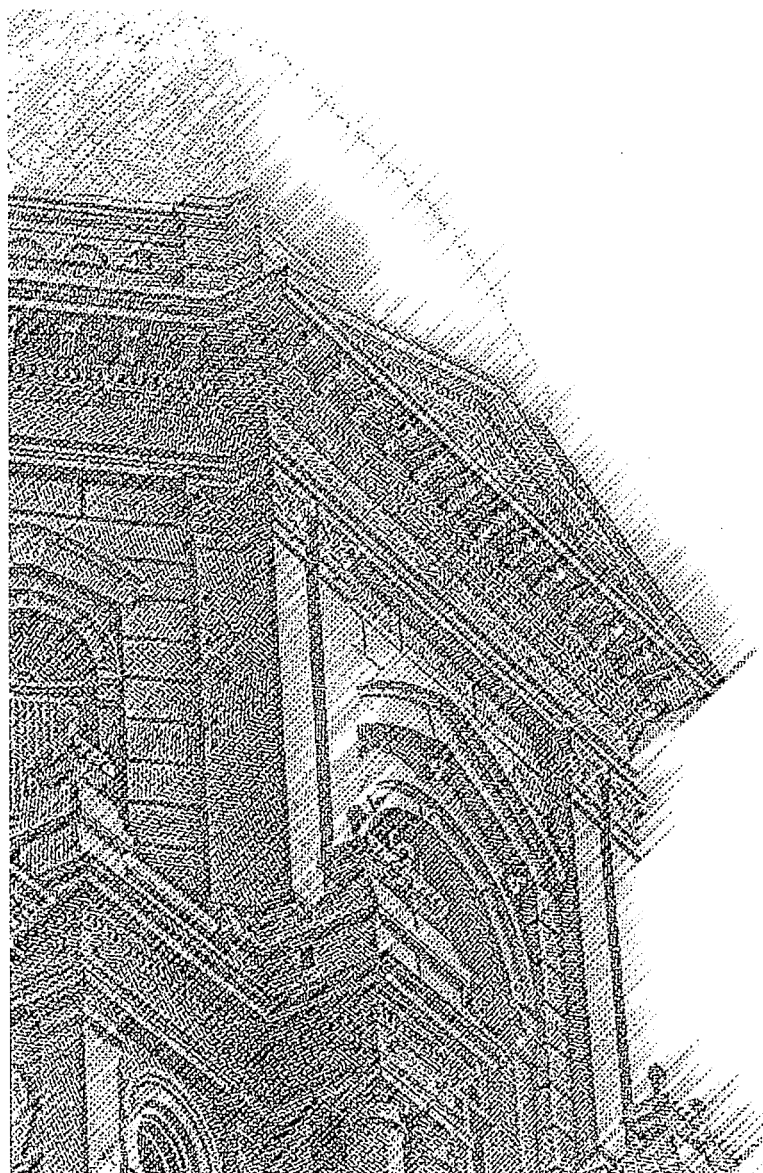


Notre Dame Report



Faculty Notes

431 Honors
431 Activities
434 Publications

Administrators' Notes

437 Appointments
437 Activities
437 Publications

Research

438 Awards Received and Proposals Submitted
439 Awards Received
441 Proposals Submitted

J U L Y 3 , 1 9 9 8

N U M B E R 1 9

Faculty Notes

Honors

John F. Affleck-Graves, chairperson and professor of finance, received the 1998 Outstanding Teaching Award presented by Notre Dame's MBA program.

James H. Davis, associate professor of management, received the 1998 Outstanding Teaching Award presented by Notre Dame's Executive MBA program.

Keith J. Egan, adjunct professor of theology and chairperson of religious studies at Saint Mary's College, received the Spes Unica Award presented by Saint Mary's College at their Honors Convocation May 3.

Paquita Davis Friday, assistant professor of accountancy, has been appointed to a three-year term on the Development Advisory Board of the University of Michigan Business School in Ann Arbor.

James L. Merz, vice president for graduate studies and research and Freimann professor of electrical engineering, delivered the commencement address at Mesa State College, Grand Junction, Colo., May 10. He also has been re-elected to the EMC Committee, which has responsibility for the development of the direction and program of the Electronic Materials Conference. Election to this position is for a three-year period beginning in June.

G. Margaret Porter, librarian, was elected member-at-large for the Women's Studies section of the Association of College and Research Libraries, a division of the American Library Association.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, was appointed to the Program Committee of the Symposium on Smart Systems for Bridges, Structures and Highways, to be held in conjunction with the SPIE 6th Annual International Conference on Smart Structures and Materials, to be held March 1-5, 1999.

Arvind Varma, Schmitt professor of chemical engineering, has received the Ernest W. Thiele Award in chemical engineering from the American Institute of Chemical Engineers.

Robert P. Vecchio, Schurz professor of management, has been appointed to the editorial review board of the *International Journal of Applied Quality Management*.

Activities

Mark S. Alber, associate professor of mathematics, gave the invited talk, "On Billiard Systems and Weak Solutions of Nonlinear Partial Differential Equations" at the Third International Interdisciplinary Meeting on Symmetries and Integrability of Difference Equations in Sabaudia, Italy, May 17. He presented the lecture "Hamiltonian Billiard Systems on Riemann Surfaces" at the University of Torino, Italy, May 25.

Albert-László Barabási, assistant professor of physics, gave a seminar, "Strained Islands on Semiconductor Surfaces: the Growth of Self-Assembled Quantum Dots," at the Research Institute for Technical Physics and Material Science of the Hungarian Academy of Sciences in Budapest, June 3. He presented a seminar, "What Keeps Sandcastles Up? The Physics of Wet Granular Matter" at the Department of Biological Physics, Eötvös University, Budapest, June 5.

Jay W. Brandenberger, associate professional specialist at the Center for Social Concerns and concurrent assistant professor of psychology, presented "Moral Development and Service-Learning: Theoretical and Empirical Foundations" at a national conference on Moral Education in a Diverse Society held at Duke University, Durham, N.C., Feb. 20-22. He presented "Building Doors in the Ivory Tower: Integrating Experiential Learning and the Curriculum" at the Break Away National Conference held at the University of Michigan, Ann Arbor, Nov. 7-9. He also led a delegation of students to Haiti for experiential learning March 6-12.

