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## **Opening Mass**

The Mass to celebrate the formal opening of the academic year will be held Sunday, September 22, 1996, at 4 p.m. in the Joyce Center. The presiding celebrant will be Rev. Edward A. Malloy, C.S.C., University president.

## Texaco Foundation Creates DeCrane Professorship

The Texaco Foundation has created an endowed professorship in honor of Alfred C. DeCrane Jr., a Notre Dame alumnus and trustee and the recently retired chairman of the board and chief executive officer of Texaco Inc. The Alfred C. DeCrane Jr. Chair in International Studies will be awarded to a distinguished academic whose scholarship is international in scope and who exerts true intellectual leadership in the social sciences or humanities.

DeCrane is a former chair of the Sorin Society and was a member of the advisory council for the College of Arts and Letters for 19 years before his election as a University Trustee in 1992. A 1953 graduate, DeCrane served in the Marine Corps before obtaining a law degree from Georgetown University in 1959. He joined Texaco that year, working as an attorney in the Houston and New York offices. He was appointed general manager in international exploration and production activities in 1968 and served in a succession of other managerial positions prior to his 1983 election as president and 1987 elevation to chairman of the board.

The Texaco Foundation, a private sector philanthropic organization, was established in 1979. It supports charitable organizations and programs in the areas of education, environmental research and awareness, the arts and culture, civics, social enrichment and health services.

## **Templeton Foundation Gives Award**

Notre Dame has received a \$10,000 award from the John Templeton Foundation for offering outstanding courses on the relationship between science and religion.

Notre Dame was honored for science and religion courses offered at both the undergraduate and graduate levels. The courses are taught by J. Matthew Ashley, assistant professor of theology, and Steven D. Crain, adjunct assistant professor of theology.

Notre Dame was among 100 institutions worldwide cited by the 1996 Templeton Science and Religion Course Program. According to program officials, the content and curricula of award-winning courses varied, but "winning courses must emphasize current developments in the field and give equal weight to both scientific and religious perspectives."

The Science and Religion Course Program is one of more than 40 similar activities of the Templeton Foundation, established in 1987 by international investment banker Sir John Templeton to encourage the pursuit of scientific and religious knowledge.

## Freeman Scholarship Established

A new scholarship has been established at Notre Dame to provide tuition reimbursement to University employees who wish to pursue postsecondary education for certification or a college degree. The fund was made possible by a bequest from the late Fred E. Freeman, who was associate director of personnel when he retired from Notre Dame in 1987.

Freeman became a member of the University staff in 1940, working in the student health center. Before joining the staff of the personnel department (now human resources), he served the University in a variety of positions, including supervisor of services and director of admissions. He also served for a time as chairman of the board of the Notre Dame Credit Union. He died in 1994.

Applicants for the Fred E. Freeman scholarships must be full-time, regular staff employees who have worked at the University for at least three years. Faculty and administrative level personnel are ineligible.

### Honors

Joseph P. Amar, associate professor of classical and Oriental languages and literatures, was appointed to the editorial board of a new series published by the Catholic University of America Press: *Early Christian Texts and Translations*.

Nai-Chien Huang, professor of aerospace and mechanical engineering, has been named a fellow of the American Society of Mechanical Engineers. The fellow grade is conferred upon a member with at least 10 years active engineering practice who has made significant contributions to the field. The 125,000-member ASME is a worldwide engineering society focused on technical, educational and research issues. It conducts one of the world's largest technical publishing operations, holds some 30 technical conferences and 200 professional development courses each year, and sets many industrial and manufacturing standards.

**Carlos Jerez-Farrán**, associate professor of Romance languages and literatures, was appointed a member of the Senat Ciutadà for the Candidature of Barcelona 2001 Ciutat Europea de la Cultura.

Scott P. Mainwaring, professor of government and international studies, has been appointed to the international editorial board of the Buenos Aires, Argentina, journal *Agora*.

Esther-Mirjam Sent, assistant professor of economics, has been named editor of the electronic information services of the *History of Economics Society*.

Peter H. Smith, assistant professor of music, was elected a regional representative for Music Theory Midwest.

Arvind Varma, Schmitt professor of chemical engineering, has been named founding editor of a new series of publications by Cambridge University Press. *The Cambridge Series in Chemical Engineering* will include both textbooks and monographs, covering the classical chemical engineering subjects of kinetics, catalysis, reaction engineering, transport processes, separation, polymers, thermodynamics, and process control. In addition, innovative topics such as environmental engineering, bioengineering, ceramics processing, catalyst design, complex fluids, molecular theory and pattern formation also will be included.

## Activities

Mark S. Alber, associate professor of mathematics, Leonid Faybusovich, associate professor of mathematics, Bei Hu, associate professor of mathematics, Gerard Misiolek, assistant professor of mathematics, Joachim Rosenthal, associate professor of mathematics, and Hong-Ming Yin, assistant professor of mathematics, organized the symposium on Current and Future Directions in Applied Mathematics at the University of Notre Dame, Notre Dame, Ind., April 18–21.

Gail Bederman, assistant professor of history, chaired and commented on a panel on "Moral Authority, Maternalism and Women's Reform in the Turn-of-the-Century United States" at the American Historical Association Pacific Coast Branch annual meeting in San Francisco, Calif., Aug. 10.

Scott D. Bridgham, assistant professor of biological sciences, served on a peer panel for the Water and Watersheds special competition of the National Science Foundation and the Environmental Protection Agency in Washington, D.C., July 15–17.

**Bruce A. Bunker**, professor of physics, presented the invited talk "XAFS and Reflectivity Studies of Buried Interfaces" at the first international conference on Synchrotron Radiation and Materials Science held in Chicago, Ill., July 30.

James J. Carberry, professor of chemical engineering, presented the following lectures at the Princeton University School of Engineering and Applied Science in Princeton, N.J.: "Applied Heterogeneous Catalysis: Davy to H.S. Taylor," March 14; "Catalyst Components: Industrial Examples," March 28; "Lab and Plant Reactors: Diverse Goals and Means. Global and Local Gradients," April 4; Catalyst Deactivation: Decline and Recovery-Fluidized, Moving and Transport Reactors," April 11; "Transient Reactors: Guard Beds, Reactors Suffering Diffusionaffected Decay," April 18; and "Fractal Phenomena: Implications Under Conditions of Diffusion-affected Decay," April 25. Carberry presented the seminars "The Diffusion-Reaction Problem" and "Metric to Biological Cell Levels" at the University of Pennsylvania in Philadelphia, Pa., March 16. He presented "Catalysis-Diffusion on the Large and Microscale Levels" at Princeton University in Princeton, N.J., April 10. He gave the seminar "The Synergism Twixt Chemistry and Catalytic Reaction Engineering" at Dartmouth College in Hanover, N.H., May 1. He presented "Fluidized, Moving Bed, Catalytic Reactors and Biological Cell Kinetics" at the City University of New York in New York, N.Y., May 13.



## FACULTY NOTES

**Richard G. Carlton**, assistant professor of biological sciences, and Mark A. Heilman presented "Methane Oxidation Associated with Tissues of Submersed Vascular Macrophytes" at the annual meeting of the American Society of Limnology and Oceanography in Milwaukee, Wis., June 16–20. Carlton and Sandra J. Hellman presented "Dissolved Organic Carbon Flux in Littoral Zone Lake Sediments" at that meeting. Carlton and Andrew E. Laursen presented "The Effect of Atrazine on Photosynthesis–Irradiance Curves of Periphyton" at that meeting.

