focus seemed to other science departments on campus to be too narrow. One of the ways in which FSU distinguished itself after it became a university in 1947 was by building strength in the sciences.

Many saw the need for a greater emphasis on applied mathematics to better serve the needs of the rest of the University. In fact, the newly created and interdisciplinary Geophysical

Fluid Dynamics Institute used its faculty lines to hire two young applied mathematics faculty members in 1968.

An interdisciplinary Committee on Applied Mathematics, set up in 1969, recommended to Dean Bob Lawton that an applied mathematics program be organized as a distinct division within the Mathematics Department and given an appropriate measure of independence. The recommendation was accepted and I came to FSU as that program's first director in the fall of 1970.

The first year was eventful. By the summer of 1971, we had added degree options in applied mathematics at the bachelor's, master's and doctoral levels, even though we had limited faculty to teach the new courses added to the curriculum. We also added degree options at the bachelor's and master's level in computer science. Although we did not specifically add a doctoral option in computer science, the doctoral requirements in applied mathematics were sufficiently broad that they allowed two students to graduate with dissertations on topics in that area in the early 1980s.

Applied mathematics met student demands for degrees in computer science without obtaining Board of Regents approval for a new degree program. Very few faculty were available to teach computer science courses, and only gradually were we able to add more. A director was acquired in 1978 and Computer Science became a separate department in 1984.

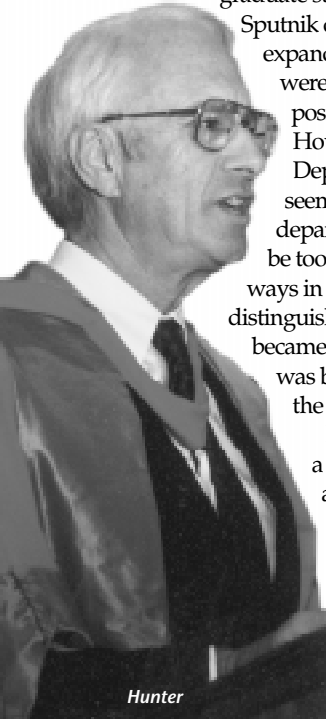
My hope was always to build a broad-based

program that covered a wide range of applications of mathematics. The opportunities appeared to be good because 1970 projections had the Department adding three new applied mathematics faculty members every two years for the foreseeable future. Those projections, as well as the higher ones for pure mathematics, proved to be wildly optimistic.

If the projections for applied mathematics alone had been correct, that faculty would today be larger than the total number of our entire Departmental faculty. Instead, a sequence of budget cutbacks caused hires during the 1970s to be sparse; many were in computer science because that was where the need was greatest. The sea change from the 1960s, reduced resources and conflicting demands, caused considerable strains in a Department that had only recently accepted the idea of a more limited program in applied mathematics. I have no doubt that the decision to develop computer science was correct. It was argued by some that computer science might prove to be a fad: maybe so, but the "fad" is still going strong after thirty years!

The continuing applied mathematics program was slow to increase. In fact, no applied mathematics faculty members were hired from 1971 until 1981. Then, inclusion of applied mathematics in the University's Quality Improvement Program (QIP) allowed us to make a senior appointment, that of National Academy of Sciences member Lou Howard, and later two junior faculty.

The majority of applied mathematics faculty



Hunter

The Nineties

Topologists Eric Klassen and Washington Mio joined the faculty in 1990, and algebraic geometer Paulo Aluffi arrived in 1991.

In 1994, the Department decided to focus its hiring and use of resources on the area of "Computational Mathematics: Symbolic and Numeric Computation." A year later, Mika Seppala came to the Department to work in complex analysis/symbolic computation. In 1996, Yousuff Hussaini and Gordon Erlebacher joined the faculty, with Hussaini as Eminent Scholar in High Performance Computing. Both Hussaini and Erlebacher now hold appointments in the School of Computational Science and Information Technology.

In 1997, algebraist/geometer Eriko Hironaka and Mark van Hoeij joined the faculty, as did applied mathematician Mark Sussman in 1999.

Into the New Millennium

Six new faculty members have joined our ranks in 2001 – mathematical physicist Ettore Aldrovandi, biomedical mathematicians Richard Bertram and Monica Hurdal, topologist Sergio Fenley, financial mathematician Alec Kercheval and applied mathematician Qi Wang. Bertram, a Florida State Ph.D., was one of Jerry Magnan's students.