Bruce A. Bunker, professor of physics, presented the physics colloquium, "Uncovering Buried Interfaces with X-rays," at North Carolina State University, Raleigh, April 13. He also participated in a panel discussion on new approaches to environmental science at the Review of the Environmental Research Division of Argonne (Ill.) National Laboratory April 28.

Jeffrey C. Burden, visiting assistant professor in the Rome Studies Program of the School of Architecture, presented "Athens Remade in the Age of Augustus" at the Conference on Romanization and the City: Creation, Dynamics and Failures, at the American Academy in Rome, May 15.

Ralph El-Chami, assistant professor of finance and business economics, presented "A Theory of Family Business" at the Midwest Mathematical Economics meetings at Michigan State University, East Lansing, May 16.

Hsueh-Chia Chang, professor of chemical engineering, presented two seminars, "Modulation Instability of Kinematic Interfacial Waves" for the mechanical engineering department at UCLA May 14, and "Wave Dynamics on a Falling Film" for the chemical engineering department at UCLA May 15.

Daniel M. Chipman, professional specialist in the Radiation Laboratory, is co-author of a paper presented by graduate student Chang-Guo Zhan, "Calibration of the Solute Cavity Size in Reaction Field Theory," given at the 31st Midwest Theoretical Chemistry Conference at Purdue University, West Lafayette, Ind., May 21-23. He presented the poster, "Effect of Hydrogen Bonding on the Vibrations of Para-Benzosemiquinone Radical Anion" at the conference.

Kevin J. Christiano, associate professor of sociology, presented an invited address, "Church and State in Institutional Flux: Canada and the U.S.A.," at the conference on "Rethinking Church, State, and Modernity: Canada Between Europe and the United States," sponsored by the Queen's University Research Unit on Religion and Society, at the Donald Gordon Centre, Queen's

University, Kingston, Ontario, May 14-16.

William G. Dwyer, Hank family professor of mathematics, delivered a nine-hour series of lectures sponsored by the Centre de Recerca Matemàtica, Institut d'Estudis Catalans, Bellaterra, Spain, between May 27 and June 2. The subject was "Finite groups, homotopy colimits, and homology decompositions." He gave an invited talk, "Symmetric powers and the Steinberg idempotent," at the Barcelona Conference on Algebra Topology, held at the Universita Autònoma de Barcelona, Bellaterra, June 10.

Richard M. Economakis, assistant professor of architecture, was awarded a \$10,000 grant by the Graham Foundation for Advanced Studies in the Arts to fund production of the book, *A Portrait in Stone: the Architecture of Nisyros Island*.

Keith J. Egan, adjunct professor of theology and chairperson of religious studies at Saint Mary's College, presented "Thomas Aquinas on Eucharist as the Sacrament of Forgiveness" at the first annual Thomas Aquinas Symposium, Saint Mary's College, Notre Dame, Ind., Feb. 7.

James A. Glazier, associate professor of physics, gave an invited seminar, "A Physicist Looks at Development," at the Research Institute of Electrical Communication, Tohoku University, Sendai, Japan, May 19.

Erik A. Johnson, visiting research specialist in civil engineering and geological sciences, presented "Monte Carlo Simulation of the Stochastic Beam-Beam Interaction Problem in Particle Accelerator Physics," co-authored with L.A. Bergman and **Billie F. Spencer Jr.**, professor of civil engineering and geological sciences, at the 12th ASCE Engineering Mechanics Specialty Conference, La Jolla, Calif., May 17-20. He also presented "Simulation of the Beam-Beam Problem by a Cell Mapping Algorithm," authored by F. Bontempi; and "Earthquake Simulator Control by Transfer Function Iteration," authored by **Billie F. Spencer Jr.** and G. Yang.

Ahsan Kareem, professor of civil engineering and geological sciences, presented a plenary session lecture, "How to Cope with Low Frequency-High Impact Disasters: A Wind Engineering Viewpoint," at the 7th International Conference on Structural Safety and Reliability held in Kyoto, Japan, Nov. 24-28. He also chaired a session on reliability and design subjected to strong winds. He presented the following papers at the conference: "Modelling of Coherence for Stochastic Representation of Wind, Wave and Seismic Load Effects," co-authored by G. Deodatis and M. Shinozuka; "Turbulence Effects on Long-Span Bridge Stability," co-authored by F. Haan Jr. and **Albin A. Szewczyk**, professor of aerospace and mechanical engineering; and "Analysis of Nonlinear Systems under Non-Gaussian Hydrodynamic Loads," co-authored by M.A. Tognarelli. He co-authored "Modelling of PDFs of Non-Gaussian System Response" with K. Gurley, and "Probabilistic Models of Ringing" with K. Gurley, F. Waisman, and M. Grigoriu, which were presented by Prof. Gurley at the conference. Professor Kareem also presented "Efficient Simulation Tools: Applications to Wind, Wave and Earthquake Related Processes" at the U.S.-Japan Workshop/Seminar on Stochastic Simulation for Civil Infrastructural Systems held in Kyoto Nov. 22-23. He served as a discussion group leader concerning environmental loads and was a member of the technical program committee for the workshop.

Yahya C. Kurama, assistant professor of civil engineering and geological sciences, presented "Seismic Behavior and Design of Unbonded Post-Tensioned Precast Concrete Walls" at the sixth U.S. National Conference on Earthquake Engineering, Seattle, Wash., May 31-June 4.

George A. Lopez, professor of government and international studies and fellow in the Kroc and Kellogg Institutes, presented "Economic Sanctions and U.S. Foreign Policy" at Lake Forest (Ill.) College April 6, and "Sanctions and Incentives: New Dimensions of Peacekeeping" at the Simmons College Symposium on Peacekeeping, Boston,

Mass., April 7. He co-authored "Economic Sanctions and Human Rights: A Preliminary Analysis" with V. Hinojosa, which was presented at the annual meetings of the Midwest Political Science Association in Chicago April 23-25. He was awarded a six-month, \$10,000 grant from the John D. and Catherine T. MacArthur Foundation to fund "The Sacred, the Sword and Global Security: A Video Project."

