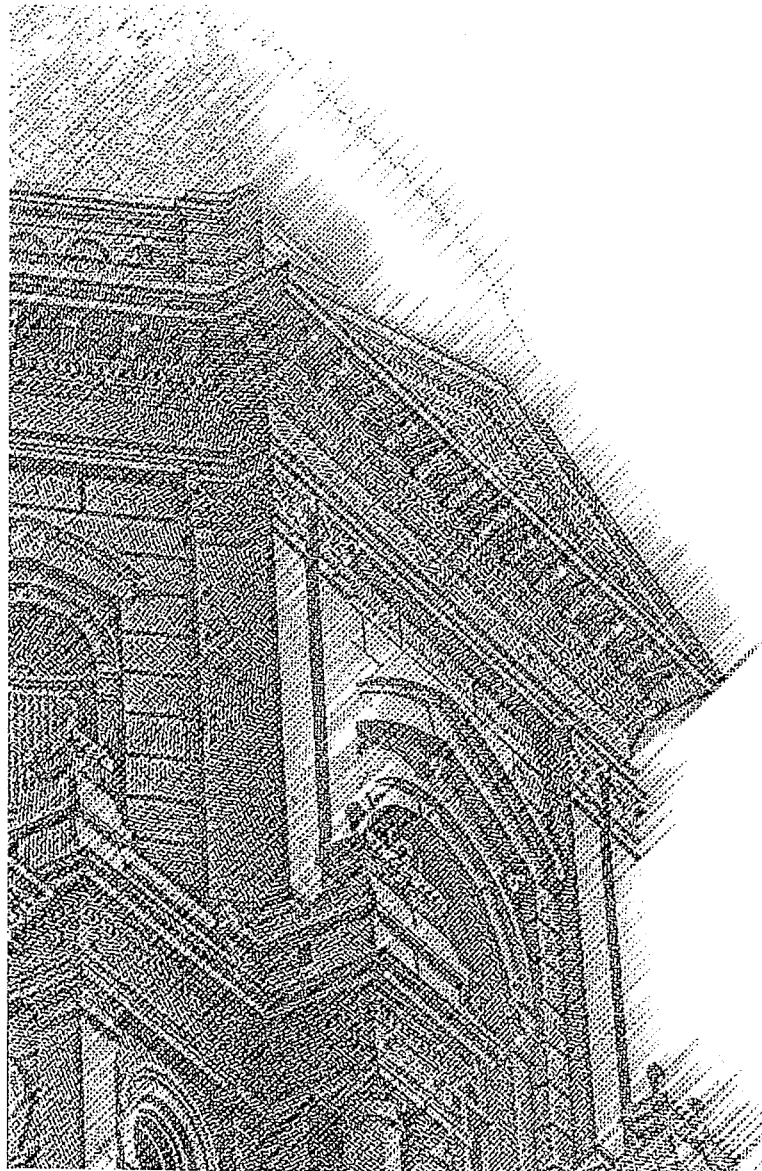


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Faculty Notes

Honors

Robert D. Bretz Jr., chairperson and professor of management, has been listed in the top ten of the most published researchers in the *Journal of Applied Psychology* and *Personnel Psychology*.

James H. Davis, associate professor of management, and **Jeffrey A. Bernel**, associate professor of management, have received a \$100,000 Kaufman grant for entrepreneurship.

Jane A. Devine, art and architecture librarian, has received the Worldwide Books Publication Award from the Art Libraries Society of North America for the book she edited, *100 Years of Architecture at Notre Dame: A History of the School of Architecture 1898-1998*.

Philip Gleason, professor emeritus of history, is serving this semester as Chester M. Alter Distinguished Visiting Professor at Regis University, Denver, Colorado.

James J. Kolata, assistant chairperson and professor of physics, has been awarded the Joon S. Moon Distinguished Alumni Award for the year 2000 by Michigan State University. Kolata is a corresponding member of the Mexican National Academy of Sciences and has been active in promoting scientific research in Mexico.

Ruey-wen Liu, Frank M. Freimann professor of electrical engineering, has been awarded the Institute of Electrical and Electronic Engineers Millennium Medal in celebration of the new millennium for his outstanding achievements and contributions to the Circuits and Systems Society.

Michael M. Stanisic, associate professor of aerospace and mechanical engineering, has been issued a U.S. Patent No. 6,026,703 for "Dexterous Split Equator Joint" along with J.M. Wiitala and S.J. Remis.

Tom Stober, assistant chairperson and associate professor of accountancy, co-authored (with Bamber and

Barron) the paper "Differential Interpretations and Trading Volume" which was recently listed on Social Science Research Network's Top Ten download list.