Several associate or assistant professors of Mathematics teach and coordinate basic courses and guide the graduate teaching assistants under the supervision of the director of basic mathematics.

Annette Blackwelder serves as associate director of basic mathematics, Ken Dodaro directs the Mathematics Help Center, Mickey Boyd is the Department's computer administrator and Karen Burgess, Jim Wooland, Ish (Jowhar)

Grigorian, Penelope Kirby, Mary Kutter and Linda Rogers have also joined our group. Kirby and Kutter are Ph.D. graduates of the Department. Many faculty have received University awards for outstanding teaching or advising, for which they deserve high commendation for their commitment to excellence.

Mathematics has always had an excellent support staff. Their dedication, expert ability and good humor have frequently been decisive in enabling the Department to carry out its responsibilities. Space does not permit the naming of each of them, but one among these outstanding individuals is Lilyan Essig, who



members have come through various extra-departmental initiatives. Two were hired in the 1980s through the Supercomputer Computations Research Institute and two in the 1990s, including Eminent Scholar Yousuff Hussaini, through the recently established School of Computational Science and Information Technology.

One consequence of our history – our inclusion in QIP was in partnership with Meteorology and Physical Oceanography, for example – has been that physical applications of mathematics have predominated in the applied mathematics program. Those applications have covered a broad range of problems relating to acoustics, astrophysics, engineering, geophysics, meteorology, physics and applied analysis.

Our graduates have ranged even more broadly. Eddie Qian (1993, Ph.D.) and Jay Webb (1993, PhD) now have professional positions in the finance industry. Both have returned to FSU to lecture and participate in the Department's new financial mathematics program. Quan earlier distinguished himself by being the Department's first, and so far only, Ph.D. who has won a National Science Foundation (NSF) Mathematical Sciences Postdoctoral Research Fellowship. Richard Bertram (1993 Ph.D.), who went from FSU to a postdoc at the National Institute of Health, has now returned to join the program in biomedical mathematics.

To date, 34 Ph.D.s have been awarded for dissertations in applied mathematics out of a departmental total of 143. The first, in 1974,

was the Department's 64th – another sign of those heady 1960s. The Department's 100th Ph.D. was awarded in 1990; roughly half of the Ph.D.s from then on have been in applied mathematics. Our Ph.D. graduates are now fairly evenly divided between academia and industry.

Bryan Travis (1974), our second Ph.D., made his career at Los Alamos National Laboratory. Bryan returned as a visiting professor in Spring 2000 and lectured on hydrology. Dale Burton (1979 Ph.D.) rose rapidly in industry to become Chief Engineer for Grumman Melbourne Systems Division, the division responsible for the electronics in the JSTARS aircraft that played an important role in Desert Storm and the Kosovo crisis. Andy Thies' (1995) story is told in Volume 1, Issue 2 of this newsletter. Due to space limitations, this is a selection only. We would like to hear from you: please send contributions for the Alumni Updates!

Applied mathematics faculty members have been professionally recognized both nationally and internationally. Lou Howard, who was already a member of the National and American Academy of Sciences when he came to FSU, was awarded the Fluid Dynamics Prize of the American Physical Society (APS) in 1996. Chris Tam won the American Institute of Aeronautics and Astronautics (AIAA) Aeroacoustics Award in 1987.

Lou, Chris and Yousuff Hussaini have all been elected as Fellows of the APS while at FSU. Chris was also elected a Fellow of both the Acoustical Society of America and the

AIAA. Mike Navon was elected a Fellow of the American Meteorological Society. Dave Loper, a 1968 pioneer, was elected a Fellow of the American Geophysical Union and is now primarily in the Geological Sciences, though he retains links with Mathematics. I was honored to be the 1995 winner of the Brouwer Award of the Division on Dynamical Astronomy of the American Astronomical Society.

Today's Department is very different from the one I joined thirty years ago. As readers have seen in previous issues, interest in the applications of mathematics is now widespread. Although this is a national trend, an external reviewer said of us in 1997, "I do not know of another mathematics department that has spawned, or is clearly associated with, so many departments and institutes."

I stepped down as director of applied mathematics for the last time in 1995. By then, I was Chair. A former dean with a long memory confided in me that he never expected to see an applied mathematician as the Department chair, but times change. The applied mathematics program is changing, too. Dave Kopriva, newly returned from his year at NSF, is the new director. There is to be a new initiative in industrial mathematics, for which Qi Wang, who helped found a similar program in Indiana, has joined us.

