CURRICULUM VITAE PROFESSOR ALAN CONRAD BOVIK



Biographical Sketch

Alan Conrad Bovik was born in Kirkwood, MO on June 25, 1958. He received the B.S. degree in Computer Engineering in 1980 and the M.S. and Ph.D. degrees in Electrical and Computer Engineering in 1982 and 1984, respectively, all from the University of Illinois, Urbana-Champaign.

He holds the Ernest J. Cockrell Endowed Chair in Engineering at The University of Texas at Austin, where he is a Professor in the Department of Electrical and Computer Engineering and The Institute for Neurosciences, and Director of the Laboratory for Image and Video Engineering (LIVE). During the Spring of 1992, he held a visiting position in the Division of Applied Sciences, Harvard University, Cambridge, Massachusetts. He is well known as the inventor or co-inventor of Order Statistic Filters; the Gabor Texture Model; the Image Modulation Model; the Structural Similarity (SSIM) and Visual Information Fidelity (VIF) Indices for image quality assessment, the MOtion-based Video Integrity Evaluation (MOVIE) index for video quality assessment, the LIVE Image and Video Quality Databases (downloaded thousands of times), and SIVA - the Signal, Image and Video Audiovisual Demonstration Gallery (used by more than 1000 sites around the world), as well as many other contributions to the fields of image and video processing, computational vision, digital microscopy, and modeling of biological visual perception. He has published over 750 technical articles in these areas and holds several U.S. patents. His publications have been cited more than 37,000 times in the literature, his current H-index is over 70, and he is listed as a **Highly-Cited Researcher** by Thompson Reuters, indicating one of the top 1% of most-

cited researchers within the field of Engineering. He is also the author of *The Handbook of Image* and Video Processing, Second Edition (Elsevier Academic Press, 2005), Modern Image Quality Assessment (Morgan & Claypool, 2006), The Essential Guide to Image Processing (Elsevier Academic Press, 2009), and The Essential Guide to Video Processing (Elsevier Academic Press, 2009).

Dr. Bovik has received a number of major awards from the IEEE Signal Processing Society, including: the Society Award (2013); the Technical Achievement Award (2005); the Best Paper Award (2009); the Signal Processing Magazine Best Paper Award (2013); the Education Award (2007); the Distinguished Lecturer Award (2000); the Meritorious Service Award (1998) and (co-author) the Young Author Best Paper Award (2013). He also was named recipient of the Honorary Member Award of the Society for Imaging Science and Technology for 2013, received the SPIE Technology Achievement Award for 2012, and was the IS&T/SPIE Imaging Scientist of the Year for 2011. He is also a recipient of the Hocott Award for **Distinguished Engineering Research** from the Cockrell School of Engineering at The University of Texas at Austin (2008), the Distinguished Alumni Award from the University of Illinois at Champaign-Urbana (2008), the IEEE Third Millennium Medal (2000) and two journal paper awards from the Pattern Recognition Society. He is a Fellow of the IEEE, a Fellow of the Optical Society of America (OSA), a Fellow of the Society of Photo-Optical and Instrumentation Engineers (SPIE), and a Fellow of the American Institute for Medical and Biological Engineering (AIMBE). He has been involved in numerous professional society activities, including: Board of Governors, IEEE Signal Processing Society, 1996-1998; Editor-in-Chief, IEEE Transactions on Image Processing, 1996-2002; Overview Editor, IEEE Transactions on Image Processing, 2009present; Editorial Board, The Proceedings of the IEEE, 1998-2004; Senior Editorial Board, IEEE Journal on Special Topics in Signal Processing, 2005-2009; Associate Editor, IEEE Signal Processing Letters, 1993-1995; Associate Editor, IEEE Transactions on Signal Processing, 1989-1993; Editorial Board, Pattern Recognition, 1988-present; Series Editor for Image, Video, and Multimedia Processing, Morgan and Claypool Publishing Company, 2003-present; and Founding General Chairman, First IEEE International Conference on Image Processing, held in Austin, Texas, in November, 1994.

Dr. Bovik is a registered Professional Engineer in the State of Texas (License # 114706) and is a frequent consultant to legal, industrial and academic institutions.



