



Eastern Nazarene College Division of Natural Sciences

Education:

Name	Degree	Graduate Education	Post-Doc Research	Undergrad
Jonathan E. Twining	M.S.	Old Dominion University		ENC
Matthew J.F. Waterman	Ph.D.	University of Pennsylvania	Harvard Medical School	ENC
Aaron Domina	Ph.D.	Dartmouth College	University of Texas	WPI
Lowell H. Hall	Ph.D.	The Johns Hopkins University	National Bureau of Standards	ENC
Timothy T. Wooster	Ph.D.	University of North Carolina	University of Vermont	ENC
Stephen Lovett	Ph.D.	Northeastern University		Brown
Fen Wang	Ph.D.	University of Maryland Baltimore County		Tianjin University
Lee Hammerstrom	Ph.D.	Northeastern University		Mid-America
Paul G. Nyce	M.S.	Boston University		ENC
Karl W. Giberson	Ph.D.	Rice University		ENC
John Free	Ph.D.	Massachusetts Institute of Technology	Harvard University	ENC
Randall K. Fish	Ph.D.	University of Washington		ENC/BU

Experience:

Name	Dept	Title	Tenured	Years at ENC
Jonathan E. Twining	Biology	Assistant		1
Matthew J.F. Waterman	Biology	Associate	Tenured	7
Aaron Domina	Biology	Assistant		2
Lowell H. Hall	Chemistry	Professor	Tenured	39
Timothy T. Wooster	Chemistry	Associate	Tenured	3
Stephen Lovett	Math/CS	Assistant		3
Fen Wang	Math/CS	Assistant		1
Lee Hammerstrom	Math/CS	Professor	Tenured	26
Paul G. Nyce	Physics	Assistant		23
Karl W. Giberson	Physics	Professor	Tenured	22
John Free	Physics	Professor	Tenured	36
Randall K. Fish	Engineering	Professor	Tenured	12

Publications and Presentations:

Name	Peer-reviewed Publications	Books	Scientific Presentations	Other**
Jonathan E. Twining			3	5
Matthew J.F. Waterman	8		3	2
Aaron Domina	2		9	4
Lowell H. Hall	122	6	70	
Timothy T. Wooster	13		11	2
Stephen Lovett	2		3	3
Fen Wang	3		6	11
Lee Hammerstrom				
Paul G. Nyce				10
Karl W. Giberson	10	3	12	46
John Free	17			
Randall K. Fish	2		8	

**Other includes book reviews, proceedings, magazine articles, editorials, public lectures, and survey reports

Honors and Awards:

Domina	The John W Strohbehn Award for Excellence in Biomedical Research, Dartmouth, Medical School, 2001
Domina	Best Post-Doctoral/ Associate Poster Presentation, Sealy Center for Molecular Science and Sealy Center for Structural Biology Science Forum, UTMB, 2004
Fish	Innovation Award, The MITRE corporation - 2005
Fish	Teaching Excellence Award, Eastern Nazarene College - 2002
Fish	Patent Pending "System and Method for Audio Hot Spotting" - filed 2005
Giberson	Outstanding Professional Achievement Awards, 1998, 2002.
Giberson	Teaching Excellence Award, Eastern Nazarene College - 1995
Giberson	1997 "Oleg Zinam" award for best essay: "The Anthropoc Principle: A Postmodern Creation Myth?"
Free	1995-1996 Outstanding Teacher Award
Free	1992-1993 Outstanding Teacher Award
Twining	Formal Environmental Educator Award, New England Environmental Education Alliance, October 2005.
Twining	Above and Beyond Award, Massachusetts Software Council, 2004, for "Still and the Restless Project".
Twining	Environmental Merit Award, US Environmental Protection Agency 2000
Hall	ENC Professional Achievement Award, 1998 and 2000
Hall	Teaching Excellence Award, Eastern Nazarene College - 1975
Hall	Alumnus of the Year, Eastern Nazarene College (1970)
Lovett	Outstanding Graduate Instructor of Record, Northeastern University, 2002
Wang	Dissertation Fellowship Award Jan. -2006 University of Maryland Baltimore County
Wang	Top Student Award of School of Management May 2000, Tianjin University, Tianjin, China

