

## Brief Curriculum Vita

### Donald E. McClure

#### a. Professional Preparation

University of California at Berkeley  
Brown University

Mathematics  
Applied Mathematics

A.B., 1966  
Ph.D., 1970

#### b. Appointments.

Division of Applied Mathematics, Brown University, Professor, 1982 to present; Division Chair, 1994--1996 and 1985--1988; Associate Professor, 1975--1982; Assistant Professor, 1970--1975; Instructor, 1969--70.

Center for Intelligent Control Systems, Brown--Harvard--MIT, Member and Associate Director, 1986--2001. Stanford University, Department of Statistics, Visiting Scholar, Academic year 1977--78.

#### c. Five publications closely related to proposed project.

*Image models in pattern theory*, Computer Graphics Image Processing, **12**, (1980), 309--325. Republished in *Image Modeling*, A. Rosenfeld (editor), Academic Press, New York (1981), 259--275.

*Statistical methods for tomographic image reconstruction* (with S. Geman), Bulletin of the International Statistical Institute, **52** (1987).

*A comprehensive statistical model for single photon emission computed tomography* (with S. Geman and K. Manbeck), Markov Random Fields: Theory and Application, R. Chellappa and A. Jain, editors, Academic Press (Harcourt Brace Jovanovich), 1993, 93--130.

*A nonlinear filter for film restoration and other problems in image processing*, (with D. Geman and S. Geman), Computer Graphics and Image Processing, **54** (1992), 281--289.

*Statistical methods for reconstruction in emission computed tomography'* (with S. Geman and K.M. Manbeck), invited presentation and publication at 1995 International Meeting on Fully Three-Dimensional Reconstruction in Radiology and Nuclear Medicine, Aix-les-Bains, Savoie, France, July 1995, P. Grangeat editor.

#### d. Synergistic Activities

Directed six national surveys of the mathematics profession in the U.S. and authored eight articles in Notices of the American Mathematical Society during the period 1991--1994 on the professional status of research mathematicians (employment, characteristics of graduate and undergraduate programs, faculty salaries, and other professional issues).

Associate Treasurer of the American Mathematical Society, 2003-- ; Trustee, Member of the Council, principal liaison between the Board of Trustees and *Mathematical Reviews*. Trustee of the American Mathematical Society, 1995--2000. Member 1993--2002 of the AMS Committee on the Profession; committee chair 1999 and 2000.

Principal participant in the technology transfer to products of mathematical algorithms for computer vision and image processing: industrial OCR; Bayesian methods for computed tomography; automated visual inspection for defect detection; mathematical techniques for processing of digital film and video.

Panel member and co-author: AMS Task Force on Excellence in Mathematics Scholarship, *Towards Excellence: Leading a Mathematics Department in the 21st Century*, American Mathematical Society, 1999 (NSF RED95-50471).

Co-organizer, workshop on Image Processing and Low-level Vision, IMA Multimedia Year, October 2000.

#### e. Collaborators and Other Affiliations:

Stuart Geman (Brown University);

Basilis Gidas (Brown University);  
Ulf Grenander (Brown University);  
Kevin Manbeck (Mathematical Technologies Inc.);  
David Mumford (Brown University).

**e(ii) Graduate and Post-doctoral advisor:**

Ulf Grenander (Brown University, Emeritus)

**e(iii) Thesis Advisor and Postgraduate Sponsor:**

John C. Thacker (1974, LORAL, Palo Alto, CA)  
Sally E. Howe (1979, National Coordinating Center for High Performance Computing and Communications)  
Charles Plumeri (1981, US Army CECOM, Ft. Monmouth, NJ)  
Nicholas Accomando, (1984, ChipWrights, Waltham, MA)  
Shoulamit C. Shwartz (1984, U.C.G. Technologies, Israel)  
Joyce E. Anderson (1985, Salem State College, Salem, MA)  
Edmond J. Nadler (1985, independent contractor, Ann Arbor)  
John Mertus (1988, Department of Cognitive & Linguistic Sciences, Brown University)  
Christopher S. Raphael (1991, Indiana University)  
Todd A. Rovelli (1992)  
Zhidong Lu (1994 Physics; Bolt, Beranek and Newman)  
Bing Chin (1998 Mathematics; Credit Suisse First Boston, New York)  
Gershon Kutliroff (2002, DPSi, Israel)  
Heng Lian (current Ph.D. candidate 2004-05)  
Zheng Li (current Ph.D. candidate 2004-05)  
Advisor to 15 Ph.D. students; two Ph.D. students currently in progress.