Activities

Ani Aprahamian, professor of physics, gave the invited "Vibrations in Nuclei: $K = 0^+$ bands in Deformed Nuclei," at the Centre de Spectrométrie Nucléaire et de Spectrométrie de Masse, Orsay, France, Nov. 25. He presented "From Exploding Stars to the Laboratory: Structure and Lifetimes of $N = Z$ Nuclei," at the Grand Accélérateur National d'Ions Lourds, Caen, France, Dec. 7. He presented "Nuclear Dynamics," at the Institute for Theoretical Physics, Gent, Belgium, Dec. 16.

Howard A. Blackstead, professor of physics, presented the following papers at the 6th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors held in Houston, Texas, Feb. 20-25: "Location and Properties of the Sr₂Yru_{1-u}Cu_uO₆," presented with J.D. Dow, **Dale R. Harshman**, visiting professor of physics, **David B. Pulling**, assistant professional specialist in physics, W.J. Kossler, A.J. Greer, C.E. Stronach, E. Koster, B. Hitti, M.K. Wu, D.Y. Chen, and F.Z. Chien; "Anomalies of high-temperature superconductivity," presented with M. Lehmann, J. D. Dow; "Eu_{2-z}Ce_zSr₂Cu₂RuO₁₀ superconducts in its SrO layers, not in its cuprate-planes," presented with J.D. Dow, **Dale R. Harshman**, I. Felner, **David B. Pulling**, W.J. Kossler, A.J. Greer, C.E. Stronach, E. Koster, and B. Hitti; "Four Predicted High-Temperature Superconductors," presented with J.D. Dow; "Magnetic resonance and surface resistance of Ba₂GdRu_{1-u}Cu_uO₆," presented with J.D. Dow, **Dale R. Harshman**, **David B. Pulling**, M.K. Wu, D.Y. Chen and F.Z. Chien; "The Nature of a Correct Theory of High-Temperature Superconductivity," presented with J.D. Dow.

Suzanne Carter, assistant professor of management, gave an invited talk "The double-edged sword of defending corporate reputation" at the University of Illinois-Champaign/Urbana-Organization Management Theory Faculty Colloquium series, Champaign-Urbana, Ill., Oct. 29.

Peter Cholak, McAndrews assistant professor of mathematics, gave the talk "Definable coding in the computable enumerable sets" at the University of Chicago Logic Seminar, Chicago, Ill., March 6.

Philip Gleason, professor emeritus of history, taught a seminar, "American Catholicism in the Twentieth Century" at Regis University, Denver, Colo. He also gave a lecture, "Through Many Toils: Catholic Higher Education in the United States" at Regis University Feb. 1. He led a group of administrators at Regis University in a discussion of Catholic higher education, Denver, Colo., Feb. 21.

Bei Hu, professor of mathematics, gave a presentation "Biharmonic functions and crack propagation" for the department of Mathematics at Northwestern University, Evanston, Ill., March 2.

Rudolph M. Navari, M.D., director, Walther Cancer Institute and professional specialist in preprofessional studies, organized and chaired a symposium sponsored by the North Central Indiana Ethics Consortium "Bringing Palliative Care to the Bedside" addressing issues on improving end of life care for physicians and health care professionals held at the University of Notre Dame, Notre Dame, Ind., Feb. 25-26. He presented an invited lecture "Ethical Issues in Palliative Care" at the Supportive Care Issues in Oncology Conference, Indiana University School of Medicine, Indianapolis, March 3.

Liviu Nicolaescu, assistant professor of mathematics, gave the talk "Seiberg-Witten theory of lens spaces" at the workshop on spectral geometry, topology and noncommutative geometry at Indiana University-Purdue University at Indianapolis, March 3-4.

James S. O'Rourke, IV, associate professional specialist in the College of Business, concurrent associate professor of management and director of the Eugene D. Fanning Center for Business Communication, hosted the third annual conference on corporate communication held at the University of Notre Dame, Notre Dame, Ind., Dec. 3-4.

Michael M. Stanisic, associate professor of aerospace and mechanical engineering, presented an invited lecture titled "Dextrous 3-Axis Pointing Systems and Their Extension into Singularity-Free General Purpose Manipulators" at the workshop on Kinematics and Manifolds held in Strobl, Austria, March 3.

Arvind Varma, Arthur J. Schmitt Professor of Chemical Engineering, presented an invited seminar titled "Inorganic Membranes for Reaction and Separation" at the DSM Research Center, Geleen, The Netherlands, March 3.

Publications

Mark S. Alber, associate professor of mathematics, co-authored "On Billiard Solutions of Nonlinear PDE's" with R. Camassa, Y. Fedorov, D.D. Holm and J.E. Marsde, published in *Phys. Lett. A*, 1999, pp. 171-178. He co-authored "On Solution-type Solutions of the Equations Associated with N-component Systems" with G.G. Luther and C. Miller, published in the *Journal of Math. Phys.*, vol. 41, no. 1, 2000, pp. 284-316.