Grants:

Waterman	\$200,000 - NIH-R21 Exploratory/Developmental Research Grant PAR-98-096 Therapeutic Modulation of Angiogenesis in Disease (1999) Ovarian Cancer Ascites Anti-angiogenic Factor
Giberson	\$10,000 for "Outstanding Course in Science & Religion," 1996
	\$1.4 million grant to fund editorial operations of Science & Spirit Magazine (2005-2007).
	\$38,000 to support writing of The Oracles of Science, a survey of leading science popularizers (2005)
	\$22,000 to support research and writing Species of Origins: America's Search for a Creation Story published in 2002 by Rowman and Littlefield
Wooster	\$67,049 - NSF-CCLI-Adaptation And Implementation Grant (2003) award#0311474, Integrated Guided-Inquiry Laboratories with the use of HPLC Across Undergraduate Chemistry Curriculum.
	Hirtzel Foundation Grant, 9200)0. Anasazi Instruments Inc. NMR. (\$55000)
Hall	NIH grant on x-ray crystallography of ferrocene derivatives EPA grant for modeling fish toxicity data Three grants for summer student research from Northeast Section of American Chemical Society
Wang	National Outstanding College Student "Bao Gang" Fellowship, one of ten selected among over 5000 graduates from top management schools nationally May 2002, Tianjin University, Tianjin, China
Free	NSF Grant to do research at Harvard 1990-01
	NSF Research Grant (Harvard) 2003-04
	Harvard internal grant 2003-04

Other Professional Experience:

Fish	MITRE Corporation: Principle Scientist - Intelligent Information Access, Feb. 2000 to Present
	Saber Equipment Corporation, Stratford, CT (<i>Feb. 1992 to Sept. 1994</i>) Vice President of Engineering
Wooster	Research Associate: Clemson University 1997, 1998
	2003 American Chemical Society General Chemistry Exams Committee
	Electrochemistry Consultant Pine Instruments 2002-2004
Giberson	Editor: Science & Theology News, and Science & Spirit
Twining	Board of Trustees for the Town of Smithfield Municipal Land Trust 1996-1998
	Founder Marah International, Inc. non-profit, interdenominational Christian environmental organization
	Senior Environmental Scientist, SAGE Environmental, Inc., Pawtucket, RI
Lovett	1995-1998, Hewlett-Packard, Senior Regulatory Specialist in export administration
Hall	CEO, Hall Associates Consulting
	Editorial Advisory Board SAR and QSAR in Environmental Research, The Journal of Chemical Information and Computer Science, and Chemistry & Biodiversity
	Scientific Advisory Board, IDBS Limited, Guildford, Surrey, UK
	Co-founder, ChemSilico, LLC
Free	Research Associate, Harvard University, 2002-06
Wang	Program Committee Member of the IRMA 2005 International Conference, San Diego, CA, May 2005
	Interactive Systems Research Center (ISRC) Meeting Organizer & Coordinator, Information Systems Dept., UMBC, 2005-present
Nyce	Director of Information Technology, Eastern Nazarene College, 1994 – 2004
	Director of Academic Computing, Eastern Nazarene College, 1990 – 1994

Summary Statistics:

Faculty	12
Ph.D	83%
Post-Doctoral	42%
Tenured	58%
Full Professor	42%
Years Service	175

