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SPECIALIST IN SCIENTIFIC COMPUTING AND LINEAR ALGEBRA

EDUCATION:

Ph.D., Michigan State University, 1971
 M.S., Michigan State University, 1966
 B.S., Michigan State University, 1965

TEACHING EXPERIENCE:

CURRENT: Chancellor Professor, University of Massachusetts Dartmouth
 (Full Prof. 6/84–9/95, Assoc. Prof. 9/79–6/84, Chairperson 6/83–6/84)
PREVIOUS: Visiting Professor of Applied Mathematics, Brown University, Spring 2007
 Visiting Professor, University of California San Diego, Winter and Spring, 2000
 Visiting Professor, Royal Institute of Technology (KTH), Stockholm, 1986
 Weber State University, Assistant Prof., 1970–75, Assoc. Prof., 1975–79
 Michigan State University, Graduate Teaching Assistant, 1966–69

OTHER EXPERIENCE

Visiting Research Faculty at the Institute for Scientific Computing, ETH Zürich,
 Fall 1992 and Fall 1999
 Visiting Scholar/Research Faculty in Scientific Computing, Stanford University,
 6/77–9/78, 1/93–6/93, 6/06–8/06
 Research consultant for the Atmospheric Sciences Division,
 Air Force Geophysics Lab, Hanscom AFB, 1987–90
 Navy Faculty Research Associate, Naval Underwater Systems Center,
 New London, Connecticut, 1984–86
 Research consultant Lockheed-Georgia Company, Summer 1981

ACADEMIC AND PROFESSIONAL HONORS AND ACTIVITIES:

- Chair of the International Linear Algebra (ILAS) Education Committee
- Editor of the Education Corner section of IMAGE, the Bulletin of the International Linear Algebra Society (ILAS)
- Editor-in-Chief of IMAGE 1989–97, contributing 1998 – present day

- Active member of the Computational Mathematics Group at UMASS Dartmouth
- Served as Director of the ATLAST Project, 1991–98 and continues to coordinate the ATLAST web pages, software, and publications
- Served a three year term (1990–93) on the Board of Directors of the International Linear Society, (ILAS)
- Director of the Applied Mathematics Program at Weber State, 1975–79
- Mathematics Coordinator for NSF project to restructure education for industrial alignment (RESIA), 1975–76

SCHOLARSHIP

A. PUBLICATIONS (1990–2010):

- *Linear Algebra with Applications, 8th edition*, Pearson, 2010. Other editions: Macmillan, First Ed. 1980, Second Ed. 1986, Third Ed. 1990, Fourth Ed., Prentice Hall, 1994, Fifth Ed., 1998, Sixth Ed., 2002, Seventh Ed., 2006, International editions 1990, 1994, 1998, 2002, 2006, 2010, Spanish Ed., Mexico City, 1993, Malaysian Ed., Kuala Lumpur, 1994, Indonesian Ed., Jakarta, 2001, Portuguese Editions, Rio de Janeiro, 1999, 2010 Korean Editions 1998, 2004, 2008. Chinese Eds., Taiwan 2003, 2008, People's Republic of China 2004, 2008, 2010
- *Linear Algebra Solutions Manuals*, Macmillan Publishing Co., 1980, 1986, 1990, 1994, Pearson/Prentice-Hall, 1998, 2002, 2006, 2010
- *Linear Algebra with Applications - Student Study Guides*, Pearson/Prentice-Hall, 2002, 2006, 2010
- *MATLAB*, Chapter in *Linear Algebra Handbook* edited by L. Hogbens, CRC Press, 2006.
- *ATLAST Computer Exercises for Linear Algebra* with Eugene Herman and Richard Faulkenberry, Prentice-Hall, First Ed. 1997, Second Ed., 2003.
- Three articles giving overviews on Linear Algebra, Determinants, and Vector Spaces in *Mathematics Education: An Encyclopedia*, edited by Grinstein and Lipsey, RoutledgeFalmer, 2001
- “Maximizing Bilinear Forms Subject to Linear Constraints”, *Journal of Linear Algebra and It's Applications*, vol. 210, 1994. Earlier version with MATLAB programs appeared as ETH Technical Report 189, December 1992.
- “Matrix and Other Methods for Solving Integral Equations of the First Kind with Applications to Remote Temperature Sensing”, *Journal of Linear Algebra and It's Applications*, vol. 150, May, 1991
- “Smooth Profile Inferencing from Noisy Radiance Data using Optical Measure Theory,” (joint paper with Jean I. F. King), *Proceedings of the Fifth Conference on Satellite Meteorology and Oceanography*, 1990
- “A Smart Algorithm for Nonlinear Interpolation and Noise Discrimination,” (Joint paper with Jean I. F. King), *RSRM '87: Advances in Remote Retrieval Methods*, edited by A. Deepak, H.E. Fleming, and J.S. Theon, A. Deepak Publishing, 1989

B. PUBLICATION PENDING

- “The Gram-Schmidt Process: 100 Years and More”, joint paper with Åke Björck and Walter Gander, *Journal of Numerical Linear Algebra* (approx. 45 pages).

