
BIOGRAPHICAL SKETCH

NAME: **Andrew F. Laine**

POSITION TITLE: Professor of Biomedical Engineering and Radiology (Physics)
Department of Biomedical Engineering

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Cornell University, Ithaca, NY	B.S.	05/77	Biological Science
University of Connecticut, Storrs, CT	M.S.	05/80	Chemistry
Washington University, St. Louis, MO	M.S.	05/83	Computer Science
Washington University, St. Louis, MO	D.Sc.	05/89	Computer Science

A. Personal Statement

My research interests include methods in quantitative image analysis, image formation, bio-mechanical measures of strain, and bio-imaging informatics. I have been working in the area of medical image analysis for over 25 years and have published over 300 papers in the field. More recently I have focused on the challenging problem in the area of biomarkers, machine / deep learning (ML/DL) and big data analytics applied to understand diseases processes and the development of pre-emptive treatments.

I have a passion to solve problems in medical imaging through technological methods / devices that can make significant contributions towards the understanding and treatment of disease and improving healthcare.

B. Positions and Honors

Positions and Employment

1989-1990	Postdoctoral Fellow, Center for Intelligent Computer Systems, Department of Computer Science, Washington University, St. Louis, MO.
1990-1995	Assistant Professor, Computer and Information Sciences and Engineering Department, University of Florida, Gainesville, FL.
1995-1997	Associate Professor, Department of Computer and Information Sciences and Engineering, Department of Electrical and Computer Engineering, and Department of Radiology, University of Florida, Gainesville, FL. Tenure granted in July, 1995.
1997-2002	Associate Professor of Biomedical Engineering and Radiology (Physics), Columbia University, New York, NY. Tenure granted in April, 2000.
2002-2011	Professor of Biomedical Engineering and Radiology (Physics), Vice Chair, Department of Biomedical Engineering, Columbia University, New York, NY.
2012-2017	Chair, Department of Biomedical Engineering, Columbia University, New York, NY
2011-present	Percy K. and Vida L. W. Hudson Professor of Biomedical Engineering and Radiology, Department of Biomedical Engineering, Columbia University, New York, NY.

Other Experience and Professional Memberships

2017	Past President, IEEE Engineering in Medicine and Biology Society (EMBS)
2015-2016	President, IEEE Engineering in Medicine and Biology Society (EMBS) (2 year term)
2013-2015	Chair, Council of Societies, American Institute of Biological and Medical Engineers (AIMBE)
2012-2014	Chair, Steering Committee, IEEE International Symposium on Biomedical Imaging
2008-2012	IEEE EMBS Executive Committee, Vice President of Publications (consecutive 2 year terms)
2009-2011	IEEE Engineering in Biology and Medicine (EMBS) Conference, Program Chair, Boston, MA, August, 2011.

- 2004-2006 IEEE Engineering in Biology and Medicine (EMBS) Conference, Program Chair, New York, NY, September, 2006.
- 1998-2003 National Institutes of Health (NIH), PLCO Cancer Screening Study, consultant and site reviewer.
- 2000-2009 National Institutes of Health (NIH), NIBIB, Ad-Hoc Panel Reviewer.
- 1995-present Editorial Board, Emerging Technologies in Biomedical Engineering, Metin Akay, Series Editor and Chief, published by IEEE Press and sponsored by the IEEE Engineering in Medicine and Biology Society.
- 1993-2001 Editor and Chairman for Proceedings of the Conference in Mathematical Imaging: Wavelet Applications in Signal and Image Processing, International Symposium on Optical Applied Science and Engineering.
- 1996-1998 Associate Editor for IEEE Transactions on Image Processing, IEEE Press.

Honors

- 1991 Engineering Research Award, Engineering Foundation and the Institute of Electrical and Electronics Engineers.
- 1991 Research Initiation Award, National Science Foundation (NSF)
- 1993 Whitaker Foundation Award in Biomedical Engineering
- 1998 Alexander Von Humboldt Foundation, Research Fellowship (Computer Science)
- 2004 Distinguished Alumni Award, Department of Computer Science, Washington University
- 2005 Senior Member of IEEE (Institute of Electrical and Electronics Engineering)
- 2006 AIMBE Fellow - American Institute for Medical and Biological Engineering (Class of 2006)
- 2008 IBM Faculty Award – T.J. Watson Research Center (Medical Information Systems)
- 2009 IEEE Fellow (2010)
- 2011 Percy K. and Vida L. W. Hudson Professor of Biomedical Engineering and Radiology, School of Engineering and Applied Science (SEAS) and Professor of Radiology (Physics), Department of Radiology, Columbia University Medical Center (CUMC), Columbia University, New York, NY
- 2017 Fellow, International Federation of Medical and Biological Engineers (IFMBE)

Full list of publications and description of current and past research project may be found at: <http://hbil.bme.columbia.edu>