Rev. Ernan McMullin, O'Hara professor emeritus of philosophy, lectured on "Galileo as a Theologian" at the Aquinas Center of Purdue University, West Lafayette, Ind., Jan. 29. He spoke on "Evolution as a Christian Theme" at Hampden-Sydney College, Va., Feb. 13. He gave the keynote address on "The Newtonian Legacy in Philosophy of Science" at the biennial meeting of HOPOS, the national association for the history of the philosophy of science, held at Notre Dame March 14. He lectured on "Anthropic Explanation in Cosmology" at Marquette University, Milwaukee, Wis., March 18. He conducted a seminar, "Contemporary Philosophy of Science," at Goshen (Ind.) College March 24. He gave the keynote address, "From Augustine to Galileo," at a conference honoring Richard Blackwell at St. Louis University April 3. He lectured on "Evolution and the Religion-Science Dialogue" at King's College, Pa., on April 17. He gave the opening lectures, "Historical Origins of the Concept of Science" and "The Role of Values in Theory-Assessment in the Natural Sciences," at a conference on environmental science organized by the Luso-American Foundation, Lisbon, Portugal, May 4.

James L. Merz, vice president for graduate studies and research and Freimann professor of electrical engineering, gave an invited talk, "Nanostructure Self-Assembly as an Emerging Technology," at the NATO Advanced Research Workshop on Future Trends in Microelectronics in Ile de Embiez, France, June 1-5.

Juan C. Migliore, professor of mathematics, presented "Buchsbaum Curves and Hyperplane Sections" May 12; "Buchsbaum Liaison Classes" May

14; and "Gorenstein Liaison" May 15 at the Conference on Buchsbaum Varieties, Catania, Italy. He presented "New Directions in Liaison Theory" at the Algebraic Geometry Seminar in Trento, Italy, May 21. He presented "Gorenstein Liaison" at the Conference on Homological Methods in Commutative Algebra and Algebraic Geometry in Genova, Italy, May 28.

Carolyn B. Miller, associate professional specialist and concurrent associate professor in the College of Business Administration, received a teaching development grant from the Center for Social Concerns to develop a business communication course incorporating social learning.

Kevin M. Misiewicz, associate professor of accountancy, presented "Illuminating Learning Outcomes in Tax: Insights from Tax Programs and Professional Groups" at the 1998 American Institute of CPAs' Tax Education Symposium in Las Vegas, Nev., June 5.

Christian R. Moevs, assistant professor of Romance languages and literatures, gave an invited lecture, "Cosmology and Ontology in Dante's *Paradiso*," at Purdue University, West Lafayette, Ind., April 24.

Michael C. Mossing, assistant professor of biological sciences, gave a seminar, "DNA recognition by Multiple Protein Domains: Linkage effects in simple systems," at the University of Mississippi Feb. 20. He presented "Coupling and Uncoupling Proteins Assembly from DNA recognition by the lambda Cro Repressor" at the Biophysical Society Meeting Feb. 22-26; he also served as chair of the session on DNA Binding Proteins at the meeting. He presented the seminar, "DNA Recognition by Multiple Protein Domains: Linkage Effects in the lambda Cro Repressor-Operator Interaction," at the University of Missouri, Kansas City, Feb. 27, at the Stevens Institute of Technology, Hoboken, N.J., March 4, at San Francisco State University March 13-15, at the University of Toledo March 8-10, and to the Department of Chemistry at the University of Missouri, St. Louis, March 24-25.

Martin F. Murphy, associate professor of anthropology and fellow in the Kellogg Institute, presented the 1998 lecture series, "Historia de la etnología," including the following titles: "El funcionalismo de Malinowski y Radcliffe-Brown"; "Funcionalismo y política colonial"; "Los aportes de Franz Boas y concepciones fundamentales: historicismo, relativismo y antirracismo"; "El neoevolucionismo y los estudios de Leslie White y Julian Steward"; "El materialismo dialéctico y materialismo cultural"; "Postmodernismo en antropología" (Diplomado en Etnología; Sponsoring Agencies: Fundación Fernando Ortiz, Academia de Ciencias de Cuba, Centro de Superación para la Cultura, Facultad de Filosofía e Historia de la Universidad de La Habana; 1-5 June, 1998, La Habana, Cuba).

Carolyn R. Nordstrom, associate professor of anthropology and fellow in the Kroc Institute, presented "New and Alternative Forms of Governance" at the Social Science Research Council workshop, "States in Crisis, States in Flux: Processes of Reconfiguration," held in Antigua, Guatemala, May 24-26. The presentation was funded by a Social Science Research Council grant.

Joseph E. O'Tousa, associate professor of biological sciences, presented a seminar, "Retinal degeneration triggered by defects in rhodopsin maturation" at the Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, April 30-May 1. He presented a seminar, "Mechanisms of retinal degeneration in *Drosophila* rhodopsin mutations" at the University of Illinois at Chicago, Department of Ophthalmology and Vision Science, April 15.

Peter E. Schiffer, assistant professor of physics, gave a condensed matter seminar, "Geometrical Frustrated Antiferromagnets: Common Behavior and Unique Ground States," at the Physics Department, Purdue University, West Lafayette, Ind., May 1. He gave a Physics Division colloquium, "Beach Physics: Studies of Wetting and Drag Force on Granular Media," at Argonne (Ill.)

National Laboratory May 29, and presented "Geometrical Frustrated Antiferromagnets: Common Behavior and Unique Ground States" at Bell Laboratories, Murray Hill, N.J., June 5.

Daniel J. Sheerin, professor of classics, presented "Patristic Gorenography: What? Why?" at the annual meeting of the North American Patristics Society, Chicago, May 30.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, delivered an invited seminar, "Technological Frontiers of Smart Seismic Protective Systems," at Tonji University, Shanghai, China, May 20. He represented the United States as part of the U.S. delegation to the U.S.-China Protocol Meeting held at the Dalian University of Technology, Dalian, China, May 25. The meeting was sponsored by the National Science Foundation and the Chinese Ministry of Construction. He delivered an invited seminar, "Magnetorheological Dampers: A New Approach to Protect Civil Structures," at Tsinghua University, Beijing, China, May 29.