Neal M. Cason, professor of physics, gave an invited talk titled "Experiment E852 — Exotic Mesons" at the Department of Energy Review of High Energy Physics at Brookhaven National Laboratory in Upton, N.Y., May 1.

Danny Z. Chen, assistant professor of computer science and engineering, presented the invited lectures "A Survey of Geometric Shortest Paths Results and Techniques," "Parallel Geometric Shortest Paths," "Applications of Geometric Shortest Paths to VLSI Design, Shape/Curve Approximation, Data Compression, and Robotics Problems" and "Algorithms and Data Structures for Approximate and Exact Shortest Path Query Problems" at the summer institute on Computational Geometry and Applications at the Center for Applied Science and Engineering and Institute of Information Science at Academia Sinica in Nankang, Taiwan, June 21–27.

Leonard F. Chrobot, adjunct professor of sociology, delivered the keynote address "Prejudice: Deny or Examine?" for the study week on cultural diversity in the Catholic Church to the Midwest St. Albert the Great Province of the Dominicans in River Forest, Ill., June 9.

Michael Coppedge, associate professor of government and international studies and fellow in the Kellogg Institute, presented a paper on "Venezuela: Conservative Representation Without Conservative Parties" at the conference on Conservative Parties, Democratization, and Neoliberalism in Latin America at the Center for U.S.-Mexican Studies at the University of California in San Diego, Calif., May 31–June 1. He presented a paper on "El concepto de la gobernabilidad: Modelos positivos y negativos" for the international seminar Ecuador: A Problem of Governability sponsored by the Corporación de Estudios para el Desarrollo (CORDES) in Quito, Ecuador, July 22–24. While in Quito he was interviewed by Ecuavisa television, Radio Quito and Radio Nacional.

Daniel J. Costello Jr., chairperson and professor of electrical engineering, presented a talk titled "A New Look at Bootstrap Hybrid Decoding" at the IEEE Information Theory Workshop in Haifa, Israel, June 9. William G. Dwyer, Hank professor of mathematics, gave an invited plenary lecture titled "Homology Decompositions" at the American Mathematical Society summer institute on Cohomology, Representations and Actions of Finite Groups held at the University of Washington in Seattle, Wash., July 12.

Elizabeth D. Eldon, assistant professor of biological sciences, presented a poster co-authored with Michael Williams titled "Conserved Signaling Pathways in Development and Immunity: A Role for *18-wheeler* in the *Drosophila* Immune Response" at the annual meeting of the Society for Developmental Biology at Vanderbilt University in Nashville, Tenn., May 30–June 4.

Harald E. Esch, professor of biological sciences, presented a seminar titled "Honeybees Measure Distances Optically" at the University of Jena in Jena, Germany, May 28; at the University of Zurich in Zurich, Switzerland, June 4; and at the University of Innsbruck in Innsbruck, Austria, June 5.

Leonid Faybusovich, associate professor of mathematics, presented the invited lecture titled "Jordan Algebra's, Symmetric Cones and Interior-point Methods" at the seventh Stockholm Optimization days in Stockholm, Sweden, June 24–25. He gave an invited talk "Complexity and Geometry of Convex Optimization" at the Differential Geometry seminar of the Mathematical Institute in Cologne, Germany, July 11. He was a fellow in the "Research in Pairs" (RiP) program at the Mathematische Forschungsinstitut Oberwolfach, Germany, July.

Jeff Feder, assistant professor of biological sciences, gave a scientific talk titled "Host Race Formation and Sympatric Speciation in the Apple Maggot Fly" in Turku, Finland, June 19. He presented the poster "Host Race Formation and Sympatric Speciation in the Apple Magot Fly" at an NSF panel meeting in Washington, D.C., June 23–25.

Mohamed Gad-el-Hak, professor of aerospace and mechanical engineering, organized and delivered three lectures in the short course "Flow Control: Fundamentals and Practices" in Corsica, France, June 24–28. He organized, chaired two sessions and delivered the talk "Compliant Coatings: One Last Chance?" in the international workshop on Flow Control in Corsica, France, July 1–5.

Jimmy Gurulé, professor of law, testified before the Senate Subcommittee on Children and Families of the Committee on Labor and Human Resources on "Juvenile Crime: An Alarming Indicator of America's Moral Poverty" in Washington, D.C., July 18.

# Faculty Notes

Alexander J. Hahn, professor of mathematics, delivered the invited lecture "Commutators of Hyperplane Reflections in Orthogonal Groups over Local Fields" at the Algebra Seminar of the Aristotelian University of Thessaloniki, Greece, May 28. He was invited to speak on the same topic at the Algebra Seminar of the University of Heraklion in Crete, June 12.

Alan L. Johnson, professor of biological sciences, presented a paper titled "Characterization of a Chicken Follicle — Stimulating Hormone Receptor (cFSH-R) cDNA, and Expression of cFSH-R in RNA in the Ovary" at the annual meeting of the Society for the Study of Reproduction in London, Ontario, Canada, July 27–31.

William K. Kelley, associate professor of law, participated in a panel discussion on the 1995–96 Supreme Court term at the Fourth Circuit Judicial Conference in White Sulphur Springs, W.Va., June 28. The panel was broadcast live on C-SPAN. He lectured on recent developments in the law of federalism before a group of 75 federal judges in a workshop for judges of the Tenth Circuit in Santa Fe, N.Mex., March 25.

Lloyd H. Ketchum Jr., associate professor of civil engineering and geological sciences, presented "Pollution Prevention Recommendations to Significant Industrial Users by Municipal Pretreatment Personnel" co-authored with T.M. LaPara and E.A. Titterton at the 1996 Industrial Wastewater Treatment Specialty Conference of the Water Environment Federation "Understanding the Industrial Pretreatment Program" in Indianapolis, Ind., July 21–24.

Pamela A. Krauser, associate professional specialist in the Office of Research, Graduate School, co-authored the poster presentation titled "Preparing for the Future: Setting Electronic Research Administration Priorities" for Ushering in a New ERA: A National Conference on Electronic Research Administration sponsored by the National Council of University Research Administrators in Atlanta, Ga., Aug. 9–11.

Ruey-wen Liu, Freimann professor of electrical engineering, chaired one of four sessions at the workshop on Nonlinear Science in the 21 Centure at Sevilla, Spain, June 26.

A. Eugene Livingston, professor of physics, presented an invited talk titled "X-ray-Fluorescence Spectroscopy of Few-Electron Ions" at the international study group on X-ray Spectroscopy and Radiation Physics at GSI-Darmstadt, Germany, June 17. He presented an invited seminar titled "Ryberg Ions: Atoms with Exaggerated Properties" at GSI-Darmstadt, Germany, July 3.

David M. Lodge, associate professor of biological sciences, gave the invited talk "Biodiversity Changes in the World's Lakes in Response to Global Change" at the workshop on Biodiversity and Climate Change at NSF's National Center for Ecological Analysis and Synthesis in Santa Barbara, Calif., June 1–6. He presented the invited speech "Herbivory by Invertebrates and Fish" at the international workshop on Role of Macrophytes in Lakes at the National Environmental Research Institute in Silkeborg, Denmark, June 14–21. He was an invited participant in a workshop on Great Lakes Biodiversity sponsored by the International Joint Commission and the Johnson Foundation in Racine, Wis., June 26–28.