Henry J. Castejon, assistant professional specialist in College of Science, co-authored "Conformational Studies in the Cyclohexane Series. 2. Phenylcyclohexane and 1-Methyl-Phenylcyclohexane" with K. B. Wiberg, W. Bailey and J. Ochterski, published in *Journal of Organic Chemistry*, vol. 65, no. 4, pages 1181-1187.

James T. Cushing, professor of physics, wrote a review of R. Nugayev's *Reconstruction of Mature Theory Change*, published in the *History of Physics Newsletter*, vol. 7, no. 6, 2000, pp. 12-14.

Keith J. Egan, adjunct professor of theology and chairperson of religious studies at Saint Mary's College, wrote a book review of B.C. Lane's *The Solace of Fierce Landscapes: Exploring Desert and Mountain Spirituality*, published in *Religious*, vol. 59, no. 2, 2000.

Walter R. Johnson, Freimann professor of physics, co-authored "Fine-structure effects in relativistic calculations of the static polarizability of the helium atom" with A. Derevianko, V.D. Ovsiannikov, V.G. Pal'chikov, D.R. Plante, and G. von Oppen, published in *Journal of Experimental and Theoretical Physics*, vol. 88, 1999, pp. 272-277. He co-authored "Relativistic Many-Body Calculations of Transition Probabilities for the $2l_1 2l_2[LSJ] - 2l_3 2l_4[L'S'J']$ Lines in Be-like Ions" with U.I. Safronova, M.S. Safronova, and A. Derevianko, published in *Physica Scripta*, vol. 59, 1999, pp. 286-295. He co-authored "Relativistic many-body calculations of magnetic-dipole transitions in Be-like ions" with U.I. Safronova and A. Derevianko, published in *Physica Scripta*, vol. 60, 1999, pp. 46-53. He co-authored "Complete description of 3p photoionization in calcium" with H. Lörch, J.M. Bizau, N. Scherer, S. Diehl, D. Cubaynes, O. Zerouni, F.J. Wuilleumier and V. Schmidt, published in *Journal of Physics B*, vol. 32, 1999, pp.2215-2226. He co-authored "High-precision calculations of dispersion coefficients, static dipole polarizabilities, and atom-wall interaction constants for alkali-metal atoms" with A. Derevianko, M.S. Safronova, and J.F. Babb, published in *Physical Review Letters*, vol. 82, 1999, pp. 3589-3592. He co-authored "Nondipole effects in the photoionization of neon: Random-phase approximation" with A. Derevianko, K.T. Cheng, V.K. Dolmatov, and S.T. Manson, published in *The Physical Review A*, vol. 59, 1999, pp. 3609-3613.

James J. Kolata, assistant chairperson and professor of physics, co-authored "Nuclear and Coulomb Interaction in ^8B Breakup at sub-Coulomb Energies" with V. Guimarães, D. Peterson, P. Santi, R.H. White-Stevens and S.M. Vincent, published in *Physical Review Letters*, vol. 84, no. 9, 2000, pp. 1862-1865.

Scott Mainwaring, executive director of the Helen Kellogg Institute for International Studies and Conley professor of government and international studies, wrote "Democratic Survivability in Latin America" published in *Democracy and Its Limits: Lessons from Asia, Latin America and the Middle East*, H. Handelman, M. Tessler, eds., Notre Dame, Ind.: University of Notre Dame Press, 1999, pp. 11-68.

Patrick E. Murphy, chairperson and professor of marketing, co-authored "The Role of Formal Policies and Informal Culture on Ethical Decision Making by Marketing Managers," with J.H. Leigh, published in *Research in Marketing*, vol. 15, 1999, 69-99.

Alven Neiman, assistant dean and concurrent associate professor in the College of Arts and Letters Core Course and fellow in the Joan B. Kroc Institute for International Peace Studies, wrote "Logic and Sin: Wittgenstein's Philosophical Education at the Limits of Language" published in *Studies in Philosophy and Education*, vol. 18, no. 5, 1999, pp. 339-349.

Walter F. Pratt, Jr., associate dean and professor of law, wrote the entries "Bradfield v. Roberts (1899)," "Church Ownership and Church Schisms: The Early 19th Century," "Church Property after the Revolution," "History and Its Role in Supreme Court Decisions on Religion," "New Haven Colony's Fundamental Articles (1639)," "Warren E. Burger," "Wisconsin v. Yoder (1972)" in *Religion and American Law: An Encyclopedia*, Garland Publishing, 2000.

Jonathan R. Sapirstein, professor of physics, co-authored "Recoil corrections to the Lamb shift in helium" with K. Pachucki, published in *Journal of Physics B*, vol. 33, no. 3, 2000, pp. 455-461.

Thomas L. Shaffer, Short professor emeritus of law, wrote "Towering Figures, Enigmas and Responsive Communities in American Legal Ethics" published in *Maine Law Review*, vol. 51, no. 2, 1999, pp. 229-239.