C. CONFERENCES, WORKSHOPS AND MINISYMPOSIA ORGANIZED

Co-organizer of 2013 ILAS Conference, Providence, Rhode Island
 Organizer of New England Numerical Analysis Day Conference, UMass Dartmouth, 2011
 Co-organizer for Invited Minisymposium, ILAS Conference Pisa, Italy, June 2010
 Organizing committee for the 2010 New England Numerical Analysis Conference, WPI
 Principal organizer of the Gene Golub Memorial Conference at UMass Dartmouth, 2008
 Organized minisymposia at SIAM Applied Linear Algebra conferences 1993, 1997, 2009
 Organized 18 ATLAST linear algebra workshops (1992-97).
 Co-organizer of the MAA Linear Algebra sessions at the 1993, 1994, 1995, 1996, 1997, and 1998 Joint Meetings of the AMS and MAA.
 Organized panel discussion on Mathematics Education for the 21st Century
 Panelists: Deborah Hughes-Hallett (Harvard University), Robert Kowalczyk and myself

D. PRESENTATIONS, 1992–2010

- **Invited Presentations**

ILAS Annual Conference, Pisa, Italy, 2010
 Haifa Matrix Theory Conference, Haifa, Israel, 2009
 ETH, Zurich, invited lecture, May 2009
 New England Numerical Analysis Days Conference, URI, April 2009
 Brown University, invited lecture September 2008
 ILAS Annual Conference, Cancun, Mexico, June 2008
 Two presentations at the Gene Golub Memorial Conference, Dartmouth, MA, 2008
 SIAM Workshop at Temple University (panel discussion), 2005
 ILAS Conference, Madison, WI, June 1998 (1/2 hour minisymposium talk)
 MAA Regional Conferences – Bellingham, Wash., June, 1997, Charleston, March 1998
 Oswego Faculty Enhancement Workshop – Keynote presenter, 1997
 NYSAIS Technology Team Conference (1 hour presentation), 1997
 Invited presentation at Southeast Section Meetings of Project Next, 1996 and 1998
 Project Kaleidoscope Workshop, University of Iowa, July 1996
 AMS Southeast Section Conference – Chattanooga, Tenn., Fall, 1996
 International Conference on Technology in Collegiate Mathematics (1993, 1994, 1995)
 Houston, TX, Nov., 1995 (2 hour minicourse), Orlando, FL, Nov., 1994 (1 hour talk)
 Parsippany, NJ, Nov., 1993 (2 hour minicourse)
 Harvard Consortium Conference, San Jose, CA, June 1995 (panel discussion)
 ILAS Conference, Atlanta, GA, August 1995 (2 invited presentations)
 Invited participant in NSF Project Impact Workshop, June, 1994
 Keynote speaker at MAA Northeastern Section Meeting, Newport, RI, June, 1994
 ILAS Conference, Pensacola, FL, March 1993 (1 hour keynote talk)
 Invited participant in NSF Coalitions Workshop, October, 1993
 Colloquium lectures presented at the Swiss Federal Institute of Technology ETH,
 University of California San Diego, San Diego State University,
 Stanford University (2 talks), San Jose State University, California State Hayward,
 Rose-Hulman Institute of Technology, Harvey Mudd College, McGill University,

San Francisco State University, Brown University (2 talks), UMass Dartmouth (2 talks),
University of Connecticut and Sam Houston State University

- **Contributed Talks**

ICIAM07, Zurich, Switzerland, 2007

ILAS Conference in Pensacola, March 1993

MATLAB Conference in Cambridge, MA, October, 1993

Contributed papers at Joint Meetings of AMS and MAA, 1993, 1994, 1995, 1996, 1997, 1998, 2011

- **Workshops Conducted**

University of Washington, 1996

Salve Regina University, 1996

University of California, San Diego, 1994, 1996 and 1997

Michigan State University, 1993

University of Wisconsin, 1992

GRANTS

- Co-PI of CSUMS Undergraduate Research Program (supported by a \$789,000 NSF grant), 2008-2013.
- 2009 – Travel grants from Technion University, Haifa, Israel and ETH, Zurich, Switzerland to pay hotel expenses for invited talks.
- 2008 – Received grants from the Mathworks, Inc. (\$7,500), and Comsol, Inc. (\$3,000) for the Gene Golub Memorial Conference at UMass Dartmouth. Also received an internal grant of \$3,000 from the College of Arts and Sciences.
- Received two NSF grants (1991–93 and 1993–98) totaling \$446,000 for project to **A**ugment the **T**eaching of **L**inear **A**lgebra using **S**oftware **T**ools (ATLAST).
- Air Force Research Grants 1987, 1988, 1989, 1990.
- Naval Office of Scientific Research grants 1984, 1985, 1986.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

Society for Industrial and Applied Mathematics (SIAM)

SIAM Special Interest Group on Linear Algebra (SIAG LA)

The International Linear Algebra Society (ILAS)

Mathematical Association of America (MAA)