Michael N. Lykoudis, assistant chairperson and associate professor of architecture, gave the lecture "Principles of Urbanism and Architecture in Practice and Education" at the Institute for the Study of Classical Architecture at New York University in New York, N.Y., July 24.

Scott Mainwaring, professor of government and international studies, gave lectures on "Democratic Survivability in Latin America" and on "Political Institutions and Democracy" at the Central European University in Budapest, Hungary, July 16–17.

Lawrence C. Marsh, associate professor of economics, and Kevin D. Brunson, research analyst for the College of Business Administration, presented the paper "Racial Differences in the Return to Education: Multicollinearity and Parameter Stability" at the joint meetings of the American Statistical Association, Institute of Mathematical Statistics, the International Society of Bayesian Statistical Analysis, and related organizations in Chicago, Ill., Aug. 7. Marsh and Arnold Zellner, University of Chicago, presented the paper "Bayesian Solutions to a Class of Selection Problems" at that meeting.

Martha Merritt, assistant professor of government and international studies, presented a paper on "The Struggle for Europe in Estonia" at the annual meeting of the Association for the Study of Nationalities at Columbia University in New York, N.Y., April 26. She gave the paper "The Baltic Russians in Estonia" at the annual meeting of the Baltic Studies Association in Waltham, Mass., June 28.

Juan Migliore, professor of mathematics, gave an invited talk "Buchsbaum-Rim Sheaves and Gorenstein Algebras" at the summer school on Commutative Algebra which was held at the Centre de Recerca Matematica in Barcelona, Spain, July 17.

Gerard K. Misiolek, assistant professor of mathematics, presented a talk titled "Conjugate Points in  $D_{\mu}(T^2)$ " at the conference Dynamical Systems Methods in Fluid Mechanics held at the Mathematisches Forschungsintitut Oberwolfach, Germany, June 30–July 6.

# Faculty Notes

Joseph E. O'Tousa, associate professor of biological sciences, presented a seminar titled "Retinal Degeneration in Drosophila Rhodopsin Mutants" at the Johns Hopkins School of Medicine, Department of Biological Chemistry, in Baltimore, Md., June 11.

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**Teresa Godwin Phelps**, professor of law, presented the paper "Using Writing Process to Teach Legal Writing" at the biannual conference of the Legal Writing Institute in Seattle, Wash., July 20.

Wolfgang Porod, professor of electrical engineering, was an invited panelist at the "Mini Symposium on Brain-like Micro- and Nano-Computation" which was part of the Second World Congress of Nonlinear Analysts held in Athens, Greece, July 10–17. He presented a series of lectures on "Computing with Coupled Quantum Dots" at that congress.

Jean Porter, professor of theology, delivered the lecture "Roman Catholic Moral Theology: Sources and Recent Developments" at the 30th annual Ecumenical Seminar titled "The Ethical Engagement of Churches in Ecumenical Perspective" at the Center for Ecumenical Studies in Strasbourg, France, July 4.

Joachim Rosenthal, associate professor of mathematics, was the organizer and main speaker of the invited minicourse "Inverse Eigenvalue Problems for Linear Multivariable Systems" at the international symposium on the Mathematical Theory of Networks and Systems (MTNS) in St. Louis, Mo., June 24–28. He organized the invited session "Inverse Eigenvalue Problems in Control Theory" and gave a talk titled "The Pole Placement Problem: Past, Present and Future Directions" at that conference.

Michael K. Sain, Freimann professor of electrical engineering, Billie F. Spencer Jr., professor of civil engineering and geological sciences, and J.D. Carlson, of Lord Corporation, co-authored the paper presented by Shirley J. Dyke, graduate student in civil engineering and geological sciences, titled "A New Semi-Active Control Device for Seismic Response Reduction" at the 11th Engineering Mechanics Conference, ASCE, in Fort Lauderdale, Fla., May 19–22.

Uri Sarid, assistant professor of physics, gave the invited talk "Why Measure  $M_t$  Precisely?" at New Directions for High Energy Physics at American Physical Society Snowmass '96 in Snowmass, Colo., July 5.

Esther-Mirjam Sent, assistant professor of economics, presented "Engineering Dynamic Economics" at the History of Political Economy Conference on New Economics and Its Writing held at Duke University in Durham, N.C., March 29–31.

Mei-Chi Shaw, professor of mathematics, gave an invited seminar talk titled "Subelliptic Estimates for the  $\overline{\partial}$ -Neumann Operator on Strictly Pseudoconvex Lipschitz Domains" at the Mathematical Sciences Research Institute in Berkeley, Calif., May 28. She gave the invited seminar talk "Local Regularity for the Tangential Cauchy-Riemann Equations on Weakly Pseudoconvex Manifolds" at that institute, June 4.

Susan Guise Sheridan, assistant professor of anthropology, presented a series of five lectures on the "Biocultural Analysis of Human Remains from St. Étiennes" summarizing her research on the inhabitants of a large Byzantine Monastic community in Jerusalem to the faculty, visiting researchers and students of L'École Biblioteque et Archéologique Français de Jérusalem, Israel, July 12–25.

Peter H. Smith, assistant professor of music, delivered a paper titled "Brahms and Motivic 6/3 Chords" at the annual meeting of Music Theory Midwest in Kalamazoo, Mich., May 18.

**Dennis M. Snow**, associate professor of mathematics, gave two lectures on the "Curvature of Homogeneous Vector Bundles" at the 34th annual meeting of the Clavius Group at Boston College in Chestnut Hill, Mass., July 16–27.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, organized and chaired the sessions "Stochastic Mechanics IV" and "Hybrid/Semi-Active Structural Control" held at the 11th Engineering Mechanics Conference, ASCE, in Fort Lauderdale, Fla., May 19-22. He delivered the presentations "Stochastic Response of Systems with Linear Hysteretic Damping" co-authored with L.A. Bergman, University of Illinois at Urbana-Champaign, and "Nonlinear Identification of Semi-Active Control Devices" co-authored with S.J. Dyke, graduate student in civil engineering and geological sciences, Michael K. Sain, Freimann professor of electrical engineering, and J.D. Carlson, of Lord Corporation, at that conference. Spencer co-authored a paper titled "Application of the Infinite Element Method to Solution of the Fokker-Planck Equation" with W. Yi, graduate student in civil engineering and geological sciences, S.F. Wojtkiewicz, University of Illinois at Urbana-Champaign, and L.A. Bergman presented at that conference. Spencer presented an invited seminar titled "Structural Control: Current Status and Future Trends" in the Department of Civil and Architectural Engineering at the University of Miami in Coral Gables, Fla., May 23. He delivered a paper titled "Semi-Active Structural Control: System Identification for Synthesis and Analysis" co-authored with S.J. Dyke at the first European conference on Structural Control in Barcelona, Spain, May 29-31. He presented an overview of the research at the University of Notre Dame

## FACULTY NOTES

in the area of structural control using magnetorheological dampers at the Lord Corporation in Cary, N.C., June 21. He served as an invited member of a panel on "Recent Research Activities in Structural Control" and delivered an invited presentation titled "Magnetorheological Dampers: A New Semi-Active Control Device for Seismic Response Reduction" at the 11th world conference on Earthquake Engineering held in Acapulco, Mexico, June 23–28. Spencer co-organized and co-chaired the sessions titled "Control of Civil Engineering Structures: I" and "Control of Civil Engineering Structures: II" at the IFAC World Congress in San Francisco, Calif., June 30-July 5. He delivered a presentation titled "Seismic Response Reduction Using Magnetorheological Dampers" co-authored with S.J. Dyke, M.K. Sain and J.D. Carlson at that congress. Spencer represented the American Society of Civil Engineering at the meeting of the board of directors of the American Automatic Control Council and delivered an invited seminar titled "Intelligent Dampers for Seismic Hazard Mitigation" at Forell/Elsesser Engineers, Inc., Structural Engineers, in San Francisco, Calif., July 3.

