

**CURRICULUM VITAE
PROFESSOR ALAN CONRAD BOVIK**



Biographical Sketch

Al 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, 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 BRISQUE, BLIINDS and NIQE blind image and video quality models, 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 digital television, image and video processing, computational vision, and modeling of visual perception.

Professor Bovik has frequently been featured or quoted in the media including *The Wall Street Journal*, *The Hollywood Reporter*, *RPS Journal*, *Austin American-Statesman*, *Emmy Magazine*, and *Sound and Picture*. He has published more than 800 technical articles and U.S. patents in these areas. His publications have been cited more than 85,000 times in the literature, his current H-index is above 100, and he is listed as a **Highly-Cited Researcher** by the Web of Science Group, indicating one of the top 1% of most-cited researchers within the field of Engineering. He is the author of the widely-adopted *The Handbook of Image and Video Processing*, Second Edition (Elsevier Academic Press, 2005), *Modern Image Quality Assessment* (Morgan & Claypool, 2006), and *The Essential*

Guides to Image and Video Processing (Elsevier Academic Press, 2009).

Dr. Bovik received Television's highest honor, an individual **Primetime Emmy Award for Outstanding Achievement in Engineering Development** from the Academy of Television Arts and Sciences (The Television Academy) in October 2015, for his work on the development of video quality prediction models that have become standard tools in broadcast and post-production houses throughout the television industry. He will receive the **Progress Medal** from The Royal Photographic Society in November 2019, which is awarded in recognition of any invention, research, publication or other contribution which has resulted in an important advance in the scientific or technological development of photography or imaging in the widest sense. This award has been given continuously since 1878. He received the **2019 IEEE Fourier Award** "For seminal contributions and high-impact innovations to the theory and application of perception-based image and video processing." He was also the recipient of the **2017 Edwin H. Land Medal** from The Optical Society and the Society for Imaging Science and Technology, "For substantially shaping the direction and advancement of modern perceptual picture quality theory, and for energetically engaging industry to transform his ideas into global practice."

He has also received all of the major awards from the IEEE Signal Processing Society, including: the **Norbert Wiener Society Award** (2013); the **Claude Shannon/Harry Nyquist Technical Achievement Award** (2005); the **Best Paper Award** (2009); the **Signal Processing Magazine Best Paper Award** (2013); the **Karl Friedrich Gauss Education Award** (2007); the **Distinguished Lecturer Award** (2000); the **Leo L. Beranek Meritorious Service Award** (1998); the **ICIP Pioneer Award** (2019); the **Sustained Impact Paper Award** (2017); the **Signal Processing Letters Best Paper Award** (2017); and (co-author) the **Young Author Best Paper Award** (2013).

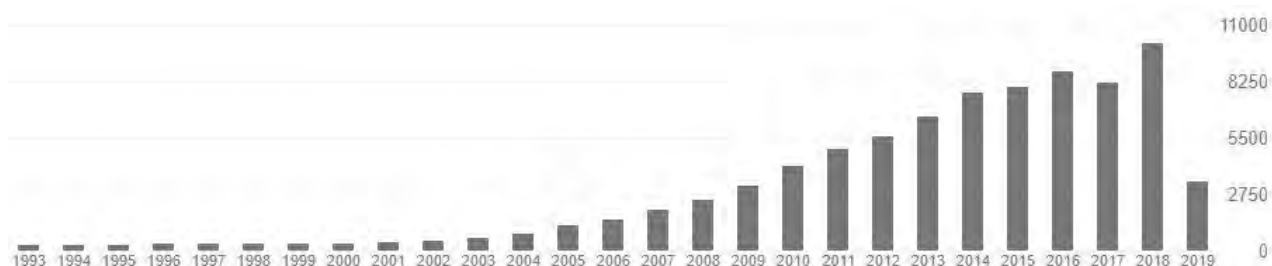
He is the author of two **2017 Google Scholar Classic Papers** recognizing highly-cited papers that have stood the test of time, and are among the ten most-cited articles in their area of research published ten years earlier. He also received the **EURASIP Best Paper Award** (2018), the **Picture Coding Symposium Best Paper Award** (2018), and the **IEEE Circuits and Systems for Video Technology Best Paper Award** (2016). 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 **Joe J. King Professional Engineering Achievement Award** (2015) and the **Hocott Award for Distinguished Engineering Research** (2008), both from the Cockrell School of Engineering at The University of Texas at Austin, 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 is a member of the Society of Motion Picture and Television Engineers (SMPTE) and a member of both The Television Academy (ATAS) and the National Academy of Television Arts and Sciences (NATAS). He is also a member of the Royal Society of Photography.