Jay H. Tidmarsh, associate professor of law, spoke on the future of American civil law in the 21st century at the annual meeting of the American Law Institute in Washington, D.C., May 14. He attended a meeting of the Mass Tort Working Group in Philadelphia May 27-28 at the invitation of Third Circuit Judge Anthony Scirica to examine the problems of mass tort litigation and to propose possible solutions to them.

Raimo Väyrynen, Regan director of the Kroc Institute and professor of government and international studies, presented "The Impact of Globalization and the European Union on Small States" at a conference organized by the Estonian Ministry of Economics in Lohusalu, Estonia, May 28-29. He presented "Globalization and the Future of the Nordic Welfare Model" at the General Conference of the Nordic Social Democratic Labour Movement in Haugesund, Norway, June 3-4.

Jennifer A. Younger, director of university libraries and librarian, presented "Metadata and Libraries: A Director's Perspective on Changes in Library Programs, Services and Operations" at the AMIGOS Spring 1998 Conference in Dallas, Tex., May 7. She presented "Connecting People to Information: Metadata and Access," at the Symposium on Building Digital Collections sponsored by the University of Iowa Libraries, Iowa City, Dec. 11-12.

Publications

Paul F. Bradshaw, professor of theology, wrote "Difficulties in Doing Liturgical Theology," published in *Pacifica* 11, 1998, pp. 181-194.

Neal M. Cason, professor of physics, co-authored "Analysis of the $\pi^0\pi^0$ final state in $\pi p \rightarrow \pi^0\eta n$ at 18.3 GeV/c" with B. Brabson et al. (T. Adams, **James M. Bishop**, research professor of physics, **John M. LoSecco**, professor of physics, J.J. Manak, A.H. Sanjari, **William D. Shephard**, professor of physics, D.L. Stienke, S.A. Teagar, and D.R. Thompson), in K. Heller, J.K. Nelson and D. Reeder, eds., *Proceedings of the 9th Meeting of the Division of Particles and Fields of the American Physical Society*. Minneapolis, Minn: World Scientific, Singapore, 1998, pp. 387-391. He co-authored "Analysis of the $\eta\pi^0$ system in πp reactions at 18.3 GeV/c" with J. Gunter et al. (T. Adams, **James M. Bishop**, research professor of physics, **James M. LoSecco**, professor of physics, J.J. Manak, A.H. Sanjari, **William D. Shephard**, professor of physics, D.L. Stienke, S.A. Teagar, D.R. Thompson), in K. Heller, J.K. Nelson and D. Reeder, eds., *Proceedings of the 9th Meeting of the Division of Particles and Fields of the American Physical Society*. Minneapolis, Minn: World Scientific, Singapore, 1998, pp. 392-395. He co-authored "Properties of the $a_0(980)$ Meson" with S. Teige et al. (T. Adams, **James M. Bishop**, research professor of physics, **John M. LoSecco**, professor of physics, J.J. Manak, A.H. Sanjari, **William D. Shephard**, professor of physics, D.L. Stienke, S.A.

Teagar, and D.R. Thompson), in K. Heller, J.K. Nelson and D. Reeder, eds., *Proceedings of the 9th Meeting of the Division of Particles and Fields of the American Physical Society*. Minneapolis, Minn: World Scientific, Singapore, 1998, pp. 396-398.

Danny Z. Chen, assistant professor of computer science and engineering, co-authored (with **John J. Uhran Jr.**, associate dean of academic affairs, College of Engineering, professor of computer science and engineering and professor of electrical engineering, and R.J. Szczerba) "Planning Shortest Paths Among 2D and 3D Weighted Regions Using Framed-Subspaces," published in *The International Journal of Robotics Research*, vol. 17, no. 5, 1998, pp. 531-546. He co-authored "Finding the Convex Hull of Discs in Parallel" with W. Chen, K. Wada and K. Kawaguchi, published in *International Journal of Computational Geometry and Applications*, vol. 8, no. 3, June 1998, pp. 305-319. He wrote "Determining Weak Visibility of a Polygon from an Edge in Parallel," published in *International Journal of Computational Geometry and Applications*, vol. 8, no. 3, June 1998, pp. 277-304. He co-authored "Efficiently Approximating Polygonal Paths in Three and Higher Dimensions" with G. Barequet, O. Daescu, M.T. Goodrich, J. Snoeyink, published in *Proceedings of the 14th Annual ACM Symposium on Computational Geometry*. Minneapolis, Minn.: ACM Press, 1998, pp. 317-326.

Julia V. Douthwaite, associate professor of Romance languages and literatures, wrote "Private Life in the Public Eye: Rousseau's Autobiography and Eighteenth-Century Painting," published in *Studies on Voltaire and the Eighteenth Century*, vol. 358, 1998, pp. 135-160.

Keith J. Egan, adjunct professor of theology and chairperson of religious studies at Saint Mary's College, wrote "The Ecclesiology of Teresa of Avila: Women As Church Especially in 'The Book of Her Foundations,'" in M.P. Aquino and R.S. Goizueta, eds., *Theology: Expanding the Borders*, annual publication of the College Theology Society, vol. 43, 1998, pp. 145-161.

Guillermo J. Ferraudi, professional specialist in the Radiation Laboratory, co-authored (with **W. Robert Scheidt**, professor of chemistry and biochemistry, A.G. Coutsolelos, and D. Daphnomili) "Photogeneration of Monomeric Porphyrins from the (Tetraphenylporphyrin) Rh-In (Octaethylporphyrin) Dissociation of the Rh-In Bond: Investigation of Their Reactions in the Picosecond-Microsecond Time Domain," published in *Inorganic Chemistry*, Vol. 37, no. 8, 1998, pp. 2077-2079.

Patrick A. Hall, associate librarian and coordinator of library instruction, wrote "Footnote from an Integrationist," in R.E. Long, ed., *Multiculturalism*. New York: H.W. Wilson, 1997. He wrote "Black and Blue," published in *Commonweal*, vol. CXXV, no. 3, Feb. 13, 1998, p. 31. He wrote "Second Class Citizens," published in *Heterodoxy*, vol. 5, no. 8, October 1997, p. 2. He wrote "A Note on School Vouchers," published in the *Conservative Review*, vol. 8, no. 6, November/December 1997, pp. 2-3.