Mark A. Stadtherr, professor of chemical engineering, and Joan F. Brennecke, associate professor of chemical engineering, presented "Reliable Stability Analysis for Cubic Equation of State Models" with James Z. Hua, graduate student, at the sixth European symposium on Computer Aided Process Engineering (ESCAPE-6) in Rhodes, Greece, May 27.

Lee A. Tavis, Smith professor of business administration, finance, presented the paper "Multinational Corporate Power and Moral Responsibility" at the first world congress of Business, Economics and Ethics at the Institute for Moralogy at Reitaku University in Kashiwa, Japan, July 28.

Laurence R. Taylor, chairperson and professor of mathematics, gave a lecture titled "The Current State of Affairs in the Theory of 4-manifolds" for the 90th Birthday Celebration Conference for Professor Arnold Ross, longtime faculty member at Notre Dame, held at Ohio State University in Columbus, Ohio, Aug. 9.

Mitchell R. Wayne, associate professor of physics, presented an invited talk titled "Visible Light Photon Counters and the DØ Scintillating Fiber Tracker" at BEAUNE 96 — New Developments in Photodetection held in Beaune, France, June 24–28.

Joannes J. Westerink, associate professor of civil engineering and geological sciences, chaired a session on "Coastal and Estuarine Flow" and presented an invited plenary talk titled "Advances in Finite Element Modeling of Coastal Ocean Hydrodynamics" at the XI international conference on Computational Methods in Water Resources in Cancun, Mexico, July 22–26. Hong-Ming Yin, assistant professor of mathematics, presented an invited colloquium talk titled "The Global Existence and Finite Time Blowup for Nonlinear Heat Equations" at the University of Central Florida in Orlando, Fla., May 14. He presented an invited talk with the title "On a Class of Evolution Systems" at the international conference on Dynamical Systems and Differential Equations at Southwest Missouri State University in Springfield, Mo., May 29–June 1.

Samir Younés, assistant professor of architecture, offered a seminar on "Architecture and Urban Design" at the Prince of Wales' Institute of Architecture Summer Program in Richmond, Va., Aug. 5–12. The seminar grouped 24 students from five countries and culminated in a masterplan which was presented to the city council, the Richmond Historical Society and various citizens' groups. He participated in a panel discussion on the architecture of Richmond organized by the Prince of Wales' Institute at the Women's Club of Richmond, Va., Aug. 5. He presented the lecture "Elements of the City" in Richmond, Va., Aug. 9.

## Deaths

William H. Hamill, professor emeritus of chemistry and former radiation research director, Aug. 12. Born in Oswego, N.Y., and raised in Utica, N.Y., Hamill earned a bachelor's degree in science from Notre Dame in 1930 and a master's in science a year later. He completed his doctoral studies in chemistry at Columbia University in 1936 and taught at Fordham University from 1931 to 1938. Hamill was appointed an assistant professor of chemistry at Notre Dame in 1938 and advanced to associate professor three years later and full professor in 1956. He was elevated to emeritus faculty status in 1973. In the early 1940s, Hamill served as a liaison between researchers at Notre Dame and the University of Chicago working on the Manhattan Project to develop an atomic bomb. In 1946–47, he joined with Nobel laureate Willard Libby on a project to detect carbon 14, a study that led to important findings in measuring the age of antiquities. Hamill chaired the Gordon Conference on Radiation Chemistry in 1958 and that same year served as an American delegate to the United Nation's second Geneva Conference on Atoms for Peace, where he delivered a paper coauthored with two other researchers in Notre Dame's Radiation Laboratory. Hamill was a member of the American Chemical Society, the Faraday Society and the Notre Dame chapter of Sigma XI. Co-author of the textbook Principles of Physical Chemistry, he also served on the editorial board of The Journal of the American Chemical Society and as associate editor of the journal Radiation Research.

## Administrators' Notes



## Activities

Alan S. Bigger, director of building services, was interviewed in the article "Flushing Unsanitary Washroom Practices" published in the July 1996 issue of *Sanitary Maintenance*.

Robert V. Watkins, director of materials management/ purchasing, and Lawrence R. "Bubba" Cunningham, assistant director and business manager of athletics, gave the workshop "Effective Communication Between Athletics and Purchasing: From an Athletic Business Manager's Perspective" at the Athletic Purchasing Conference and Expo in Seattle, Wash., July 24–26.

## Publications

Alan S. Bigger, director of building services, and Linda B. Thomson, assistant director of purchasing, wrote "Sweeping Changes for Vacuuming" published in the July 1996 issue of *Maintenance Solutions*.



## *Notre Dame Report* **Publication Schedule** Volume 26 — 1996–97

- **#1** Deadline Date: Wednesday, August 14, 1996 Publication Date: Friday, August 30
- #2 Deadline Date: Wednesday, August 28 Publication Date: Friday, September 13
- **#3** Deadline Date: Wednesday, September 11 Publication Date: Friday, September 27
- #4 Deadline Date: Wednesday, October 2 Publication Date: Friday, October 18
- **#5** *Deadline Date:* Wednesday, October 16 *Publication Date:* Friday, November 1
- #6 Deadline Date: Wednesday, October 30 Publication Date: Friday, November 15
- #7 Deadline Date: Wednesday, November 13 Publication Date: Wednesday, November 27
- #8 Deadline Date: Wednesday, November 27 Publication Date: Friday, December 13
- #9 Deadline Date: Thursday, January 2, 1997 Publication Date: Friday, January 17
- **#10** Deadline Date: Wednesday, January 15 Publication Date: Friday, January 31
- #11 Deadline Date: Wednesday, January 29 Publication Date: Friday, February 14
- #12 Deadline Date: Wednesday, February 12 Publication Date: Friday, February 28
- **#13** Deadline Date: Wednesday, February 26 Publication Date: Friday, March 14
- #14 Deadline Date: Wednesday, March 19 Publication Date: Friday, April 4
- #15 Deadline Date: Wednesday, April 2 Publication Date: Friday, April 18
- #16 Deadline Date: Wednesday, April 16 Publication Date: Friday, May 2
- #17 Deadline Date: Wednesday, April 30 Publication Date: Friday, May 16
- **#18** Deadline Date: Wednesday, May 21 Publication Date: Friday, June 13
- #19 Deadline Date: Wednesday, June 18 Publication Date: Thursday, July 3
- #20 Deadline Date: Wednesday, July 9 Publication Date: Friday, July 25

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## Notre Dame Report Submission Information

Faculty (all classes: teaching research faculty, special professional faculty, and librarians and special research faculty) and administrators may submit information to be printed in *Notre Dame Report* to the Graduate School Office of Research, 312 Main Building or via e-mail to Thornton.4@nd.edu or Diltz.1@nd.edu. Standardized forms for submission of honors, activities or publications are available at the Office of Research (631-7432).

#### Faculty and Administrators' Notes:

Appointments include only those University appointments such as deans, department heads, heads of committees and administrative professionals. This does not include appointments to faculty positions.