Billie F. Spencer, Jr., professor of civil engineering and geological sciences, co-edited "A New Advance in Seismic Isolation, Energy Dissipation and Control of Structures," with Z. Fulin, published in *Proceedings of the International Workshop on Seismic Isolation, Energy dissipation and Control of Structures*, Guangzhou, China: Seismological Press, Beijing, China, 1999, 392 pages.

Administrators' Notes

Appointments

Kevin White, currently athletic director at Arizona State University, has been appointed the new athletic director at the University by Father Malloy. White, 49, will take over as Notre Dame's athletic director in mid-April. Under the realignment of athletic administrative responsibilities announced in February by Father Malloy, he will become the first Notre Dame athletic director to report directly to the University's president. A career educator and one of the most respected athletic administrators in the nation, White previously has been athletic director at Tulane University, the University of Maine, and Loras College.

Publications

Cathy Pieronek, director of law school relations, wrote a book review of L. Guinier's *Becoming Gentlemen*, published in *The Journal of College and University Law*, vol. 25, no. 3, pp. 627-644. She wrote "Discrimination Against Students in Higher Education," published in *The Journal of College and University Law*, vol. 26, no. 2, pp. 307-349.

Documentation

Foik Award

The Reverend Paul J. Foik Award Committee invites nominees for the award, which is given annually to a library faculty member who has contributed significantly to library service to the Notre Dame community or to the library profession through personal scholarship or involvement in professional associations. The award is named for the Holy Cross priest who served as director of Notre Dame's library from 1912 to 1924 and was a leading figure in the library profession in the first quarter of the 20th century. It is among those announced at the President's faculty dinner in May. Most recent recipients have been Dwight King, Jr., Head of Research Department, Law Library, Stephen Hayes, Business Services Librarian, and Katharina Blackstead, Library Advancement Officer. These three recipients will serve on the award committee.

All members of the University Libraries' and Law Library faculty with two or more years' service are eligible. Please send names of nominees, including a letter or other supporting documentation, to the Reverend Paul J. Foik Award Committee, c/o Larry Rapagnani, Office of Information Technology, by March 31.

Graduate Council Minutes

February 9, 2000

A joint meeting with the University Committee on Research and Sponsored Programs.

Graduate Council members

present: James L. Merz (chair), Terrence J. Akai, Doris L. Bergen, Jay B. Brockman, Maria Canalas, Peter Diffley, Richard A. Lamanna, Gary A. Lamberti, Marya Lieberman, Samuel Paolucci, James H. Powell, Lynette P. Spillman, Gregory E. Sterling, James C. Turner, Jennifer A. Younger.

Graduate Council members absent

but excused: Julia M. Braungart-Rieker, Peter C. Burns, Joseph A. Buttigieg, Francis J. Castellino (represented by Steven A. Buechler), Umesh Garg, Jacob R. Heidenreich, Anthony K. Hyder, Frank P. Incropera, Donald P. Koyers, LeRoy J. Krajewski, Christopher B. Fox (represented by Laura Holt), Mihir Sen, Barbara M. Turpin, Carolyn Y. Woo.

Observers: Janice M. Poorman, Russell S. Kitchner.

UCRSP members present (in addition to James L. Merz): Peter H. Bauer, Wolfgang Porod, Steven T. Ruggiero, Thomas L. Sweeney.

Guest: John Renaud.

Prof. James Merz, Vice President for Graduate Studies and Research, called the meeting to order at 3:35 p.m. and asked Prof. Terrence Akai to begin the session with a prayer.

I. Minutes of the 278th Graduate Council Meeting

The minutes of the 278th Graduate Council Meeting were approved by voice vote.

II. Change of Designation of Degree Title

Prof. Merz asked the Council to consider a request by the Department of

Aerospace and Mechanical Engineering to designate the major for the Ph.D. degree as "Aerospace and Mechanical Engineering" rather than using one of "Aerospace Engineering" and "Mechanical Engineering" as is now the current practice. He invited Prof. John Renaud, Director of Graduate Studies in the Department, to present the request.

Prof. Renaud explained that the two disciplines were housed in different departments until 1961, when they were combined as a single department. The requirements for the Ph.D. in either discipline are now the same; therefore, choosing one of the two disciplines as the major to be placed on the transcript is somewhat arbitrary. The Department's faculty recommends that "Aerospace and Mechanical Engineering" be used as the designation of major for all Ph.D.s granted by the department.

Prof. Renaud further explained that the many subdisciplines were much more descriptive designators than either "Aerospace Engineering" or "Mechanical Engineering." He cited use of the combined designation by Princeton, and also said that the combined designation can lead to improved national rankings (because of methods used to identify disciplinary faculty). He also noted the precedent set in the Department of Computer Science and Engineering and the Department of Civil Engineering and Geological Sciences.

Prof. Merz asked if there were any concerns raised by the Department's faculty about the move to a combined designation. Prof. Renaud indicated that they deliberately attempted to find disadvantages, but could not. The combined designation is inclusive of both disciplines, and the specific program of an individual student identifies his or her area of expertise.