Gregory V. Hartland, assistant professor of chemistry and biochemistry, co-authored "Observation of Acoustic Quantum Beats in Nanometer Sized Au Particles" with J.H. Hodak and I. Martini, published in *Journal of Chemical Physics*, vol. 108, no. 22, June 8, 1998, pp. 9210-9213.

Christine Jensen Hogan, adjunct instructor of first year composition, wrote and performed in "Un Pas de Deux, Un Pas de Dieu: A Meeting between Thomas Merton and Anne Bradstreet at the second general meeting of the Thomas Merton Society of Great Britain and Ireland, Oakham, England, March 27.

Erik A. Johnson, visiting assistant professor of civil engineering and geological sciences, co-authored "Monte Carlo Simulation of the Stochastic Beam-Beam Interaction Problem in Particle Accelerator Physics" (with **Billie F. Spencer Jr.**, professor of civil engineering and geological sciences, and L.A. Bergman), in H.

Murakami and J.E. Luco, eds., *Proceedings of the 12th ASCE Engineering Mechanics Specialty Conference*, La Jolla, Calif., May 17-20, 1998. Reston, Va.: ASCE, 1998, pp. 1457-1460.

George A. Lopez, professor of government and international studies and fellow in the Kroc and Kellogg Institutes, co-authored "Globalizing Human Rights: the Work of Transnational Human Rights NGOs in the 1990s" with J. Smith and R. Pagnucco, published in *Human Rights Quarterly*, vol. 20, no. 2, May 1998, pp. 379-412. He co-authored (with **David B. Cortright**, guest lecturer in the Kroc Institute) "Trouble in the Gulf: Pain and Promise," published in *The Bulletin of the Atomic Scientists*, vol. 54, no. 3, May/June 1998, pp. 39-43.

Edward J. Maginn, assistant professor of chemical engineering, co-authored (with **Davide A. Hill**, associate professor of chemical engineering, and Y.N. Kaznessis) "Molecular Dynamics Simulations of Polar Polymer Brushes," published in *Macromolecules*, vol. 31, 1998, pp. 3116-3129.

Juan C. Migliore, professor of mathematics, co-authored "Submodules of the deficiency modules and an extension of Dubreil's theorem" with H. Martin, published in *Journal of the London Mathematics Society* (2), vol. 56, no. 3, 1997, pp. 463-476.

Marvin J. Miller, Clark professor of chemistry and biochemistry, co-authored "The Synthesis of Enantiomerically Pure, Highly Functionalized Heterocycles: The Products of Amino Acid Based Acylnitroso Hetero Diels-Alder Reactions" with P.F. Vogt, M.J. Mulvihill, S. Ramurthy, G.C. Savelle and A.R. Ritter, published in *Enantiomer*, vol. 2, 1998, pp. 367-380. He co-authored "Enzymatic Resolution of Aminocyclopentenols as Precursors to D- and L- Carbocyclic Nucleosides" with J.L. Gage and M.J. Mulvihill, published in *The Journal of Organic Chemistry*, vol. 63, 1998, pp. 3357-3363. He co-authored "Syntheses of Novel Hydroxylamine Carbanucleosides" with M.J. Mulvihill, published in *Tetrahedron*, vol. 54, 1998, pp. 6605-6626.

Michael C. Mossing, assistant professor of biological sciences, co-authored "Single-Chain Lambda Cro Repressors Confirm High Intrinsic Dimer-DNA Affinity" with R. Jana, T.R. Hazbun and J.D. Fields, published in *Biochemistry*, vol. 37, 1998, pp. 6446-6455. He wrote "Solution Structure and Dynamics of a Designed Monomeric Variant of the Lambda Cro Repressor," published in *Protein Science*, vol. 7, 1998, pp. 983-993.

Thomas L. Nowak, professor of chemistry and biochemistry, co-authored "Conformational Changes in Yeast Pyruvate Kinase Studied by ^{205}Ti + NMR" with J.P. Loria, published in *Biochemistry*, vol. 37, 1998, pp. 6967-6974.

Daniel J. Pasto, professor of chemistry and biochemistry, wrote "A Theoretical Study on the Modes of Homolytic Bond Fragmentation in $\text{H}_n\text{X-YH}_m$, H-S-X-Y and H-S(O)-X-Y Systems," published in the *Journal of Molecular Structure*, vol. 446, 1998, pp. 75-92. (Dr. Pasto passed away March 25, 1998.)

Rev. Paul J. Philibert, O.P., director and concurrent associate professor in the Institute for Church Life, wrote "Contemplation and the Life Cycle," published in *The American Benedictine Review*, vol. 49, no. 2, June 1998, pp. 123-137. He wrote a chapter, "The Wounded Soul: Through the Lens of Pastoral Psychology," in R.J. Kennedy, ed., *Reconciling Embrace: Foundations for the Future of Sacramental Reconciliation*. Chicago, Ill.: Liturgy Training Publications, 1998, pp. 29-40.

Wolfgang Porod, professor of electrical engineering, wrote "Quantum-Dot Devices and Quantum-Dot Cellular Automata," published in *International Journal of Bifurcation and Chaos*, Vol. 7, No. 10, 1997, pp. 2199-2218.

Peter E. Schiffer, assistant professor of physics, co-authored "From Double Exchange to Superexchange in Charge-Ordering Perovskite Manganites" with W. Bao, J.D. Axe, C.H. Chen, S.W. Cheong and M. Roy, published in *Physica B* 241-243, 1998, pp. 418-420.

Thomas L. Shaffer, Short professor emeritus of law, wrote "The Jurisprudence of John Howard Yoder," published in *The Legal Studies Forum*, vol. 22, no. 1, 2 and 3, 1998, pp. 473-486.

Daniel J. Sheerin, professor of classics, wrote "Rhetorical and Hermeneutic *Synkrisis* in Patristic Typology" in J. Petruccione, ed., *Nova & Vetera: Patristic Studies in Honor of Thomas Patrick Halton*. Washington, D.C.: The Catholic University of America Press, 1998, pp. 22-39.