Honors is comprised of non-University appointments in one's field and outright honors. It does not include fellowships, grants, etc. Any grants not published in the Awards Received section of the *Report* will be noted in Activities.

Activities must be of a professional and public nature (such as invited lectures and papers read) and should be related to one's work at the University. Lectures given on campus are only acceptable if they are of a special nature and/or if they are presented to a broader audience than the Notre Dame community. Merely attending a meeting is unacceptable. Information required for each activity submitted includes: name, rank, title of presentation, title of meeting, place and date. No activities are printed ahead of the date, only after the fact. Activities will not be printed over six months out of date.

#### **Current Publications and Other Scholarly Works:**

Submission of current publications are due on the Friday prior to the copy deadlines stated on this page.

#### Documentation:

Meeting minutes from the Graduate Council, Academic Council, Faculty Senate, University Committee on Libraries, Committee on Research and Sponsored Programs, Faculty Board on Athletics and Faculty/Student Committee on Women are printed in *Notre Dame Report*. These minutes should be sent to 415 Main Building or via e-mail to Diltz.1@nd.edu.

## Official University of Notre Dame Academic Year Calendar, 1997–98

### Fall 1997 Semester

August 22, Friday Orientation, enrollment and registration for new upperclass and graduate students

August 25, Monday Enrollment for all continuing students and freshmen

August 26, Tuesday Classes begin at 8 a.m.

September 3, Wednesday Last date for all class changes

October 17, Friday Midsemester Deficiency Reports due in Registrar's Office by 3 p.m.

October 18–26, Saturday–Sunday Midsemester break

October 27, Monday Classes resume at 8 a.m.

October 31, Friday Last day for course discontinuance

November 27–30, Thursday–Sunday Thanksgiving holiday

December 1, Monday Classes resume at 8 a.m.

December 10, Wednesday Last class day

December 11–14, Thursday–Sunday Study Days (no examinations)

December 15–19, Monday–Friday Final examinations

December 23, Monday All grades due in the Registrar's Office by 3 p.m.

### Spring 1998 Semester

January 12, Monday Orientation, enrollment and registration for new students

January 13, Tuesday Classes begin at 8 a.m.

January 21, Wednesday Last date for all class changes

March 6, Friday Midsemester Deficiency Reports due in Registrar's Office by 3 p.m.

March 7–15, Saturday–Sunday Midsemester break

March 16, Monday Classes resume at 8 a.m.

March 20, Friday Last day for course discontinuance

April 10–13, Friday–Monday Easter holiday

April 14, Tuesday Classes resume at 8 a.m.

April 29, Wednesday Last class day

April 30–May 3, Thursday–Sunday Study days (no examinations)

May 4–8, Monday–Friday Final examinations

May 12, Tuesday All grades are due in the Registrar's Office by 3 p.m.

May 15–17, Friday–Sunday Commencement weekend

#### **1998 Summer Session**

June 22, Monday Enrollment

June 23, Tuesday Classes being at 8 a.m.

August 4, Tuesday Last class day

August 5, Wednesday Final examinations

August 7, Friday Commencement



## Notre Dame Award Acceptance Speech by John Hume April 25, 1996

Father Malloy, thank you for what you have said. I am honored to be here this evening with my wife, Pat, to receive the honor of this very distinguished university, the University of Notre Dame du Lac.

But I see the honor conferred on me not as a strictly personal honor but as a very powerful and strong expression of your enormous interest and encouragement in the peace process that is at last happening in our off-shore island of the United States of Europe and of the United States of America. And I hope that we are now in the final stages of a quarrel that has lasted for centuries. It started in the streets of my own city in 1689 — The Siege of Derry. It is still celebrated — that battle — every year. We have long memories in Northern Ireland. One of our political parties' election slogan, every time it fights an election, is "Remember 1690." I hope we will have got to the stage where we will begin to realize that we are now in the 1990s and that we will be in the final stages of centuries of conflict --- centuries of conflict which have absorbed the energies of our people in destroying our land rather than building our land, centuries which have absorbed their energies in spilling their blood rather than their sweat. And I hope that if we get them to spill their sweat rather than their blood, that the patriotism of the new century in Ireland will be building our country and not destroying it.

The last 25 years have been among the worst of those three centuries of conflict. In Northern Ireland, which has a population of a million and a half people, the real result of our conflict — the terrible loss — has been 3,100 human lives, and 38,000 people maimed and injured for life. That's one out of 505 people have lost their lives, one out of 50 people have lost limbs or been seriously injured. In population terms, that is the equivalent of half a million people dying in the United States. It is the equivalent of 18,000 people dying in the state where we now sit, the State of Indiana. This lets you know how serious that problem has been.

But in addition to the killing of human beings, it has been necessary to build in the city of Belfast — the foremost church-going city in western Europe on both sides of our divide — it has been necessary to build, even as the Berlin Wall fell, not one, but 13 walls in the city of Belfast to separate and protect one section of Christian people from another. Where has the basic fundamental message of Christianity gone? I mean, the real message of peace in this world, that is, Love Thy Neighbor. A simple statement, but when you think of it, it is the powerful message of peace. But where is it in that city? Thirteen walls to separate and protect one sect of our people from another.

Those walls are an indictment of all of us because they scream at us, but our own past attitudes have built them. But that is a negative way of looking at them. A positive way of looking at them is that they are now a challenge to us all, and the challenge to both sides of our quarrel is to re-examine past attitudes, because if we are ever going to bring those walls down, both past attitudes from both sections of our people have got to be re-examined. Because when you study our conflict, or when you study conflict anywhere in the world, you will find that the same mindsets, the same mentalities exist. The unionist mindsets. The unionist people are largely from the Protestant community. Their objective is to protect their difference and their identity and I have no quarrel with that because every society has its differences and its diversity, and unless you respect that you will not have peace and stability.

My quarrel with the unionist people is not about their objective. It is about their methods and their mindset, because their methods have been that because they are a minority within Ireland as a whole, the only way they can protect themselves in Northern Ireland is to hold all power in their own hands and exclude anyone who is not one of them. That in practice meant that if you were a Catholic in Northern Ireland, when they governed it as a one-party state from 1920 until 1970, it meant you didn't get jobs and you didn't get housing and you didn't get voting rights. When I was a young teacher, I did not have a vote because I was not a rate payer. But the mayor of the city had 43 votes because he owned seven small companies as well as his own vote and he got six votes for each one of his companies and one for himself. That was the situation. And of course at the end of the day, discrimination in widespread terms is bound to lead to conflict.

So the challenge to the unionist people is to re-examine that mindset and to recognize that, rather than the siege mentality from which they suffer, their real mindset should be that because of their geography and their numbers, since the problem cannot be resolved without them, they should come to the table with the strength of their own convictions and the strength of that geography and numbers and reach agreement with the people with whom they share a piece of earth called Ireland. And in coming to that, I would hope that they would bring forward the positive elements of the Protestant tradition. Because all we have seen to date in their politics has been the negative tradition. All their slogans are negative. "No surrender." "Not an inch." "What we have we hold." "Ulster says no." I said to Reverend Ian

Paisley on television recently, "Ian, if you took the word no out of the English language, you would be speechless." In any case, that is my challenge to them, because the siege mentality has in some degree dried up their creativity as a people.