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Honors and Awards

- 1. Elected to Honor Society of Phi Kappa Phi, 1981.
- 2. Stark Centennial Endowed Fellow in Engineering, University of Texas, Austin, 1987-1991.
- 3. Listed in Men of Achievement, 1988.
- 4. Honorable Mention, Thirteenth Annual Pattern Recognition Society Award for the paper "Nonparametric tests for edge detection in noise," *Pattern Recognition* (1988).
- 5. Registered Professional Engineer in the State of Texas (License # 114706).
- 6. Elevated to Senior Member of the IEEE, November 1989.
- 7. Supervised PhD Dissertation "On Using Chromatic Information in Stereo Correspondence" (John R. Jordan III), selected winner of the University of Texas all-campus Outstanding Dissertation Award, 1990.
- Supervised winner of 1990 MCC Awards for Excellence in Computer Science and Electrical & Computer Engineering student paper award winner for the paper (Dapang Chen and A.C. Bovik) "Visual Pattern Image Coding," *IEEE Transactions on Communications*, vol. COM-38, no. 12, December 1990.
- 9. National Finalist, 1990 Eta Kappa Nu Outstanding Young Electrical Engineer Award. There were 7 Finalists in this U.S. competition.
- 10. William H. Hartwig Endowed Fellow in Engineering, The University of Texas at Austin, 1991-present.
- 11. Recipient of University of Texas Engineering Foundation Faculty Excellence Award, 1991.
- 12. Associate Director, Center for Vision and Image Sciences, The University of Texas at Austin, 1994-2000.
- 13. Honorable Mention, Nineteenth Annual Pattern Recognition Society Award for the paper "Using Chromatic Information in Dense Stereo Correspondence," *Pattern Recognition*, 1993.
- 14. Elected Fellow of the Institute of Electrical and Electronics Engineers (IEEE) "For Contributions to Nonlinear Image Processing," December 1995.
- 15. General Dynamics Endowed Fellow in Engineering, The University of Texas at Austin, 1996-2000.
- 16. Recipient of the **IEEE Signal Processing Society Meritorious Service Award** in 1998. This is the highest service honor given by the Society. Citation: "For Broad and Extensive Service Contributions to the Society, and in Particular for the Creation of the IEEE International Conference on Image Processing."
- 17. Recipient of the IEEE Third Millennium Medal, 2000.
- 18. Recipient of the IEEE Signal Processing Distinguished Lecturer Award in 2000.

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- 19. Plenary Speaker, International Conference on Multimedia Processing and Systems, Madras, India, August 14, 2000.
- 20. Named Robert Parker, Sr. Centennial Professor in Engineering, The University of Texas at Austin, September 2000-August 2003.
- 21. Named a Dean's Fellow in the College of Engineering in the Year 2002.
- 22. Named The Cullen Trust for Higher Education Endowed Professor, The University of Texas at Austin, September 2003-August 2005.
- 23. **Plenary Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Lake Tahoe, Nevada, March 28-30, 2004.
- 24. Plenary Address, National Instruments NI Week, Austin, Texas, June 2004.
- 25. Named the **Keys and Joan Curry/Cullen Trust Endowed Chair in Engineering**, The University of Texas at Austin, September 2005-2014.
- 26. Recipient of the **IEEE Signal Processing Society Technical Achievement Award**, 2005. This is the highest technical honor given by the Society. Citation: "For Broad and Lasting Contributions to the Field of Digital Image Processing."
- 27. **Keynote Address**, *Twelfth Annual Worldwide Virtual Instrumentation Conference and Exhibition*, Austin Convention Center, Austin, Texas, August 2006.
- 28. Elected **Fellow of the Optical Society of America**, "For fundamental research contributions to and technical leadership in digital image and video processing," November 2006.
- 29. Keynote Address, SPIE Human Vision and Electronic Imaging Conference, San Jose, California, January 29, 2007.
- 30. **Plenary Address,** *IEEE Signal Processing Society International Workshop on Multimedia Signal Processing*, Chania, Crete, Greece, October 2007.
- 31. Plenary Address, Texas Wireless Symposium, Austin, Texas, October 2007.
- 32. **Plenary Address,** *IEEE Southwest Symposium on Image Analysis and Interpretation,* Santa Fe, New Mexico, March 2008.
- 33. Recipient of the **IEEE Signal Processing Society Education Award** in 2008. This is the highest education honor given by the Society. Citation: "For Broad and Lasting Contributions to Image Processing, including popular and important image processing books, innovative on-line courseware, and for the creation of the leading research and educational journal and conference in the image processing field."
- 34. Elected **Fellow of the Society of Photo-Optical and Instrumentation Engineers (SPIE)** *"For pioneering technical, leadership, and educational contributions to the field of image processing,"* December 2007.
- 35. Plenary Address, IEEE Region 10 Conference, Hyderabad, India, November 2008.
- 36. **Plenary Address**, *First IEEE International Workshop on IP Multimedia Communications*, Virgin Islands, USA, August 4, 2008.
- 37. **Plenary Address**, *IEEE International Conference on Image Processing*, San Diego, California, October 2008.
- 38. Recipient of the **Distinguished Alumni Award of the University of Illinois**, Champaign-Urbana "For fundamental and enduring technical, educational and service contributions to the field of digital image and video processing," September 2008.
- 39. Recipient of the **Billy and Claude R. Hocott Award** for Distinguished Engineering Research, The University of Texas at Austin. This is the highest engineering research award given annually to one member of the faculty of the Cockrell School of Engineering, October