Freed from administrative responsibilities, I am back to teaching and research. I have added gravitational lensing to my interests: I am working hard on that topic with one current student and on galactic dynamics with another.

served for a quarter of a century, during the first several years of which she was the Department's only staff member.

Campus mathematical and actuarial societies offer opportunities for our students and faculty to share interests and socialize. The honorary Pi Mu Epsilon inducts students of high achievement. A seminar is held each fall on problems of the kinds found on the national Putnam examination.

For many years, a science or mathematics library was regarded as one of the Department's top-priority needs. That need was met in 1988 with the construction of the Dirac Science Library, located only fifty yards from the Love Building.

The Department's great progress in the past half century would have been almost unimaginable if not for the many who worked so hard to achieve that goal. Surely the developments of the next half-century will be even more breathtaking, and Mathematics will prove yet again that it is indeed the queen and handmaiden of the sciences.

Many of our graduates have kept in touch with the Department, and we invite all other alumni to do the same. In fact, we are in the process of creating an alumni database and would be happy to include your returned contact information on website alumni@math.fsu.edu.

Robert "Bob" D. Davis, Ph.D., 1969 writes: "I retired this year after 31 years at the University of Nevada, Reno. I came here after finishing my Ph.D. at FSU under Nick Heerema and I've been here ever since."

Keep Us Posted!

We'd like to hear from you! Please return this form, with a note about your present affiliation, to the address below.

Name _____

Address _____

FSU Degree(s) _____ Graduation Date(s) _____

Employer _____

Your News _____

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Staff Updates

Candace Laukea, Program Assistant for the Math Help Center, left her half-time position with the Department on September 28th to work full-time for the Dean of Students Office. She was a great help to the students in the Math Help Center and will be missed, but we wish her well in her new position.



Betty Stokes transferred to our Department recently from the Computer Science Department as a Senior Secretary. Ms. Stokes has been a great help to us, assisting the Office Manager in varied tasks, taking over all travel arrangements and working in the front office. She is a pleasure to work with and is always willing to assist with any task. We could not ask for a nicer lady to join our ranks.

Evangelous Robinson, the new Senior Fiscal Assistant, is another new face in the Department. Ms. Robinson is here on a temporary assignment, but we are very glad to have her for whatever time she is with us. She is a calming presence in



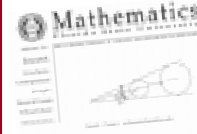
the chaos of financial matters. We hope to convince Ms. Robinson to make her stay in Mathematics a permanent one.

Randall White has accepted the new half-time position of Coordinator of Computer Applications. Dr. White is not a stranger to FSU. He was a student of Computer Science, just down the hall from Mathematics, where he earned B.S., M.S. and Ph.D. degrees. He has held various positions on campus and recently completed a stint as an Adjunct Instructor for the Computer Science Department. Dr. White's extensive skills are being put to good use as the Mathematics Department grows in faculty, students and staff. We welcome him and the expertise he brings to the Department.

You can now support the students and faculty of FSU's Department of Mathematics with a tax-deductible gift that will enhance our teaching and research efforts. Checks payable to FSU Foundation Mathematics Fund No. 0223 may be sent to: Philip Bowers, FSU Department of Mathematics, Tallahassee, FL 32306-4510 or to the FSU Foundation, Tallahassee, FL 32306-2660. Questions may also be directed to Dr. Bowers, Associate Chair, by phone (850.644.7405) or by email (bowers@math.fsu.edu).

Web Notes

To enhance Department web resources, our website now offers photo web pages of all Math graduate students. They look very similar to the new standardized faculty web pages announced in the last newsletter, and provide contact and course information for each of our



alumni. An online page editor eases the burden of keeping this important information up to date. It is now easier for personnel to attach a name to a face, and for students to find class information prepared by instructors. Visit <http://www.math.fsu.edu/People/GradStudents/> for details.

Our Virtual Library of Mathematics continues to grow in popularity and usage. In September 2001, the Library served over 20,000 visitors seeking the most complete collection of Math-related information on the web. Our Department has maintained this valuable resource for the Internet community since 1993. We receive new contributions to the site from all over the world. If you haven't visited the Library recently, check it out at <http://www.math.fsu.edu/Virtual>.

<http://www.math.fsu.edu>

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