Professor Bovik 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; Editorial Board, *The Proceedings of the IEEE*, 1998-2004; Senior Editorial Board, *IEEE Journal on Special Topics in Signal Processing*, 2005-2009; and Founding General Chair, *First IEEE International Conference on Image Processing*, held in Austin, Texas, in November, 1994. Dr. Bovik is also a busy and much sought-after consultant to industry.

	All	Since 2014
Citations	85019	46285
h-index	110	73
i10-index	452	287



This image is a Word Cloud formed from the titles of the journal papers in this document, roughly illustrating the topical frequency of Professor Bovik's research work:



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.
8. 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 **1998 Leo L. Beranek Meritorious Service Award 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.
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 **Claude Shannon / Harry Nyquist 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 **Karl Friedrich Gauss 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 2008.
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, 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 **Norbert Wiener 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.*”
 58. Recipient of the **IEEE Signal Processing Magazine Best Paper Award** of the IEEE Signal Processing Society for 2013, for the paper “Mean Squared Error: Love it or Leave it? — A New Look at Signal Fidelity Measures,” *IEEE Signal Processing Magazine*, vol. 26, no. 1, pp. 98-117, January 2009. This is the highest survey paper award given by the Society, and is retrospective over the five years leading up to the award.
 59. Co-author of the **IEEE Signal Processing Society Young Author Best Paper Award** (with K. Seshadrinathan) for 2013, for the paper “Motion Tuned Spatio-Temporal Quality Assessment of Natural Videos,” *IEEE Transactions on Image Processing*, vol. 19, no. 2, pp. 335-350, February 2010. This is the highest young author paper award given by the Society, and is retrospective over the five years leading up to the award.
 60. **Plenary Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, San Diego, California, April 2014.
 61. **Keynote Address**, *Second IEEE Global Conference on Signal and Information Processing*, Atlanta, Georgia, December 2014.
 62. **Highly-Cited Researcher for 2014**, according to Thompson Reuters, indicating one of the top 1% of most-cited researchers within the field of Engineering, August 2014.