But let us not forget that those of the Protestant tradition in Ireland, particularly the Presbyterian tradition, were in earlier centuries, like the Catholic population, subjected to serious religious intolerance by the then-established church in Ireland. And they were driven out, and they came to this land, to the United States, and were heavily involved in the shaping and foundation of the constitution of this country. Indeed, the American Declaration of Independence was printed by John Dunlop from Strabane - in my parliamentary district. And the old printing press, for that man was trained as a printer, is still there on that street, and I have often thought if it were in Philadelphia, it would be a national shrine. And the first secretary of the American Congress was a Presbyterian from the upper lands in County Derry. When you look at your constitution and look at its fundamental statement, I often feel that it is a mistake that America allows itself to be seen either as an economic or a political power in this world rather than a moral power, because when that constitution was written, it was written to respect peoples of many traditions and nations who had been driven out of their homelands by intolerance, poverty, famine and the like. And the most fundamental message of your constitution is written, if you look at it, on your cheapest coin. If your eyesight is not good enough to read it there, go to the grave of Abraham Lincoln and there you will see it written in three Latin words, "e pluribus unum," "from many we are one." The essence of unity is the respect, is the acceptance of diversity. And that is the message of peace to every country, particularly countries that have divided peoples.

That is the philosophy that Ireland is screaming out for today. And I say to the Protestant tradition, bring forward that philosophy now — respect for diversity.

Then there is the other mindset in Ireland, with which many of us were reared and, indeed, many Irish Americans as well: the nationalist mindset. Essentially a territorial mindset. This is our land, and you unionists, because you are a minority, cannot stop us from uniting. They forget, they forget, that mindset forgets, that it is people who have rights, not territory. Without people, any piece of earth, as I always say, is only a jungle. And the only wealth that this world has is human beings. And it is human beings who create. And when human beings are divided, whether it is in Ireland, Cyprus, the former Yugoslavia, South Africa, or anywhere, they can only be brought together by agreement and not by any form of coercion or force. And killing has no contribution to make to uniting people. It only drives them farther apart. It only deepens the divisions, deepens the prejudices and leads, of course, to retaliation and, as Martin Luther King described it, the old doctrine of "an eye for an eye" which leaves everybody blind.

Our tradition in Ireland has to learn that victories are not solutions in divided societies, but that agreement is the answer when you have a divided people. And, of course, the challenge to the two mindsets that I have been setting out both lead in the same direction, both looking for an agreement as to how we share a piece of earth together. And that would mean that the responsible government in that situation should also be doing everything in its power to promote such an agreement, and using all its resources to do so. At last, through the current peace process, we have finally got the British government committed to working together with the Irish government to, and I am quoting exactly from the Downing Street Declaration, "to encourage, facilitate and enable agreement among the people of Ireland, and to legislate for whatever form that agreement takes."

It is easy, of course, to do as I have just been doing, pointing to the wrongs of the past. Looking to the future is a little more difficult, because then you have to exercise your mind to look at solutions and what those solutions could be. But in that, I have been very heavily inspired by my experience in Europe as a member of the European Parliament and before that, because my original job was teaching French and history, I was very interested and involved in Europe for most of my life. And when you consider today, European union, and I know it is not thought about much in America, but European union is the result of the same lesson your founders learned — "e pluribus unum." Think back 50 years. A hundred and thirty-five million people lay dead across the European continent, for the second time in a century. For centuries the peoples of Europe slaughtered one another by the millions. Who could have forecast 50 years ago today that we would have European union, the peoples of Europe united in one body? And the Germans are still Germans, and the French are still French. How did they do it? Because European union is, in my opinion, the greatest example in the history of the world of conflict resolution, and it is the duty of everyone in the area of conflict to study how they did it. And how did they do it? As in everything in life, profundities and profound statements of principle are simplicities. They decided the difference was not a threat. Because all conflict is about seeing difference as a threat and trying to wipe out the difference or take revenge for difference. And the answer to difference, as the founders of this state realized, is not to fight about it but to respect it. Because when you think of it, there are not two human beings in this room who are the same. There are not two human beings in the entire hu-

man race who are the same. Difference is an accident of birth and it is with you all your life. No one chose to be born. So whatever you are born, whatever race you are born into, whatever nationality you are born into, whatever religion, it is an accident of birth that you are born into it, and the answer is not to fight about it. The answer is to respect it and to build together.

The peoples of Europe learned that lesson and built institutions in Europe. Now I am a member of one of them the European Parliament. Those institutions respected differences, gave no victory to anyone. But, but, but. . . . the most important thing is they allowed all to work together in their common interests, spilling their sweat and not their blood, working for their basic right to existence, the right to life and the right to a decent standard of living. And by spilling their sweat and not their blood, by working together and building trust, the healing process began in Europe, breaking down the old prejudices, the barriers that had divided them for centuries. And the healing process evolved into a new Europe based on respect for diversity, and is still evolving.

That is what we have to do on our small island. Build institutions within the North, between North and South, which respect our differences but which allow us to work together in our common interests, which are even more considerable today than in the past, because we are the off-shore island of the United States of Europe now, and of the United States of America. Our economic interests are common, because our young people still, from many parts of our land, have to go to other lands to earn their living. Therefore, I think that we have to build those institutions and, having done so, create the healing process of working together on the economic front, breaking down the barriers that divide us, because the simplistic notions that have been always put forward in many ways, say an instant package will solve our problems, unite Ireland next week and the problem is solved. That is simplistic. That is emotional.

But the reality is that the border in Ireland is not a line on a map, it is in the minds and hearts of people, and it is a border created by the prejudices of centuries. You don't heal that in a week or a fortnight. You need a healing process. And that is why we have to create the institutions that will allow for that healing process to take place.

So when we get to these talks on the 10th of June, which I hope that we will now, in spite of all the difficulties being put in our way by having elections that are unnecessary, etcetera, etcetera, I hope that when we get there, we will work to reach that agreement. And while we are working to reach that political agreement, which will not be easy, we will work too toward our common ground and I will come back to that in a moment because that is where I think the Irish in other lands have a role to play. But whatever agreement we reach at a political level, once we have reached it and our quarrel is stopped and we start working together, then the real healing process will begin and the new Ireland will evolve and in a generation or two we will have an Ireland built on respect for diversity and on agreement among our formerly divided people.

Of course, in shaping that new Ireland, I believe that the people of the Irish diaspora have a great role to play. The Irish are, as I often say, the most numerous wandering people in the world. There are five million people who live in Ireland; there are 42 million in this country of Irish descent, according to the last census. But, of course, when the ancestors of that diaspora left Ireland, it was a different world. Many of them - we just had a major exhibition in my home city last week - came a hundred and fifty years ago, fleeing famine, in sailing ships taking weeks to get here, and many died on the way. That's why, before they left, the "American wake" was held for them, because when they left, their families knew they would never see them again. There is a very moving gravestone in a churchyard near my home on which it says, "This is the grave of William Dougherty, set here by his son who is gone to America," and the son is named. And then it says, "this stone must not be moved until I return." In other words, it would be moved only to bury him, but of course he never did return.

In today's world, the Irish who came here from both our traditions, Protestant and Catholic, have in many instances moved to the top in the professions, in business and in politics. And because we are a smaller world today, with telecommunications, transport, and the like, the time has come that the Irish diaspora can give back and can help our small island, and one area of real help is on the economic front, as both sections of our people work toward common ground. If, for example, the 42 million people who were proud enough of their Irish descent to insist in the last census that they were Irish in America, if they spent only \$5 a week on some product from Ireland, that would be \$10 billion in one year and the Irish economy would go through the roof. That may sound like a dream, but in today's world it is achievable, because there is no part of Ireland that does not have a special link with some part of the United States.