Andrew J. Sommese, professor of math, co-authored "Sharp Matsusaka-Type Theorems on Surfaces" with M. Beltrametti, published in *Mathematische Nachrichten*, vol. 191, 1998, pp. 5-17. He co-authored "On Higher Order Embeddings of Fano Threefolds by the Anticanonical Linear System" with M. Beltrametti and S. Di Rocco, published in *Journal of Mathematical Sciences of The University of Tokyo*, vol. 5, 1998, pp. 75-97.

Billie F. Spencer Jr., professor of civil engineering and geological sciences, co-authored "Earthquake Simulator Control by Transfer Function Iteration" with G. Yang, published in H. Murakami and J.E. Luco, eds., *12th ASCE Engineering Mechanics Specialty Conference*, La Jolla, Calif., May 17-20, 1998. Reston, Va.: ASCE, 1998, pp. 766-769.

D. Katherine Spiess, assistant professor of finance and business economics, co-authored (with **Paula A. Tkac**, assistant professor of finance and business economics) "The Private Securities Litigation Reform Act of 1995: The Stock Market Casts its Vote...", published in *Managerial and Decision Economics*, vol. 18, 1997, pp. 545-561.

Lee A. Tavis, Smith professor of finance and fellow in the Kroc and Kellogg Institutes, wrote "Private Enterprise: A Critical Dimension of Development," published in *Grassroots Development: Journal of the Inter-American Foundation*, 1998.

Jay H. Tidmarsh, associate professor of law, wrote "Mass Tort Settlement Class Actions: Five Case Studies," published by the Federal Judicial Center, 1998, pp. 1-100.

G.N.R. Tripathi, professional specialist in the Radiation Laboratory, wrote "Electron-Transfer Component in Hydroxyl Radical Reactions Observed by Time Resolved Resonance Raman Spectroscopy," published in *Journal of the American Chemical Society*, vol. 120, no. 17, 1998, pp. 4161-4166. He wrote "A Ring-H⁺ Bonded Semiquinone Dication Radical Observed by Time Resolved Resonance Raman Spectroscopy," published in the *Journal of the American Chemical Society*, vol. 120, no. 20, 1998, pp. 5134-5135.

Administrators' Notes

Appointments

Jennifer A. Lyng has been appointed assistant director of corporate relations at the University effective July 1. A 1986 Notre Dame graduate, Lyng obtained an MBA degree from Seton Hall University in 1995. She worked for more than 10 years at Nabisco, Inc., in various sales, marketing and management positions. Active in several community service organizations, Lyng has been a volunteer at the Washington, Pa., Women's Shelter, the CARE Rape Crisis Center and Animal Friends.

Activities

Kitty Cooney Hoyer, director of career services and law school relations, presented "Trading Places: Sharing Perspectives on the Recruitment Process" at the National Association for Law Placement Annual Education Conference in San Francisco, Calif., March 27.

Michael Langthorne, associate director, OIT/Educational Media, presented "Benefits and Challenges of Information Technology in Higher Education" to the 10th Annual All African Student Conference at Notre Dame May 9.

The Minority Engineering Program (MEP), directed by **Joy Vann-Hamilton**, received a \$61,000 grant from the Ameritech Foundation. The grant will be used to support the MEP's academic-year, pre-college engineering component. The Ameritech Pre-College Minority Engineering Program at Notre Dame, which delivers the programming via two-way interactive video (distance learning), introduces minority youths in grades 7 and 8 to engineering in the surrounding community.

Publications

Michael W. Favorite, assistant director of audit and advisory services, wrote "International Staff Exchange" with D. Martin, published in *The Ledger*, the journal of the Association of College and University Auditors, April 1998.

Awards Received and Proposals Submitted

In the period May 1, 1998, through May 31, 1998

AWARDS RECEIVED

| Category | Renewal | | New | | Total | |
|--------------------------|----------|----------------|----------|--------------|----------|----------------|
| | No. | Amount | No. | Amount | No. | Amount |
| Research | 12 | 830,697 | 25 | 1,392,132 | 37 | 2,222,829 |
| Facilities and Equipment | 0 | 0 | 0 | 0 | 0 | 0 |
| Instructional Programs | 1 | 373,754 | 0 | 0 | 1 | 373,754 |
| Service Programs | 0 | 0 | 5 | 17,299 | 5 | 17,299 |
| Other Programs | <u>2</u> | <u>103,954</u> | <u>1</u> | <u>3,750</u> | <u>3</u> | <u>107,704</u> |
| Total | 15 | 1,308,405 | 31 | 1,413,181 | 46 | 2,721,586 |

PROPOSALS SUBMITTED

| Category | Renewal | | New | | Total | |
|--------------------------|----------|----------|----------|-----------|----------|-----------|
| | No. | Amount | No. | Amount | No. | Amount |
| Research | 11 | 502,685 | 29 | 8,190,130 | 40 | 8,692,815 |
| Facilities and Equipment | 0 | 0 | 0 | 0 | 0 | 0 |
| Instructional Programs | 2 | 384,141 | 0 | 0 | 2 | 384,141 |
| 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 | 13 | 886,826 | 29 | 8,190,130 | 42 | 9,076,956 |

Awards Received

In the period May 1, 1998, through May 31, 1998

AWARDS FOR RESEARCH

Aerospace and Mechanical Engineering

Edmundo Corona

Buckling of Structural Members Under Cyclic Loading
National Science Foundation
\$48,636 24 months

Thomas J. Mueller

Flow Physics for Wings at Very Low Reynolds Numbers
Department of the Navy
\$59,983 12 months

Eric A. Jumper

Instrument Development for H.C.F. Program
U.S. Air Force Academy
\$20,000 6 months

Anthropology

Joanne Mack

Cultural Resource Survey and Evaluation
PacifiCorp
\$14,300 32 months

Biological Sciences

Paul R. Grimstad

St. Joseph County (IN) Mosquito Surveillance Program
St. Joseph County Health Dept.
\$30,000 8 months

Elizabeth D. Eldon

Signaling Pathways in Insect Immunity:
The Role of 18-wheeler
National Science Foundation
\$110,301 24 months

David W. Severson

Mapping of Filarial Vector Competence in *Aedes Aegypti*
CSU
\$89,704 10 months

John G. Duman

Proprietary Information Agreement-Antifreeze Protein
Research
CMI
\$8,000 12 months