Peer Reviewed Publications	162
Books	9
Other**	83
Professional Presentations	125

** Other includes book reviews, proceedings, magazine articles, editorials, public lectures, and survey reports

Selected Publications over the last 10 years

- Domina AM, Vrana JA, Gregory MA, Hann SR, and Craig RW. MCL1 is phosphorylated in the PEST region and stabilized upon ERK activation in viable cells, and at additional sites with cytotoxic okadaic acid or taxol. *Oncogene*, 23(31): 5301, 2004.
- Domina AM, Smith JH, and Craig RW. Myeloid cell leukemia 1 is phosphorylated through two distinct pathways, one associated with extracellular signal-regulated kinase activation and the other with G2/M accumulation or protein phosphatase 1/2A inhibition. *Journal of Biological Chemistry*, 275: 21688-94, 2000.
- Wooster, T. T.; Geiger, W. E.; Ernst, R. D.; Quantitative Study of the interconversion of S- and U- Isomers of Cp(h5-pentadienyl)Cr(CO) in 18e- and 17e- Complexes: Cyclic Voltammetric Study of an Organometallic Square Scheme, *Organometallics*, 1995 14(7), 3455-60.
- Wooster, T. T.; Gamm, P. R.; Geiger, W. E.; Oliver, A. M.; Black, A. J.; Craig, D. C.; Paddon-Row, M. N.; Synthesis and Surface-Confined Electrochemistry of Dimethoxynaphthalene Fused Through Rigid Norbornylogous Spacers to Thiolate, Dithiolate, and Disulfide Groups, *Langmuir*, 1996, 12, 6616-6626.
- Wooster, T. T.; Creager, S. E; A New Way Of Using Ac Voltammetry To Study Redox Kinetics In Electroactive Monolayers, *Analytical Chemistry*, 1998, 70(20), 4257.
- Fish "Multilevel Classification of Milling Tool Wear with Confidence Estimation", with Mari Ostendorf and Gary Bernard, and David Castanon. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, January 2003.
- Fish "ML Parameter Estimation of a Multiscale Stochastic Process Using the EM Algorithm", with A. Kannan, M. Ostendorf, WC Karl, D. Castañon. *IEEE Transactions on Signal Processing*, June 2000.
- Giberson BOOK: *Species of Origins: America's Search for a Creation Story*. (with Don Yerxa). (Lanham, MD: Rowman & Littlefield, 2002).
- Giberson BOOK: *The Oracles of Science*. (with Mariano Artigas). Completed manuscript under contract by Oxford University Press.
- Giberson "The Anthropoc Principle: A Postmodern Creation Myth?" *Journal of Interdisciplinary Studies*, September, 1997.
- Giberson Providence and the Christian Scholar. (with Don Yerxa) *Journal of Interdisciplinary Studies*. (Vol XI, No. 1/2, 1999).
- Giberson "A Scientist Takes Steps Along His Damascus Road," *Preacher's Magazine* (Winter, 1998-1999).
- Giberson "Bottom Up Apologist" (John Polkinghorne). *Christianity Today*, May 21, 2002.
- Giberson Evolution in the Public Schools: A Case Study Analysis (with ENC undergraduate Tim Johnson). *Perspectives on Science and Faith*, December 2002.
- Twining Butler Pond: Preliminary Report on Water and Sediment Quality and the Management of Aquatic Weeds. Prepared for the City of Quincy Department of Public Works, December 1999.
- Twining Building Sustainable Communities: A Long-Term Strategy for Watershed Protection. Presented to Fore River Watershed Association constituents, May 1998.
- Twining Remediation Management: A Case Study Using Stabilization of Soil Contaminated with Heavy Metals. Paper presented at Rhode Island Pollution Prevention Conference, September 1996.
- Hall BOOK: "QSAR Development with MDL QSAR", Lowell H. Hall, Lemont B. Kier and L. Mark Hall, MDL Information Systems, Inc., San Leandro, VA (2003).
- Hall BOOK: "Molecular Structure Description: The Electrotological State", Lowell H. Hall and Lemont B. Kier, Academic Press, San Diego, CA (1999).
- Hall L. M. Hall, L. H. Hall and L. B. Kier, "Modeling of Drug Albumin Binding Affinity with E-State Topological Structure Representation", *J. Chem. Inf. Comput. Sci.*, *43*, 2120-2128 (2003).
- Hall L. H. Hall, "A Structure-Information Approach to Prediction of Biological Activities and Properties", *Chem. Biodiversity*, *1*, 183-201 (2004).
- Hall L. H. Hall and L. M. Hall, "QSAR Modeling Based on Structure-Information for Properties of Interest in Human Health", *SAR QSAR in Environmental Res.*, *16*, 13-41 (2005).
- Hall J. F. Contrera, L. H. Hall, L. B. Kier, P. MacLaughlin, "QSAR Modeling of Carcinogenic Risk Using Discriminant Analysis and Topological Molecular Descriptors" *Current Drug Discovery Technologies*, *2*, 55-67 (2005)
- Hall Lowell H. Hall, Lemont B. Kier and L. Mark Hall, "Structure Information Representation (SIR) in Drug Discovery", Chapter 4, part 6 in *Comprehensive Medicinal Chemistry, /Second Edition*, eds. John Taylor and David Triggle, Elsevier Limited, Oxford, UK (in press).
- Hall Lowell H. Hall, L. Mark Hall and Lemont B. Kier, "Interpretation of the role of the Electrotological State and Molecular Connectivity Indices in the prediction of physical properties and ADME-Tox behavior. Case study: Human Plasma Protein Binding", *Proceedings of the Solvay Conference, Luzern, Switzerland* (in press).
- Lovett Orthogonal and symplectic analogues of determinantal ideals, *Journal of Algebra*, vol. 291 p.416-456 (2005).
- Lovett Resolutions of orthogonal and symplectic analogues of determinantal ideals, preprint (accepted by *Journal of Algebra*).