63. Named Holder of the **Ernest J. Cockrell Endowed Chair in Engineering (#3)**, The University of Texas at Austin, September 2014-present.
64. Recipient of the **ICIP Top 10% Paper Award** for the paper “Assessment of Video Quality Using Time-Frequency Statistics,” presented at the *IEEE International Conference on Image Processing*, Paris, France, October 27-30, 2014 (with A. Mittal and M. Saad).
65. **Keynote Address**, *Eighth International Conference on Image and Graphics (ICIG)*, Tianjin, China, August 2015.
66. Recipient of the **Joe J. King Professional Engineering Achievement Award**, The University of Texas at Austin. This is the highest engineering award honoring professional achievement and leadership given annually to one member of the faculty of the Cockrell School of Engineering, September 2015.
67. **Plenary Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, March 2016.
68. Recipient of Television’s highest honor, an individual **Primetime Emmy Award for Outstanding Achievement in Engineering Development** from the Academy of Television Arts and Sciences in October 2015, for the invention of “Structural Similarity (SSIM) Video Quality Measurement.” The award recognizes his work on the development of video quality prediction models which have become standard tools in broadcast and post-production houses throughout the television industry. A Primetime Emmy Award is Television’s highest honor. An Engineering Emmy Award is bestowed upon an individual, company or organization for developments in engineering that are either so extensive an improvement on existing methods, or so innovative in nature, that they materially affect the transmission, recording or reception of television.
69. **Highly-Cited Researcher for 2015**, according to Thompson Reuters, indicating one of the top 1% of most-cited researchers within the field of Engineering.
70. Recipient of the **IEEE Circuits and Systems for Video Technology Best Paper Award** of the IEEE Circuits and Systems Society for 2016, for the paper “Video Quality Assessment by Reduced Reference Spatio-Temporal Entropic Differencing,” *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 23, no. 4, pp. 684 – 694, April 2013. Retrospective over the three years leading up to the award.
71. **Keynote Address**, Thomas Huang Symposium, The Beckman Institute, The University of Illinois, Urbana, Illinois, October 1, 2016.
72. **Keynote Address**, *IEEE International Workshop on Signal Processing Systems*, Dallas, Texas, October 26-28, 2016.
73. **Highly-Cited Researcher for 2016**, according to Thompson Reuters, indicating one of the top 1% of most-cited researchers within the field of Engineering.
74. Recipient of the **IEEE Signal Processing Society Sustained Impact Paper Award for 2017**, 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 award is required to be limited to papers published in an IEEE Signal Processing Society journal at least ten years prior to the award, thereby recognizing sustained impact over many years on a subject related to the Society's technical scope. Notably, this is the most-cited paper ever published in any IEEE Signal Processing Society transactions, journal, magazine, express letters, or conference proceedings.
75. **Keynote Address**, *International Conference on Computer Analysis of Images and Patterns*, Ystad, Sweden, August 2017.

76. Recipient of the **Edwin H. Land Medal** for 2017 from The Optical Society and the Society for Imaging Science and Technology. Citation: *For substantially shaping the direction and advancement of modern perceptual picture quality theory, and for energetically engaging industry to transform his ideas into global practice.*
77. **2017 Google Scholar Classic Paper Award** (for Computer Vision and Pattern Recognition): “Image information and visual quality,” *IEEE Transactions on Image Processing*, vol. 15, no. 2, pp. 430-444, February 2006. Google Scholar Classic Papers are highly-cited papers that have stood the test of time, and are among the ten most-cited articles in their area of research published ten years earlier. The main algorithm developed in the paper, called the Visual Information Fidelity (VIF) Index, is a core picture quality prediction engine used to quality-assess all encodes streamed globally by Netflix.
78. **2017 Google Scholar Classic Paper Award** (for Signal Processing): “An evaluation of recent full reference image quality assessment algorithms,” *IEEE Transactions on Image Processing*, vol. 15, no. 11, pp. 3440-3451, November 2006. Google Scholar Classic Papers are highly-cited papers that have stood the test of time, and are among the ten most-cited articles in their area of research published ten years earlier. The picture quality database and human study described in the paper, the LIVE Image Quality Database, has been the standard development tool for picture quality research since its first introduction in 2003.
79. **Highly-Cited Researcher for 2017**, according to Clarivate Analytics, indicating one of the top 1% of most-cited researchers within the field of Engineering.
80. Recipient of the **IEEE Signal Processing Letters Best Paper Award** of the IEEE Signal Processing Society for 2018, for the paper “Making a ‘Completely Blind’ Image Quality Analyzer,” *IEEE Signal Processing Letters*, vol. 21, no. 3, pp. 209-212, March 2013. This ‘high-impact’ Letters paper award is retrospective over the five years leading up to the award.
81. **Plenary Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Las Vegas, Nevada, April 2018.
82. **Keynote Address**, *Picture Quality Symposium*, San Francisco, California, June 2018.
83. **Keynote Address**, *European Workshop on Visual Information Processing (EUVIP)*, Tampere, Finland, November 2018.
84. **Keynote Address**, *SPIE Conference on Image Quality and System Performance*, San Francisco, California, January 2019.
85. Recipient of the **EURASIP Best Paper Award** of the European Association for Signal Processing for 2018, for the paper “Full-Reference Quality Assessment of Stereopairs Accounting for Rivalry,” *Signal Processing: Image Communication*, vol. 28, no. 10, pp. 1143-1155, October 2013. Retrospective over the five years leading up to the award.
86. Recipient of the **Best Paper Award** of the *Picture Coding Symposium* for the paper, “Detecting Source Video Artifacts with Supervised Sparse Filters,” June 2018.
87. Recipient of the **IEEE Fourier Award for Signal Processing** for 2019. This major honor is an IEEE-level Technical Field Award. Citation: *For seminal contributions and high-impact innovations to the theory and application of perception-based image and video processing.*
88. **Highly-Cited Researcher for 2018**, according to Clarivate Analytics, indicating one of the top 1% of most-cited researchers within the field of Engineering.
89. Recipient of the **Progress Medal** for 2019 from The Royal Photographic Society. The Progress Medal is awarded in recognition of any invention, research, publication or other contribution which has resulted in an important advance in the scientific or technological development of