Gary A. Lamberti

Dissertation Improvement: Ecological Stoichiometry
National Science Foundation
\$4,500 24 months

Civil Engineering and Geological Sciences

Robert B. Fleischman

NSF Career Award
National Science Foundation
\$200,000 48 months

Joannes J. Westerink

Enhancements of ADCIRC for Inlets
U.S. Army Corps of Engineers
\$25,000 60 months

Chemical Engineering

Mark J. McCready

Fundamental Study of Long-Short Interfacial Waves
Department of Energy
\$84,536 12 months

Arvind Varma

REU Supplement for NSF Grant CTS95-29172
National Science Foundation
\$5,000 27 months

Chemistry and Biochemistry

W. Robert Scheidt

X-Ray and Chemical Studies of Metalloporphyrins
National Institutes of Health
\$295,762 12 months

Sharon Hammes-Schiffer

Simulation of Proton and Hydride Transfer in Enzymes
National Institutes of Health
\$147,011 12 months
Simulation of Charged Transfer Reaction
Oak Ridge Associated Universities
\$5,000 12 months

Bradley D. Smith

Molecular Recognition Using Organoboron Acids
National Science Foundation
\$83,000 36 months

Computer Science and Engineering

Edwin Hsing-Mean Sha

Communication Bandwidth Reduce Techniques and
IP Video Phone
AT & T
\$25,000 16 months

Andrew Lumsdaine

REU Supplement
National Science Foundation
\$5,000 36 months

Economics

David M. Betson and Jennifer L. Warlick

The New Poverty Measure
University of Wisconsin
\$24,570 8 months

Electrical Engineering

Oliver Collins

Code Capacity and Code Design
National Science Foundation
\$79,898 12 months

Douglas C. Hall

NSF Career Award Supplement
National Science Foundation
\$25,000 48 months

Government and International Studies**Gilbert D. Loescher**

The United Nations High Commissioner for Refugees
U.S. Institute of Peace
\$40,000 12 months

Romance Languages and Literatures**Kristine L. Ibsen**

Fellowship for College Teachers and Scholars
National Endowment for the Humanities
\$30,000 9 months

Medieval Institute**Patrick J. Geary**

Mellon Seminar in Medieval Studies
A.W. Mellon Foundation
\$80,000 24 months

Philosophy**Karl Ameriks**

Fellowship for University Teachers
National Endowment for the Humanities
\$30,000 6 months

Michael J. Loux

Aristotle: The Centrality of Substance
American Council of Learned Societies
\$30,000 12 months

Physics**David P. Bennett**

MACHO Project Research
University of California -Berkeley
\$48,000 24 months

Jacek K. Furdyna and Albert-László Barabási

Self-Organized Superlattice Formation in Semiconductors
Department of Energy
\$120,221 12 months

A. Eugene Livingston

Highly Charged Ions in an Electron Beam Ion Trap
National Institute of Standards and Technology
\$24,000 5 months

Grant J. Mathews and James R. Wilson

Gravity Waves and Binary Neutron Star Hydrodynamics
National Science Foundation
\$50,000 24 months

Terrence W. Rettig

REU Site Program for Physics at Notre Dame 1996-2000
National Science Foundation
\$64,000 36 months
REU Site Program in Physics at the University of
Notre Dame
National Science Foundation
\$13,193 36 months

Randal C. Ruchti, Neal M. Cason, et al.

CMS HCAL Construction Project
Fermi National Laboratory
\$26,108 12 months

Steven T. Ruggiero

Single Electron Tunneling
Department of Energy
\$49,000 12 months
Transport Properties of YBCO Thin Films
Purdue University
\$5,000 96 months

Psychology**David A. Cole**

Competency Based Model of Child Depression
National Institutes of Health
\$223,106 12 months

Urban Institute for Community and Educational Initiatives**Dorine Blake-Smith and Mario Borelli**

Upward Bound Program 1998
Department of Education
\$373,754 12 months

AWARDS FOR SERVICE PROGRAMS**Center for Continuing Formation in Ministry****Rev. Eugene F. Lauer**

Center for Continuing Formation in Ministry
Various Others
\$568 1 month
Center for Continuing Formation in Ministry
Various Others
\$11,030 1 month

Center for Pastoral Liturgy**Sr. Eleanor Bernstein, C.S.J.**

Center for Pastoral Liturgy
Various Others
\$2,775 1 month
Center for Pastoral Liturgy
Various Others
\$2,587 1 month

Institute for Church Life

Sr. Kathleen Cannon, O.P.

Institute for Church Life

Various Others

\$339 1 month

AWARDS FOR OTHER PROGRAMS

Office of Executive Vice President

James A. Roemer

National Youth Sports Program for 1998

NCAA

\$56,000 12 months

Graduate School

Peter Diffley

Fellowship for Hector Mendoza

Graduate Education for Minorities

\$3,750 12 months

Urban Institute for Community and Educational Initiatives

Iris Outlaw, Mario Borelli, et al.

Talent Search Program

Department of Education

\$47,954 14 months

Proposals Submitted

In the period May 1, 1998, through May 31, 1998

PROPOSALS FOR RESEARCH

Aerospace and Mechanical Engineering

Hafiz M. Atassi

Adaptive Methods for Aerodynamics and Acoustics

Old Dominion University

\$912,057 60 months

Hydrodynamics and Acoustics in Nonuniform Flows

Department of the Navy

\$109,928 12 months

Patrick F. Dunn and Raymond M. Brach

Indoor Air Particulate Reentrainment from Surfaces

Center for Indoor Air Research

\$326,458 36 months

Eric J. Jumper

Instrument Development for H.C.F. Program

U.S. Air Force Academy

\$20,000 4 months

James J. Mason

High Speed Machining of Aluminum

Alcoa Foundation

\$20,000 12 months

Thomas J. Mueller

Indiana Space Grant

Purdue University

\$40,000 12 months

Steven Schmid

Workshop on Integration of Research and Education

National Science Foundation

\$143,355 12 months

Art, Art History and Design

Kathleen A. Pyne

Modernism and the Feminine Voice

National Endowment for the Humanities

\$30,000 12 months

Biological Sciences

Scott D. Bridgham

Retention of Soluble Organic Nutrients in Succession

University of Nevada

\$224,628 36 months

Paul R. Grimstad

St. Joseph County (IN) Mosquito Surveillance Program

St. Joseph County Health Dept.