In my city, Derry, they say the next parish is Boston. And it is true. Because you got on the sailing ship in my city and sailed to Boston. And I've set up special links with Boston. We have taken our small companies over there to market their products with the help of the Irish in Boston. To date, we have got \$42 million worth of orders for those small companies, creating jobs. If we can organize right across the United States, different parts of

Ireland linking up directly with the parts of the United States with which they have special relationships and building trade partnerships directly — not by paying fortunes but by using direct personal contacts — then together we can build that new Ireland.

And, of course, universities have a major role to play in that effort. For one, by building special links with universities back in Ireland and giving broader horizons to our young people through exchange programs of staff and students. But there is an even more important job to be done. As we move into the next century, we are living through the greatest economic revolution in the history of the world. The last one was the industrial revolution; now we are going through the technological, telecommunications and transport revolution. As I said earlier, the only wealth of the world is human beings and their creativity, and education is key to developing that creativity and developing the world. For that very reason, education will become more and more important to the economic future of our world, and so as we move into the next century, education is going to have a very, very major role.

I hope also, because the world now is a smaller place, that the Irish nation — and I am going to find a different word for that eventually — but let us say the definition of Irish identity is no longer confined to those who live on the island itself. Let us develop for the next century a concept of Irishness that the Irish all over the world share in a positive way, so that we can all come together. And you know if we do that, we can become the most powerful people in the world, because we are not only in America, we are in Australia, we are in Argentina, we are in France (the first president of the republic was General "MacMahone," as they called him there; we called him McMahon) and in New Zealand and everywhere. And if we develop that concept for the next century, of certificates of Irish identity, and build on that to give back to the old homeland, then I think the next century will be - and this is my dream - the first century in our island's history in which we will have no blood on our streets and no emigration of our young to other lands to earn a living.

Thank you.

## Dedication of Craig House at the Environmental Research Center by Rev. Edward A. Malloy, C.S.C. July 11, 1996

#### Dr. George Craig

About one year ago, on July 21, 1995, when the Officers' Group was at Land O'Lakes, UNDERC facilities here were dedicated and blessed in memory of Jim Hank and in the presence of the Hank family, N.D. faculty and students, Father Hesburgh and Dr. George Craig.

About six months ago, George died while attending a professional conference in Nevada.

Because of his special professional interest in and dedication to the type of research for which this beautiful property is especially apt and appropriate, George spent much time here each summer.

Generations of Notre Dame students discovered the same excitement for research that was one of the driving forces of his own distinguished career.

It is appropriate that we dedicate this faculty house, where George Craig spent many weeks each summer, in memory and honor of this Notre Dame scholar.

### Blessing

Lord God,

We praise you for the wonder of your creation and for the beauty which surrounds us at every turn.

You make us in your own likeness, as the crowning moment of your creative generosity. You give men and women the desire to know you through the beautiful works of your hand, and you give us the intelligence we need to discover truth and beauty in our world.

Today we dedicate this faculty house in honor and memory of Dr. George Craig.

We remember his family, and we pray for their continued consolation.

May future generations of Notre Dame scholars be inspired by the work of George Craig, and carry out their own work with dedication and enthusiasm.

We make this prayer through the intercession of Mary, Notre Dame, the Mother of God and our patroness, and in the name of Jesus Christ, Our Lord, who lives and reigns with you and the Holy Spirit, One God, forever and ever.

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## Current Publications and Other Scholarly Works

Current publications should be mailed to the Office of Research of the Graduate School, Room 312, Main Building.

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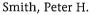
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#### **Electrical Engineering**

Antsaklis, Panos J.

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- I. K. Konstantopoulos and P. J. Antsaklis. 1996. An eigenstructure assignment approach to control reconfiguration. In *Proceedings of the 4th IEEE Mediterranean Symposium on Control and Automation*, 328-333. Chania, Crete, Greece. June 10-14.
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- J. A. Stiver, P. J. Antsaklis and M. D. Lemmon. 1996. An invariant based approach to the design of hybrid control systems containing clocks. In *Hybrid Systems III* — *Verification and Control*, eds., R. Alur, T. Henzinger and E. Sontag, 464-474. Lecture Notes in Compter Science, LNCS 1066. Springer-Verlag.
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Sain, Michael K.

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#### LAW SCHOOL

Shaffer, Thomas L.

- T. L. Shaffer. 1996. Maybe a lawyer can be a servant; if not .... *Texas Tech Law Review* 27 (3): 1345-1357.
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#### LOBUND LABORATORY

Pollard, Morris

M. Pollard, F. H. Faas, A. Q. Dang, X. M. Hong, K. Fan, P. H. Luckert and M. Schutz. 1996. Increased phospholipid fatty acid remodeling in human and rat prostatic adenocarcinoma tissues. *Journal of Urology* 156:243-248.

#### RADIATION LABORATORY

George, M. V.

- T. Mathew, S. A. Kumar, S. Das, N. P. Rath and M. V. George. 1996. A photoproduct derived from 9-Benzyl-Substituted Dibenzobarrelene. *Acta Crystallographica Section C* C52:942-944.
- D. Ramaiah, M. Muneer, K. R. Gopidas, P. K. Das, N. P. Rath and M. V. George. 1996. Phototransformations of *C*-Benzoylaziridines. Dipolarophihlic trapping of photogenerated azomethine ylides. *Journal of Organic Chemistry* 61 (13): 4240-4246.

## Awards Received and Proposals Submitted

In the period July 1, 1996, through July 31, 1996

#### AWARDS RECEIVED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	13	1,303,230	18	839,815	31	2,143,045
Facilities and Equipment	0	0	1	14,150	1	14,150
Instructional Programs	0	0	1	45,650	1	45,650
Service Programs	0	0	4	27,732	4	27,732
Other Programs	<u>0</u>	<u>0</u>	<u>2</u>	26,458	<u>2</u>	<u>26,458</u>
Total	13	1,303,230	26	953,805	39	2,257,035

#### PROPOSALS SUBMITTED

Category	Renewal		New		Total	
	No.	Amount	No.	Amount	No.	Amount
Research	3	775,067	16	4,358,426	19	5,133,493
Facilities and Equipment	0	0	2	85,061	2	85,061
Instructional Programs	0	0	0	0	0	0
Service Programs	0	0	0	0	0	0
Other Programs	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	3	775,067	18	4,443,487	21	5,218,554

## **Awards Received**

In the period July 1, 1996, through July 31, 1996

#### AWARDS FOR RESEARCH

#### **Biological Sciences**

O'Tousa, J.

Genetic Analysis of Retinal Degeneration National Institutes of Health \$192,474 12 months Kulpa, C. TNT Biodegradation Argonne National Laboratory

\$50,000 12 months

Hellenthal, R. Long Term Habitat ( Forest	Change in the Ottawa National				
U.S. Forest Service					
\$9,975	13 months				
Adams, J.					
Molecular Analysis o	of Apical Organelles of Plasmodium				
National Institutes	s of Health				
\$93,922	24 months				
Müller, I.					
Analysis of T Cells ir	n Secondary Leishmania Infections				
National Institutes					
\$95,932	12 months				
Civil Engineering and Geological Sciences					
Pyrak-Nolte, L.					
NSF - Young Investig	gator Award				
National Science Foundation					

36 months

\$100,000

### Ketchum. L.

Elkhart Environmental Center City of Elkhart \$25,000 Kareem, A. Dynamic Response of Structures National Science Foundation \$87,261 24 months Makris, N. NSF CAREER Award for Nicos Makris National Science Foundation \$50,000 12 months

#### **Chemical Engineering**

ę

McCready, M. Fundamental Study of Long-Short Interfacial Waves Department of Energy \$79,945 12 months Varma, A. Ceramic and Metal-Composite Membranes National Science Foundation \$85,068 12 months

#### **Chemistry and Biochemistry**

Smith, B.