photography or imaging in the widest sense. This award has been given continuously since 1878.

90. Named **Honorary Fellow** of The Royal Photographic Society, 2019.
91. Recipient of the **ICIP Pioneer Award** (2019). Citation: *For unparalleled leadership and contributions to the image processing community*. Professor Bovik conceptualized, promoted, created, and served as General Chair of the first *IEEE International Conference on Image Processing* (ICIP), held in Austin Texas in 1994.
92. **Highly-Cited Researcher for 2019**, according to the Web of Science Group, indicating one of the top 1% of most-cited researchers within the field of Engineering.
93. **Plenary Address**, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, March 2020.
94. **Keynote Address**, *Data Compression Conference*, Snowbird, Utah, March 2020.
95. **Keynote Address**, *IEEE CVPR Workshop: Aesthetic and Technical Visual Quality Assessment*, Seattle, Washington, June 2020.

Professional Society Activities

Editorships and Publication Boards

1. Textbook reviewer for McGraw-Hill, West Educational, Academic Press, Prentice-Hall, and The MIT Press.
2. Editorial Board, *Pattern Recognition*, 1988 - present.
3. Associate Editor, *IEEE Transactions on Signal Processing*, 1989 - 1993.
4. Publications Board, IEEE Signal Processing Society, 1989 - 2002.
5. Guest Editor, Special Issue on "Three-Dimensional Microscopy," *Machine Vision and Applications*, volume 4, no. 4, November 1991.
6. Steering Committee, *IEEE Transactions on Image Processing*, 1991 - 1995.
7. Editorial Board, *Journal of Visual Communication and Image Representation*, 1992 - 1995.
8. Associate Editor, *IEEE Signal Processing Letters*, 1993 - 1995.
9. Area Editor, *Graphical Models and Image Processing*, 1995 - 1998.
10. Editor-in-Chief, *IEEE Transactions on Image Processing*, 1996 - 2002.
11. Editorial Board, *Pattern Analysis and Applications*, 1997-1998.
12. Editorial Board, *The Proceedings of the IEEE*, 1998 - 2002.
13. Editorial Board, *Real-Time Imaging*, 2000 - 2004.
14. Series Editor for Image, Video, and Multimedia Processing, Morgan and Claypool Publishing Company, 2003 - present.
15. Editorial Board of the *Encyclopedia of Multimedia*, Kluwer Academic Publishing, 2005.
16. Senior Editorial Board, *IEEE Journal on Special Topics in Signal Processing*, 2006-present.
17. Editorial Board of the *Encyclopedia of Wireless and Mobile Communications*, 2006.
18. Overview Editor, *IEEE Transactions on Image Processing*, 2009-present.
19. Guest Editor, *IEEE Journal of Selected Topics in Signal Processing*, Special Issue on Special Issue on Perception Inspired Video Processing, 2013.
20. Senior Editorial Board, *IEEE Journal of Selected Topics in Signal Processing*, 2015-present.