A motion to endorse the request for a combined designation for the Ph.D. degree was made by Prof. Gregory Sterling, and was seconded by Prof. James Turner. The motion was passed (by a show of hands) without dissenting votes.

III. Society of Fellows Discussion

Prof. Merz next asked Prof. Peter Diffley to brief the attendees on a proposal to create a Society of Fellows. Prof. Diffley stated that one of the ways considered for developing post-doctoral programs was creation of a Society of Fellows similar to those at Columbia or Harvard. A nucleus of scholars would be chosen by the faculty.

The intent is to fund the Society through University endowments; until such endowments become available, federal and foundation grants would have to be sought. Individual post-doctoral fellowships named after a donor is also a possible funding mechanism. The Society could include teaching post-doctoral fellows drawn from new Notre Dame graduates who need time to enhance their CVs and publication records. Here, we would share costs with the College of Arts and Letters, and we would perhaps explore similar arrangements with the Colleges of Science and Engineering.

Prof. Janice Poorman suggested that a fellowship be associated with the new Institute for Latino Studies, especially as a means of drawing young faculty to Notre Dame. Prof. Diffley agreed, and noted that the Development Office should be made aware of postdoctoral needs when Centers and Institutes are initiated. Prof. Bergen asked if Notre Dame was involved with funding for minorities through corporations. Prof. Diffley replied that we do not have corporation funding of this type now, and Prof. Poorman noted that programs at other universities were geared to such types of funding.

Asked by Dr. James Powell if the Society would include both Notre Dame and non-Notre Dame graduates, Prof. Diffley replied that appointments of both types were possible but would be culture specific. He speculated that fellows from science and engineering disciplines might want shorter appointments; but Prof. Steven Buechler suggested that those with research appointments should be appointed for longer terms.

Prof. Turner stated that a similar model at the University of Michigan appointed about five or six fellows per year for three-year terms. The new appointees were vetted by departments as well as by the society. The society became a useful faculty recruitment tool and helped departmental course offerings on a consistent basis. He also noted that the program was costly.

Prof. Sterling suggested exploration of tie-ins to publications such as press contracts on dissertations or invitations to co-edit major works.

Both Prof. Merz and Prof. Marya Lieberman noted that endowed fellowships would be helpful. Prof. Merz underscored the need for endowments because bringing postdoctoral funding into yearly budgets would interfere with improving the base for graduate students. He reported that while the new Generations campaign was doing well in general, unfunded areas tended to be those associated with graduate education. Dr. Jennifer Younger noted that funding for the Library provides indirect benefits to the Graduate School; nevertheless, Prof. Merz called for ideas to demonstrate to donors how intellectual activities at the graduate and post-doctoral levels are of benefit to undergraduates. Among immediate suggestions were promotion of such concepts through the Notre Dame Magazine and making use of the Eck Center.

IV. Update on the 21st Century Fund

Prof. Merz briefed the assembly on two funding initiatives. The first of these is the Indiana 21st Century Research and Technology Fund. Prof. Merz gave a brief history of this Fund. He explained that the initial idea explored by a small group including himself and counterparts at Indiana and Purdue Universities was to obtain funding for biomedical research in the state. As this idea evolved, draft legislation modified the concept by broadening it and aiming primarily at economic development. In subsequent discussions, a compromise encompassing both

technology and economic development was reached.

The result is a Fund that provides \$25M for the next two years. Notre Dame responded to the request for proposals by submitting over 20 proposals that were split across the Colleges of Science and Engineering. Five of Notre Dame's proposals were among the 23 projects that received \$15M in the first round of funding. Two of the five had Notre Dame faculty as principal investigators; we were involved as subcontractors on the other three. Four engineering projects and one science project comprised the five. Prof. Merz noted that engineering was more naturally suited to the goals of economic impact and benefit to the state. Nevertheless, unfunded science projects contained "good science" according to the external reviewers; our goal now would be to find ways of linking the good science with economic impact.

Prof. Lieberman asked if anyone was assessing the economic impact of the funded projects. Prof. Merz replied that this would have to be done to justify renewal of the Fund two years hence. He further noted that documenting the impact of the longer-term projects could be problematic.

V. Washington Briefing

The second briefing given by Prof. Merz concerned our initiative to increase our presence in Washington, D.C. The effort here is to seek a share of congressional earmarked funds. These funds are somewhat controversial because they bypass the usual peer-review process of agencies such as NSF and NIH. Because of this controversial view, Notre Dame has not gone to the Indiana delegation in the past. But that leaves money on the table; now, the approach is to seek funds in areas where there is a match between needs and the University's expertise.