Dopamine Transport through Supported Liquid Membranes North Atlantic Treaty Organization \$6,361 24 months Molecular Recognition Using Organoboron Acids National Science Foundation \$99,000 12 months Castellino, F. Structure/Function Studies on Plasminogen and Plasmin National Institutes of Health \$387,447 12 months Huber. P. Interactions of Aminoglycoside Antibiotic with TAR **RNA** Parke-Davis 10 months \$13,500 **Computer Science and Engineering** 

Kogge, P., Brockman, J. PIM Based Accelerator Technology Infrastructure MAYO/ARPA

\$61,475

#### **Electrical Engineering**

Hall, D. CAREER Award Equipment Supplement National Science Foundation 48 months \$10,000 Model 2010 Upgrade Metricon Corp. \$9,000 36 months Lemmon, M., Antsaklis, P. Distributed Simulation of Complex Systems Department of the Army \$80,000 12 months Stevenson, R., Lumsdaine, A. Parallel Algorithms for High-Speed Image Processing Department of the Air Force \$199,931 18 months

#### Mathematics

Wong, P. Hyperbolic Geometry and Nevanlinna Theory National Science Foundation 12 months \$22,192 Cholak, P. Computability in Mathematics National Science Foundation \$64,500 36 months Herzogm, I. Model Theory of Modules National Science Foundation \$18,000 12 months Smyth, B., Xavier, F. Submanifolds/Injectivity Problems in Geometry National Science Foundation \$35,000 12 months Shaw, M., Himonas, A. Partial Differential Equations and Several Complex Variables National Science Foundation \$4,467 36 months

#### Physics

Mathews, G., Wiescher, M. Nuclear Astrophysical Probes of Matter Department of Energy \$60,000 12 months Bunker, B. XAFS Collaboration Argonne National Laboratory \$5,000 2 months Biswas, N., Ruchti, R., et al. Colliding Beam Experiment National Science Foundation \$30,000 24 months

Wayne, M., Ruchti, R. DO Detector Project Fermi National Laboratory \$77,000 12 months

#### Psychology

Marsh, K., Julka, D. A Functional Approach to Increasing Donor Participation Social Psychology Study Social Issues \$936 15 months

Borkowski, J., Whitman, T. Research Training in Mental Retardation National Institutes of Health \$89,659 12 months

#### AWARDS FOR FACILITIES AND EQUIPMENT

#### Psychology

Maxwell, S. Quantitative Psychology Lab Equipment NCAA \$14,150 12 months

#### AWARDS FOR INSTRUCTIONAL PROGRAMS

#### Aerospace and Mechanical Engineering

Schmid, S., Renaud, J., et al. SME Education Foundation SME Education Foundation \$45,650 12 months

AWARDS FOR SERVICE PROGRAMS

#### Center for Continuing Formation in Ministry

Cannon, K. Center for Continuing Formation in Ministry Various Others \$300 1 month Lauer, E. Center for Continuing Formation in Ministry Various Others \$20,600 1 month

#### ND Center for Pastoral Liturgy

Bernstein, E.	
Center for Pastoral Liturgy	
Various Others	
\$752	1 month
Center for Pastoral Liturgy	
Various Others	
\$6,080	1 month

#### AWARDS FOR OTHER PROGRAMS

#### **Electrical Engineering**

Porod, W. International Workshop on Computational Electronics Department of the Army \$6,000 12 months

**Reilly Center** 

Mirowski, P., Sent, E. The Need for a New Economics of Science National Science Foundation \$20,458 18 months

### **Proposals Submitted**

In the period July 1, 1996, through July 31, 1996

PROPOSALS FOR RESEARCH

#### Aerospace and Mechanical Engineering

Thomas, F. Turbulence Stress Amplification Model McDonnell Douglas Corp. \$25,000 12 months



#### **Biological Sciences**

Müller, I. Role of IL-4 in Immune Responses to Leishmania Infection World Health Organization \$230,080 36 months Fraser, M. Genetics of the Lepidopteran Piggybac Transposon National Science Foundation \$521,885 36 months Transposon Mutagenesis of NPV National Institutes of Health \$261,472 12 months

### Civil Engineering and Geological Sciences

Ketchum, L. Bioleaching of Sewage Sludges and Its Effect on Duram Wheat Department of Agriculture \$30,000 36 months Silliman, S. Fulbright Semester in Israel Council International Exchange Scholar \$0 5 months

## THE GRADUATE SCHOOL Office of Research

#### **Chemical Engineering**

Varma, A., Strieder, W. Silicon Nitride Synthesis: Experiments and Theory ACS Petroleum Research Fund \$75,000 44 months

#### **Chemistry and Biochemistry**

Fehlner, T. Metallaborane Chemistry National Science Foundation \$455,167 36 months Taylor, R. Oligocyclopropanes from Homo-Allylic Cations American Chemical Society \$20,000 24 months Basu, S. Characterization of Breast Cancer Cell Surface Antigens Department of the Army

36 months

#### **Computer Science and Engineering**

Kogge, P., Brockman, J.

\$260,292

PIM Based Accelerator Technology Infrastructure MAYO/ARPA \$1,838,306 36 months

#### **Institute for International Peace Studies**

Smith. I.

Assessing Local Implications of Transnational Organization J.D. and C.T. MacArthur Foundation 18 months \$64.462

#### Physics

Iones. G. Modeling a Gravitational Microlensing Planet Search Network National Aeronautics and Space Administration \$154.451 36 months Detection of Extra-Solar Planets National Aeronautics and Space Administration 36 months \$293,796 Rettig, T. A Search for Protoplanets Embedded in Circumstellar Disks National Aeronautics and Space Administration 36 months \$84,873 Barabasi, A. Interface Motion in Disordered Environment American Chemical Society \$20,000 24 months

Furdyna, J., Dobrowolska-Furdyna, M. Tetrahedrally Coordinated II-VI Semiconductor Heterostructures Purdue University 9 months \$58,428 Ruggiero, S., Tanner, C., et al. Hot-Electron Detectors National Aeronautics and Space Administration 36 months \$439,817

#### Psychology

Day, J. Creating Zones of Proximal Development Health and Human Services \$300,464 36 months

PROPOSALS FOR FACILITIES AND EQUIPMENT

#### **Biological Sciences**

Carlton, R. Instrumentation for Ecological Investigation National Science Foundation \$70,911 6 months

#### Psychology

Maxwell, S. Quantitative Psychology Lab Equipment NCAA \$14,150

12 months



# NOTRE DAME REPORT

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Linda M. Diltz, Editor Marten Schalm, Designer Erin Gallavan, Publication Assistant Gerard Jacobitz, Indexer Publications and Graphic Services 415 Main Building Notre Dame, IN 46556 (219) 631-5337 e-mail: Diltz.1@nd.edu

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