Conference Chairmanships

1. Local Arrangements Chairman, *IEEE Computer Society Workshop on the Interpretation of 3-D Scenes*, Austin, Texas, November 24-27, 1989.
2. Program Chairman, SPIE Program on Image Processing, *SPIE/SPSE Symposium on Electronic*

- Imaging*, Santa Clara, California, February 11-16, 1990.
3. Conference Chairman and Organizer, *SPIE Conference on Biomedical Image Processing*, Santa Clara, California, February 11-16, 1990.
4. Conference Chairman and Organizer, *SPIE Conference on Biomedical Image Processing II*, San Jose, California, February 24 - March 1, 1991.
5. Conference Co-Chairman, *SPIE Conference on Wavelet Applications in Signal and Image Processing*, San Diego, California, July 12-13, 1993.
6. General Chairman, *First IEEE International Conference on Image Processing*, Austin, Texas, November 14-16, 1994.
9. General Chair, *Texas Wireless Symposium*, Austin, Texas, November 2014.
7. Honorary General Chair, *IEEE Southwest Symposium on Image Analysis and Interpretation*, Las Vegas, Nevada, April 2018.

Other Conference Technical Committees and Program Committees

1. Technical Program Committee, *Tenth International Conference on Pattern Recognition*, Atlantic City, New Jersey, June 1990.
2. Technical Program Committee, *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, Maui, Hawaii, June 1991.
3. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, Boston, Massachusetts, November 1992.
4. Technical Program Committee, *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, New York, New York, June 1993.
5. Conference Board, IEEE Signal Processing Society, 1992 - 1995.
6. Technical Program Committee, *Twelfth International Conference on Pattern Recognition*, Jerusalem, Israel, October 1994.
7. Technical Program Committee, *IEEE Workshop on Biomedical Image Analysis*, Seattle, Washington, June 1994.
8. Technical Program Committee, *IEEE Workshop on Nonlinear Signal and Image Processing*, Neos Marmaras-Halkidiki, Greece, June 1995.
10. Technical Program Committee, *IEEE International Conference on Image Processing*, Washington, DC, October 1995.
11. U.S. Liason, *IEEE International Conference on Image Processing*, Lausanne, Switzerland, November 1996.
12. Technical Program Committee, *IEEE International Conference on Image Processing*, Santa Barbara, CA, October 1997.
13. Scientific Committee, *European Signal Processing Conference (EUSIPCO)*, Rhodes, Greece, September 1998.
14. Technical Program Committee, *IEEE International Conference on Image Processing*, Chicago, IL, October 1998.
15. Technical Program Committee, *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, Santa Barbara, California, June 1998.
16. Technical Program Committee, *IEEE International Conference on Image Processing*, Vancouver, British Columbia, September 2000.
17. Technical Program Committee, *IEEE International Conference on Image Processing*, Thessaloniki, Greece, October 2001.
18. Organizing Committee, *IASTED International Conference on Signal and Image Processing* -

- SIP 2002*, Kauai, Hawaii, August 12-14, 2002.
19. Technical Program Committee, *IEEE International Conference on Image Processing*, Rochester, New York, September 2002.
 20. Technical Program Committee, *IEEE International Conference on Image Processing*, Barcelona, Spain, September 2003.
 21. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, Lugano, Switzerland, November 2003.
 22. Technical Program Committee, *IEEE International Conference on Image Processing*, Singapore, October 2004.
 23. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, San Jose, California, November 2004.
 24. Technical Program Committee, *IEEE International Conference on Image Processing*, Genoa, Italy, September 2005.
 25. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, Beijing, China, November 2005.
 26. Technical Program Committee, *First International Workshop on Video Processing and Quality Metrics for Consumer Electronics*, Scottsdale, Arizona, January 2005.
 27. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, San Jose, California, January 2006.
 28. Technical Program Committee, *Second International Workshop on Video Processing and Quality Metrics for Consumer Electronics*, Scottsdale, Arizona, January 2006.
 29. International Program Committee, *IASTED International Conference on Signal and Image Processing* Honolulu, Hawaii, August 2006.
 30. Technical Program Committee, *Southwest Symposium on Image Analysis and Interpretation*, Denver, Colorado, March 2006.
 31. Technical Program Committee, *IEEE International Conference on Image Processing*, Atlanta, Georgia, October 2006.
 32. Technical Program Committee, *Third International Workshop on Video Processing and Quality Metrics for Consumer Electronics*, Scottsdale, Arizona, January 26-26, 2007.
 33. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, San Jose, California, January 2007.
 34. Technical Program Committee, *IEEE International Conference on Image Processing*, San Antonio, Texas, September 2007.
 35. Technical Program Committee, *SPIE Symposium on Visual Communications and Image Processing*, San Jose, California, January 2008.
 36. Technical Program Committee, *IEEE International Conference on Image Processing*, San Diego, California, October 2008.
 37. International Technical Program Committee, *Sixth Indian Conference on Computer Vision, Graphics, and Image Processing*, Bhubaneswar, India, December 2008.
 38. Advisory Committee and Technical Program Committee, *First International Workshop on Quality of Multimedia Experience*, San Diego, California, July 2009.
 39. Technical Program Committee, *IEEE International Conference on Image Processing*, Cairo, Egypt, November 2009.
 40. Steering Committee, *Second International Workshop on Quality of Multimedia Experience*, Trondheim, Norway, June 2010.
 41. Technical Program Committee, *IEEE International Conference on Image Processing*, Hong