Prof. Merz credited Prof. Anthony Hyder with taking a lead role in getting ideas to senators and representa-

tives, a couple of whom took an interest in some of the ideas. As a result, the University will receive about \$3.5M. A large part of that amount is to fund nanotechnology research across science and engineering departments; the remainder is allocated to the Institute for Educational Initiatives and to the Alliance for Catholic Education, due primarily to the efforts of Fr. Timothy Scully. In addition to Fr. Scully and Profs. Hyder and Merz, Prof. Nathan Hatch, Dr. William Sexton, and Fr. William Beauchamp serve on the oversight committee for this initiative.

Final questions concerned the feasibility of obtaining such funds for buildings. Prof. Merz explained that funding for buildings is in fact more difficult to obtain. The reason is that the agencies administering the grants want to see measurable work, and the impact of buildings on such work is difficult to assess.

The meeting adjourned at 4:45 p.m.

Awards Received and Proposals Submitted

In the Period February 1, 2000, through February 29, 2000.

Category	AWARDS RECEIVED		PROPOSALS SUBMITTED	
	No.	Amount	No.	Amount
Research	20	\$1,904,113	53	\$20,840,005
Facilities and Equipment	0	0	0	0
Instructional Programs	0	0	1	99,544
Service Programs	0	0	0	0
Other Programs	<u>0</u>	<u>0</u>	<u>1</u>	<u>2,000</u>
Total	20	\$1,904,113	55	\$20,941,549

RESEARCH AWARDS

Awards received

In the period February 1, 2000, through February 29, 2000.

Aerospace and Mechanical Engineering

Hafiz M. Atassi

Effects of Nonuniform Flows on Sound Generation and Propagation

National Aeronautics and Space Administration
\$103,727 12 months

Thomas C. Corke

Free-Stream Turbulence Level Measurements
National Aeronautics and Space Administration
\$59,645 10 months

James J. Mason

Investigation of Fatigue Crack Propagation Rates in UDIMET 720 and AF2-1DA-6

Ladish Co., Inc.
\$5,000 12 months

John Eldon Renaud

Advanced Information Technology in Design
National Aeronautics and Space Administration
\$55,629 32 months

Steven R. Schmid

Tribology Module for Numerical Analysis of Hot Forging
Concurrent Technologies Corporation
\$16,574 5 months

Biological Sciences

David R. Hyde, Joseph Edward O'Tousa and Vecheslav A. Elagin

Mechanisms of Retinal Degeneration
National Institutes of Health
\$219,020 12 months

Chemistry and Biochemistry

Francis Castellino

Blood Coagulation Protein-Metal Ion-Lipid Interactions
National Institutes of Health
\$323,820 12 months

Dennis C. Jacobs

Dynamics of State-Selected Ion/Surface Reactions
National Science Foundation
\$136,350 12 months

Marvin J. Miller

Organic Syntheses Testing
Organic Syntheses, Inc.
\$3,000 60 months

Marvin J. Miller

Siderophores, Analogs and Bioconjugates
National Institutes of Health
\$96,099 36 months

Richard Edmund Taylor

Myriaporones: Synthetic and Biological Studies
National Institutes of Health
\$203,876 12 months

Olaf Guenter Wiest

Mechanism and Models of DNA Photolyase
National Institutes of Health
\$97,222 12 months

Civil Engineering and Geological Sciences

Joannes J. Westerink

ADCIRC Hydrodynamic Circulation and Transport Code
Development
Department of Army
\$110,450 48 months

Computer Science and Engineering

Vincent W. Freeh and Jay B. Brockman

Statement of Work for HTMT Distributed Isomorphic
Simulator
Jet Propulsion Laboratory
\$115,000 14 months

Economics

David M. Betson

Parental Spending on Children
University of Wisconsin
\$24,200 12 months

Electrical Engineering

Daniel Joseph Costello

Error Control Coding Techniques
National Aeronautics and Space Administration
\$50,000 24 months

Wolfgang Porod and Craig Stanley Lent

Nanoelectronics
Arizona State University
\$185,210 36 months

Freimann Life Science Center

Mark Allen Suckow

IPA Agreement Dated 09/08/99
Veteran Affairs Medical Center
\$13,000 13 months

Physics

Walter R. Johnson and Ulyana I. Safronova
Photoexcitation and Photoionization in Dense Plasmas
Lawrence Livermore National Laboratory
\$70,986 27 months

A. Eugene Livingston
Atomic Structure of Highly Charged Uranium Ions
National Science Foundation
\$15,305 24 months

Proposals submitted

In the period February 1, 2000, to February 29, 2000.