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- 40. Panelist, "Tools, Targets and Trends," First International Workshop on Quality of Multimedia Experience, San Diego, California, July 30, 2009.
- 41. Winner, **IEEE Signal Processing Society Best Paper Award** for 2009, for the paper "Image quality assessment: From error visibility to structural similarity," published in the *IEEE Transactions on Image Processing*, volume 13, number 4, pages 600-612, April 2004. This is the highest paper award given by the Society, and is retrospective over the five years leading up to the award.
- 42. Plenary Address, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Austin, Texas, May 2010.
- 43. Plenary Address, Optical Society of America Topical Meeting on Digital Image Processing and Analysis (DIPA), Tucson, AZ, June 2010.
- 44. Keynote Address, National Instruments NI Week Vision Summit, August 2010.
- 45. Elected Fellow of the American Institute for Medical and Biological Engineering (AIMBE), October 2010.
- 46. **Plenary Address,** *IS&T / SPIE Electronic Imaging Symposium,* San Francisco, California, January 2011.
- 47. Recipient of the **IS&T / SPIE Imaging Scientist of the Year Award**, 2011. This is the highest technical honor collaboratively given by these two Societies. Citation: "For his seminal contributions to the computational aspects of biological visual perception, specifically in the areas of image and video quality."
- 48. Keynote Address, European Workshop on Visual Information Processing, Paris, France, July 2011.
- 49. **Keynote Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, April 2012.
- 50. Plenary Address, Optical Society of America Meeting on Computational Optical Sensing and Imaging, Monterrey, California, June 25, 2012.
- 51. Plenary Address, Workshop on Digital Video Analytics and Processing, IIT-Chennai, Chennai, India, December 2012.
- 52. Keynote Address, International Workshop on Video Processing and Quality Metrics for Consumer Electronics, Scottsdale, Arizona, January 30, 2013.
- 53. Recipient of the **SPIE Technology Achievement Award**, 2012. This is the highest technical honor given by the 17,000 member Society for Photo-Optical and Instrumentation Engineers. Citation: *"For Broad and Lasting Contributions to the Field of Perception-Based Image Processing."*
- 54. **Keynote Address**, *IEEE Signal Processing Society Workshop on Image*, *Video, and Multidimensional Signal Processing*, Seoul, Korea, June 2013.
- 55. Recipient of the **Honorary Member Award** of the Society for Imaging Science and Technology, 2014. This is the highest award of any kind given by IS&T. Citation: "For his impact in shaping the direction and advancement of the field of perceptual image processing."
- 56. **Keynote Address,** *SPIE Conference on Image Quality and System Performance,* San Francisco, California, January 2014.
- 57. Recipient of the **Society Award of the IEEE Signal Processing Society**, 2013. This is the highest award of any kind given by the IEEE SPS. Citation: "*For fundamental contributions to digital image processing theory, technology, leadership and education.*"

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