- Kong, September 2010.
42. Steering Committee, *Third International Workshop on Quality of Multimedia Experience*, Mechelen, Belgium, September 2011.
 43. Technical Program Committee, *IEEE International Conference on Image Processing*, Brussels, Belgium, September 2011.
 44. Technical Program Committee, *IAPR/IEEE International Joint Conference on Biometrics*, Brussels, Belgium, October 2011.
 45. Steering Committee, *Fourth International Workshop on Quality of Multimedia Experience*, Yarra Valley, Australia, July 2012.
 46. Technical Program Committee, *IEEE International Conference on Image Processing*, Orlando, Florida, October 2012.
 47. Technical Program Committee, *European Workshop on Visual Information Processing*, Paris, France, June 2013.
 48. Steering Committee, *Fifth International Workshop on Quality of Multimedia Experience*, Klagenfurt am Wörthersee, Austria, July 2013.
 49. Technical Program Committee, *IEEE International Conference on Image Processing*, Melbourne, Australia, September 2013.
 50. Technical Program Committee, *International Symposium on Image and Signal Processing and Analysis*, Trieste, Italy, September 2013.
 51. Technical Program Committee, *IEEE International Conference on Image Processing*, Paris, France, October 2014.
 52. Technical Program Committee, *IEEE Global Conference on Signal and Information Processing (GlobalSIP)*, Atlanta, Georgia, December 2014.
 53. Technical Program Committee, *ACM Workshop on Perception Inspired Video Processing*, Orlando, Florida, November 2014.
 54. Technical Program Committee, *IEEE International Conference on Image Processing*, Quebec, Canada, October 2015.
 55. Program Committee, *Third Workshop on Quality of Multimedia Services (QUAMUS)*, Naples, Italy, November 2016.
 56. Technical Program Committee, *IEEE International Conference on Image Processing*, Phoenix, Arizona, September 2016.

Standing Society Committees

1. IEEE Computer Society Pattern Analysis and Machine Intelligence Technical Committee, 1988 - present.
2. Image and Multidimensional Digital Signal Processing Technical Committee of the IEEE Signal Processing Society, 1989 - 2002.
3. Member-at-Large, Board of Governors, IEEE Signal Processing Society, 1996 - 2002.
4. Awards Board, IEEE Signal Processing Society, 2004 - 2007.
5. IEEE Communication Society Multimedia Communications Technical Committee, 2010-present.

Government Panels

1. Review Panelist, National Science Foundation, Instrumentation, Sensing, and Measurement Small Business Innovation Research Program, September 1987.
2. Review Panelist, National Science Foundation, Computer Research Equipment Program,

- November 1987.
3. Review Panelist, National Science Foundation, Research Initiation Awards, March 1993.
 4. Review Panelist, National Science Foundation, CAREER Awards, November 2004.
 5. Review Panelist, National Science Foundation, Information and Intelligent Systems Awards, November 2004.
 6. Review Panelist, National Science Foundation, Science and Technology Centers (STC), September 2015.