\$30,000 8 months

Alan L. Johnson

Physiological Mediators of Granulosa Cell Apoptosis

National Institutes of Health

\$22,669 12 months

David W. Severson

Population Genetics of *Aedes aegypti* in the West Indies

National Institutes of Health

\$22,100 12 months

Civil Engineering and Geological Sciences

Jeremy B. Fein and Charles F. Kulpa Jr.

Quantifying Bacteria-Water-Rock Interactions

National Science Foundation

\$250,320 36 months

William G. Gray

Multiscale Modeling of Contaminant Remediation

Strategies

Texas A & M University

\$225,368 36 months

Philip R. Johnson, Stephen E. Silliman, et al.

The Effect of Heterogeneities on Colloid Deposition

National Science Foundation

\$323,650 36 months

Ahsan Kareem

A Virtual Environment for Wind Hazard Mitigation

University of Illinois Chicago

\$415,082 36 months

Lloyd H. Ketchum Jr.

Impact of Switching to Aqueous and Semi-Aqueous Cleaners

National Science Foundation
\$102,275 24 months

Clive R. Neal

Interaction Between the Caribbean and South American Plates

National Science Foundation
\$129,814 24 months

Geochemical Evolution of the Moon

National Aeronautics and Space Administration
\$156,540 36 months

Stephen E. Silliman

The LGE Method for Groundwater Investigations

National Science Foundation
\$154,323 24 months

Chemical Engineering**Edward J. Maginn**

Adsorption of Organic Contaminants

National Science Foundation
\$5,000 3 months

Edward J. Maginn, Hsueh-Chia Chang, et al.

Multi-Scale Simulated of Zeolite Transport and Chemistry

National Science Foundation
\$1,089,523 36 months

Chemistry and Biochemistry**Anthony S. Serianni**

¹³C-1H and ¹³C-¹³C Spin-Couplings in Oligosaccharides

National Institutes of Health
\$224,962 12 months

Bradley D. Smith

Rationally Designed Promoters and Inhibitors of Membrane Fusion

National Institutes of Health
\$191,371 12 months

Richard E. Taylor

Myriaporone 4: Synthetic and Biological Studies

National Institutes of Health
\$187,703 12 months

Economics**Charles Craypo and Lynn Unruh**

The Impact of Nurse Staffing on the Quality of Patient Care

National Institutes of Health
\$32,240 12 months

Institute for Educational Initiatives**Maureen T. Hallinan**

Effects of Schedule Changes on Math and Science Achievement

National Science Foundation
\$285,351 24 months

Electrical Engineering**Douglas C. Hall**

NSF Career Award Supplement

National Science Foundation
\$25,000 12 months

Michael D. Lemmon and Mihir Sen

Semi-Autonomous Agent Networks

National Science Foundation
\$2,294,627 36 months

Romance Languages and Literatures**Dominic R. Thomas**

Official Francophone Literature

National Endowment for the Humanities
\$30,000 12 months

Physics**James J. Kolata**

R.O.A. Supplement

National Science Foundation
\$16,785 2 months

Terrence W. Rettig

Effects of Protoplanets Embedded in Circumstellar Disks

National Aeronautics and Space Administration
\$87,780 36 months

Understanding Physical Structure of

Comet Shoemaker-Levy 9

National Aeronautics and Space Administration
\$82,568 24 months

Randal C. Ruchti

QuarkNet

Northeastern University
\$175,151 12 months

Randal C. Ruchti, Neal M. Cason, et al.

Detector Development for CMS/HCAL

Northeastern University
\$41,052 12 months

CMS HCAL Construction Project

Fermi National Laboratory
\$53,000 18 months

Psychology

John G. Borkowski and Tammy L. Dukewich

Study of Adolescent Mothers, Their Children and
Head Start

Department of Health and Human Services

\$15,000 12 months

Radiation Laboratory

Guillermo J. Ferraudi

Magnetokinetic Effects in Reactions of Metalloproteins

National Institutes of Health

\$159,535 12 months

Radiation Laboratory

Gordon L. Hug

Photo- and Radiation-Induced Radical Processes

North Atlantic Treaty Organization

\$7,600 12 months

Theology

S. Blake Leyerle

Reconstructing Daily Life in a Byzantine Urban Monastery

National Endowment for the Humanities

\$30,000 12 months

PROPOSALS FOR INSTRUCTIONAL PROGRAMS

Electrical Engineering

Gary H. Bernstein

Planar Processing for IC and MEMS Applications

National Science Foundation

\$10,375 3 months

Urban Institute for Community and Educational Initiatives

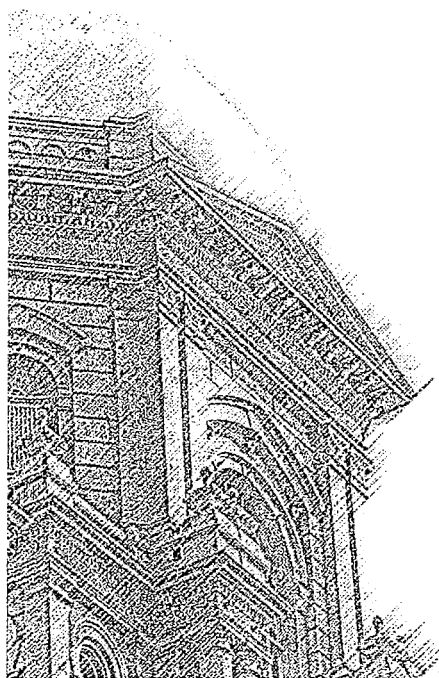
Dorine Blake-Smith and Mario Borelli

Upward Bound Program 1998

Department of Education

\$373,766 12 months

Notre Dame Report



Volume 27, Number 19
July 3, 1998

Notre Dame Report is an official publication published fortnightly during the school year, monthly in the summer, by the Office of the Provost at the University of Notre Dame.

Bernadette Zoss, Editor
Marten Schalm, Designer
Publications and Graphic Services
502 Grace Hall
Notre Dame, IN 46556-5612
(219) 631-4633
e-mail: ndreport.1@nd.edu

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