PROPOSALS FOR RESEARCH

Aerospace and Mechanical Engineering

Hafiz M. Atassi
Advancing the-State-of-the-Art of Computer Modeling of
Aero-mechanical and Acoustic Phenomena in Turbofan
Engine
Purdue University
\$252,706 24 months

Thomas C. Corke
MEMS and Flow Control for Aircraft Engines
Massachusetts Institute of Technology
\$30,000 6 months

John W. Goodwine
REU Supplement-Stratified Robotic Manipulation
National Science Foundation
\$10,000 12 months

Eric J. Jumper and Thomas C. Corke
Feedback Control of Shear Layers for Adaptive Optic
Lasers
DARPA
\$537,163 6 months

Michael M. Stanisic and Patrick J. Fay
Design and Control of an Actuated Ball-and-Socket Joint
National Aeronautics and Space Administration
\$2,028,851 36 months

Flint O. Thomas and Robert C. Nelson
Turbulent Wake Development in Pressure Gradient
National Aeronautics and Space Administration
\$48,277 12 months

Anthropology

Susan G. Sheridan
Analysis of the Human Remains from Khirbet Qumran
Dr. M. Aylwin Cotton Foundation
\$3,187 3 months

Biological Sciences

Nora J. Besansky
Genetics of Anopheles Funestus Populations
National Institutes of Health
\$424,765 12 months

Scott D. Bridgman
Biocomplexity-Incubation Activity on Biocomplexity in
Peatlands
National Science Foundation
\$99,540 24 months

Frank H. Collins
Malaria Control by Genetic Manipulation of Vectors
National Institutes of Health
\$639,875 12 months

Malcolm J. Fraser
Transgenic Engineering of Aedine Mosquitoes Using the
PiggyBac Transposon
National Institutes of Health
\$426,686 12 months

David M. Lodge
Developing Range Scenarios for High Risk Species
Environmental Protection Agency
\$187,283 24 months

David M. Lodge
Science for Prevention: Predicting Great Lakes Invasions
Environmental Protection Agency
\$187,283 24 months

David M. Lodge and Christopher S. Hamlin
Ecology, Theology and Judeo-Christian Environmental
Ethics
Valparaiso University
\$83,500 24 months

David M. Lodge
Using Population Viability Analysis in Risk Assessment
Great Lakes Fishery Commission
\$368,662 36 months

Martin Tenniswood
Genesis of the Invasive Phenotype in Prostate Cancer
American Cancer Society
\$96,000 48 months

Kevin T. Vaughan
Visual Cell, Pigment Cell Interface and Disk Turnover
Medical College of Wisconsin
\$22,350 36 months

Chemical Engineering

Joan F. Brennecke and Peter C. Burns
Environmental Applications of Ionic Liquids
Camille & Henry Dreyfus Foundation
\$96,000 24 months

Chemistry and Biochemistry

Dennis C. Jacobs

Ion/Surface Interactions and Reaction Mechanisms
Department of the Air Force
\$391,056 36 months

Elliot D. Rosen

Coagulation Initiation In FVII Deficient Mice
National Institutes of Health
\$310,750 12 months

Anthony S. Serianni

NMR Studies of Biologically-Important Oligosaccharides
National Institutes of Health
\$313,690 12 months

Civil Engineering and Geological Sciences

Jeremy B. Fein and Stephen E. Silliman

Equilibrium Thermodynamic Surface Complexation
(ETSC) Approach to Bacteria-Metal-Mineral Interactions in
Porous Media
Department of Energy
\$483,202 36 months

William G. Gray

Multiscale Modeling of Subsurface Microbial Consortial
Responses to Xenobiotic Challenges
University of Texas
\$302,418 60 months

Lloyd H. Ketchum

An Educational Center for Students and Treatment Plant
Personnel
Indiana Department of Environmental Management
\$72,030 10 months

Yahya C. Kurama

REU Supplement for CAREER: Seismic Behavior and
Design of Non-Emulative Precast Concrete Buildings with
Supplemental p\Passive Energy Dissipation
National Science Foundation
\$10,000 12 months

Clive R. Neal

Platinum Group Element Behavior in Basaltic Systems and
Mantle Domains
National Science Foundation
\$545,775 36 months

Billie F. Spencer

REU Supplement
National Science Foundation
\$10,000 12 months

Computer Science & Engineering

Danny Z. Chen and Xiaobo Hu

ITR/ACS: Algorithms and Complexity of Geometric
Problems in Medical Applications
National Science Foundation
\$496,390 36 months

Andrew Lumsdaine

ITR/ACS: Collaborative Research: Computational Analysis
of Multiphase Flow through Fractured Porous Media
National Science Foundation
\$244,669 36 months

Andrew Lumsdaine

ITR/SII: Scalable Infrastructure for Cluster Computing
National Science Foundation
\$498,600 36 months

Electrical Engineering

Gary H. Bernstein, Gregory L. Snider, Sunny K. Boyd and Wolfgang Porod

Applications of a Novel Microextrusion Process
National Science Foundation
\$0 36 months

Thomas E. Fuja, Patrick J. Fay, Daniel J. Costello, Oliver M. Collins and Yih-Fang Huang

Improved Error Control and Interference Mitigation in
Wireless Networks Via Increased Receiver Dynamic Range
National Science Foundation
\$499,973 24 months