- Waterman Hanai J, Dhanabal M, Karumanchi SA, Albanese C, Waterman M, Chan B, Ramchandran R, Pestel R, Sukhatme VP. (2002) Endostatin causes G1 arrest of endothelial cells through inhibition of Cyclin D1. *J. Biol. Chem.*, 277:16464-9.
- Waterman Satyamoorthy K, Chehab NH, Waterman MJ, Lien MC, El-Deiry WS, Herlyn M, Halazonetis TD. (2000) Aberrant regulation and function of wild-type p53 in radioresistant melanoma cells. *Cell Growth Differ.* 11(9):467-74.
- Waterman Dhanabal, M., Ramchandran, R., Waterman, MJF., Lu, H., Knebelmann, B., Segal, M., Sukhatme, V.P. (1999) Endostatin induces endothelial cell apoptosis. *J. Biol. Chem.*, 274:11721-6.
- Waterman Waterman, MJF., Stavridi, E.S., Waterman, J.L.F., and Halazonetis, T.D. (1998) Ionizing radiation induces post-translational modifications of the p53 C-terminus leading to association with 14-3-3 proteins. *Nature Genetics*, 19:175-178.
- Waterman Wiczorek, A.M., Waterman, J.L.F., Waterman, MJF., and Halazonetis, T.D. (1996) Structure based rescue of common tumor derived p53 mutants. *Nature Medicine*, 2:1143-1146.
- Free Hysteretic I-V curves of superconducting nanowires by M. Tinkham, J.U. Free, C.N. Lau, N. Markovic, *Phy. Rev. B* 68, 134515 (2003)).
- Free Phase transitions in Josephson-junction arrays with long range interactions?, L.L. Sohn, M.S. Rzchowski, J.U. Free, and M. Tinkham, *Phy. Rev. B*, 47 967 (1993).
- Free Effects of current direction on the dynamics of Josephson-junction arrays?, L.L. Sohn, M.S. Rzchowski, J.U. Free, M. Tinkham, and C. J. Lobb, *Phy. Rev B*, 45 3003 (1992).
- Free Simulations and interpretation of fractional giant Shapiro steps in two-dimensional Josephson-junction arrays?, M. Octavio, J.U. Free, S.P. Benz, R.S. Newrock, D.B. Mast, and C.J. Lobb, *Phy. Rev. B*, 44 4601 (1991).
- Free Dynamical simulations of fractional giant Shapiro steps in two-dimensional arrays?, J.U. Free, S.P. Benz, M.S. Rzchowski, M. Tinkham, and C.J. Lobb, *Phy. Rev. B* 41 7267 (1990).
- Nyce John Farrell, *The Day Without Yesterday: Lemaître, Einstein, and the Birth of Modern Cosmology*, Books & Culture (submitted for publication).
- Nyce Diana Preston, *Before The Fallout: From Marie Curie to Hiroshima*, *Science & Theology News* (October 2005), 40-41.
- Nyce Chet Raymo, *Climbing Brandon: Science and Faith on Ireland's Holy Mountain*, *Science & Spirit* (September-October 2004), 74-75.
- Wang Wang, F., & Forgionne, G. (2006). EBBSC: A Balanced Scorecard Based Framework for Strategic E-business Management. Forthcoming in the *International Journal of E-Business Research (IJEER)*.
- Wang Wang, F., & Forgionne, G. (2005). Intelligent Decision support for strategic e-business management Stage II. In *Proceedings of the 2005 DSI Annual Meeting*.
- Wang Wang, F. (2005). E-shoppers' Perception of Web-based Decision Aid. In M. Khosrow's (Ed.), *Encyclopedia of E-Commerce, E-Government and Mobile Commerce*: Idea Group, Inc.
- Wang Wang, F., & Forgionne, G. (2005). Intelligent Decision support for strategic e-business management Stage I. In *Proceeding of 16th IRMA International Conference, Track of Decision Support Technologies*.