Michael D. Lemmon and Panos J. Antsaklis

ITR/SII: Model Based Approaches to Network
Management
National Science Foundation
\$499,820 36 months

Michael D. Lemmon

ITR/SW: Supervisory Control of Distributed-Object
Concurrent Software
National Science Foundation
\$499,896 36 months

Government and International Studies

Martha L. Merritt

Imagining the Baltic States: Ethnicity and Apocalypse in
Russian Foreign Policy
Nat'l Council for Eurasian and East European Research
\$39,911 18 months

Martha L. Merritt

Imagining the Baltic States: Ethnicity and Apocalypse in
Russian Foreign Policy
U.S. Institute of Peace
\$39,000 12 months

History

Richard B. Pierce

Negotiated Freedom: African American Development and
Protest in the Urban North
National Research Council
\$37,500 12 months

Law School**Teresa G. Phelps**

Shattered Voices: Language, Violence, and Retribution
 J.D. and C.T. MacArthur Foundation
 \$75,000 12 months

Mathematics**Samuel R. Evens**

Geometry and Representations of Reductive Groups
 National Science Foundation
 \$25,000 41 months

Leonid Faybusovich, Andrew J. Sommese, Florian Jarre and Danny Z. Chen

ITR/ACS: Optimizing the Sum of Polynomial Fractional Functions: Applications, Algorithms, and Analysis
 National Science Foundation
 \$463,706 36 months

Florian Jarre

ITR/ACS: Collaborative Research: Next Generation Interior-Point Solvers for Optimization
 National Science Foundation
 \$131,805 36 months

Nano Science and Technology Center**Peter M. Kogge and Craig S. Lent**

Nano Technology and Micro/Nano Spacecraft Computers
 National Aeronautics and Space Administration
 \$730,668 36 months

Physics**Albert-Laszlo Barabasi**

ITR/SII: The Topology of the Internet and the www
 National Science Foundation
 \$491,557 36 months

Albert-Laszlo Barabasi

Biocomplexity-Incubation Activity: Scaling of Complexity with Diversity
 San Francisco State University
 \$33,674 24 months

Albert-Laszlo Barabasi

Biocomplexity: Fault Tolerance of Complex Metabolic Networks
 National Science Foundation
 \$1,090,429 48 months

Bruce A. Bunker and Umesh Garg

REU Site Program for Physics at the University of Notre Dame
 National Science Foundation
 \$21,247 12 months

James A. Glazier, Mark S. Alber and Jesus A. Izaguirre

Organogenesis: An Integrated Approach
 DARPA
 \$3,088,348 36 months

James A. Glazier, Mark S. Alber and Jesus A. Izaguirre

Biocomplexity – Multiscale Simulation of Avian Limb Developers
 National Science Foundation
 \$2,962,572 48 months

Mitchell R. Wayne, Neal M. Cason and Randal C. Ruchti

DO Detection Project
 Fermi National Laboratory
 \$205,500 12 months

Psychology**John G. Borkowski, Thomas L. Whitman and Scott E. Maxwell**

Precursors of Retardation in Children with Teen Mothers
 National Institutes of Health
 \$290,160 12 months

David A. Cole

Competency Based Model of Child Depression
 National Institutes of Health
 \$189,426 12 months

Michael J. Wenger

Dynamic Models for Latency-Accuracy Relations in Memory
 National Institutes of Health
 \$68,375 12 months

Robert L. West

Neural Correlates of Prospective Remembering
 McDonnell-Pew Program
 \$135,730 36 months

PROPOSALS FOR INSTRUCTIONAL PROGRAMS

College of Arts and Letters**Christopher Fox**

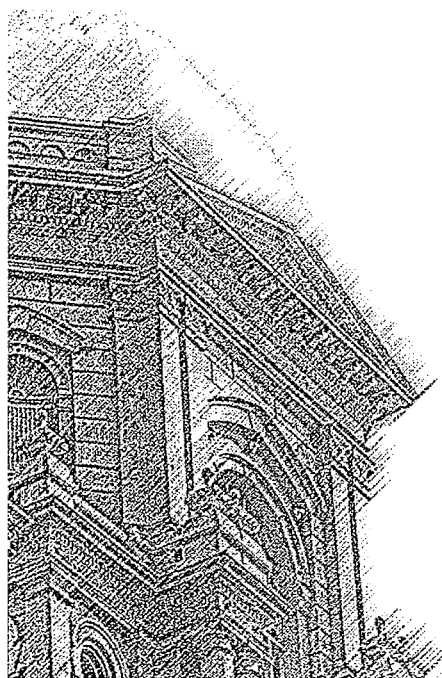
Anglo-Irish Identities: 1600-1800
 National Endowment for the Humanities
 \$99,544 12 months

PROPOSALS FOR OTHER PROGRAMS

Physics**Michael C. Wiescher**

Midwest Workshop on Nuclear Astrophysics
 National Science Foundation
 \$2,000 3 months

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