Selected Alumnae Achievement

David Constantine '04, math	PhD program in mathematics at <i>U Michigan</i> , 2004 National Science Foundation Graduate Research Fellowship	
Kenny Wantz '90, math	PhD (Mathematics) <i>University of Delaware</i> Assistant Professor of Mathematics at <i>West Virginia State College</i> Associate Professor of Mathematics at <i>Southern Nazarene University</i>	
Gordon Swain , '85 math	PhD <i>UMass-Amherst</i> (Math) - professor of mathematics/chair of dept. at <i>Ashland University</i>	
Kurt Heckman '84, math	President of <i>Sycamore.US</i> , a Defense and Aerospace Contractor	
Jon Hall , '06, engineering	computer engineering - already secured a job at <i>Raytheon</i>	
Travis Pape '88 physics	PhD (physics) <i>Duke</i> - Staff Engineer <i>Silicon Wireless Co.</i>	
William Rogers '84, Engineering	Founder <i>Zydacron</i> : Developer of video teleconferencing hardware Founder of <i>Global Telemedix</i> : telemedicine software development Founder <i>Extron</i> : web development and leading edge e-commerce solutions: President/CEO and COO	
Edward Rogers Engineering		
Ken Constantine , '77 physics	PhD (statistics) <i>Purdue</i> - now mathematics prof. at <i>Taylor University</i>	
Dave Douglas '76, physics	PhD (physics) <i>UMaryland</i> - theoretical physicist at <i>Jefferson Laboratories</i> (national particle accelerator at Newport News, VA)	
James Cameron	PhD (physics) <i>Brown</i>	Engineers at Mitre Corporation
Jeff Higginson '85 physics	MS (physics) <i>Georgia Tech</i>	
Andy Gregorowicz	Electrical engineer	
Lenny DeMoranville '04 chemistry	PhD program in chemistry at <i>University of Maryland</i>	
Brian Hult '05 chemistry	PhD program in chemistry at <i>Northeastern</i>	
Patrick Itotia '05 chemistry	PhD program in Pharmacology at <i>SUNY Buffalo</i>	
Kim Rose Blish '02 chemistry	coauthored two papers with Lowell Hall at <i>Wake Forrest</i> : number one entering student in MD-PhD program	
Hlaing Hlaing Maw '00 chemistry	coauthored three papers with Lowell Hall research at the Tufts Medical Center will PhD after she obtains her green card	
Tara Yeaman '00 chemistry	Chemist at <i>Shuster Chemical</i>	
David Dunmire , '97 chemistry	PhD (chemistry) <i>Syracuse University</i> , - <i>National Institute of Standards and Technology</i>	
Cara Wallington '97 chemistry	MD medical school at the <i>University of Nottingham</i> , in England	
Rob Dailey '93 chemistry	PhD (chemistry) <i>Indiana University</i> - <i>Chemical Abstract Services</i>	
Eric Nelson '91 chemistry	MD <i>University of Massachusetts Medical School</i>	
Kristen Solomon '05, biology	<i>Harvard</i> School of Public Health	
Jason Tubo '04, biology	<i>University of Connecticut</i> Dental School	
Walt Jones '01, biology	at <i>Columbia University</i> : number one entering student in MD-PhD program	
Charla Henson '00, biology	<i>Johns Hopkins</i> School of Nursing	
Cecily Rasys '00, biology	<i>Tufts</i> Veterinary School	
Ross Tubo '81 biology	PhD (biology) <i>SUNY Bufalo</i> – Senior Director Stem Cell biology <i>Genzyme</i>	