Other Panels and Boards

1. Advisory Board, International Center for Signal Processing, Tampere, Finland, 1996 - present.
2. Faculty Advisory Committee, Center for Advanced Studies in the Arts, The University of Texas at Austin, 1997 - 2000.

Journal Citation Highlights

- 1983: #2 cited paper of *IEEE Transactions on Acoustics, Speech and Signal Processing*
- 1987: #7 cited paper of *Pattern Recognition Letters*
- 1989: #12 cited paper of *Pattern Recognition*
- 1990: #4 cited paper of *IEEE Transactions on Pattern Analysis and Machine Intelligence*
- 1996: #9 cited paper of *IEEE Transactions on Speech and Audio Processing*
- 2002: #1 cited paper of *IEEE Signal Processing Letters* (**#1 cited ever of >1000**)
#10 cited paper of *IEEE Transactions on Multimedia*
- 2004: #1 cited paper of *IEEE Transactions on Image Processing* (**#1 cited ever of >1000**)
#1 cited paper of *EURASIP Journal on Signal Processing: Image Communication* (**#1 cited ever of >1000**)
- 2005: #7 cited paper of *IEEE Transactions on Image Processing*
#11 cited paper of *IEEE Transactions on Image Processing*
- 2006: #3 cited paper of *IEEE Transactions on Image Processing*
#4 cited paper of *IEEE Transactions on Image Processing*
- 2009: #1 cited paper of *IEEE Selected Topics in Signal Processing*
#1 cited paper of *IEEE Signal Processing Magazine*
- 2010: #1 cited paper of *IEEE Signal Processing Letters*
#2 cited paper of *IEEE Signal Processing Letters*
#3 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
#4 cited paper of *IEEE Transactions on Circuits and Systems for Video Technology*
#5 cited paper of *IEEE Transactions on Image Processing*
#10 cited paper of *IEEE Transactions on Image Processing*
- 2011: #6 cited paper of *IEEE Transactions on Image Processing*
#6 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
- 2012: #1 cited paper of *IEEE Transactions on Image Processing*
#3 cited paper of *IEEE Transactions on Image Processing*
#3 cited paper of *IEEE Journal on Selected Topics in Signal Processing*
#4 cited paper of *IEEE Signal Processing Letters*
- 2013: #1 cited paper of *IEEE Signal Processing Letters*
#3 cited paper of *IEEE Transactions on Circuits and Systems for Video Technology*
#1 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
#2 cited paper of *EURASIP Journal on Signal Processing: Image Communication*

- 2014: #1 cited paper of *IEEE Transactions on Image Processing*
#9 cited paper of *IEEE Transactions on Image Processing*
#1 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
#4 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
#7 cited paper of *EURASIP Journal on Signal Processing: Image Communication*
- 2015: #3 cited paper of *IEEE Journal on Selected Topics in Signal Processing*
#5 cited paper of *IEEE Transactions on Image Processing*
- 2016: #6 cited paper of *IEEE Transactions on Image Processing*

Journal Publications

1. A.C. Bovik, T.S. Huang and D.C. Munson, "A generalization of median filtering using linear combinations of order statistics," *IEEE Transactions on Acoustics, Speech, and Signal Processing*, vol. ASSP-31, no. 6, pp. 1342-1350, December 1983.
2. A.C. Bovik, T.S. Huang and D.C. Munson, "Edge-sensitive image restoration using order-constrained least-squares methods," *IEEE Transactions on Acoustics, Speech, and Signal Processing*, vol. ASSP-33, no. 4, pp. 1253-1263, October 1985.
3. A.C. Bovik and D.C. Munson, "Edge detection using median comparisons," *Computer Vision, Graphics, and Image Processing*, vol. 33, pp. 377-389, March 1986.
4. A.C. Bovik, T.S. Huang and D.C. Munson, "Nonparametric tests for edge detection in noise," *Pattern Recognition*, vol. 19, No. 3, pp. 209-219, 1986.
5. A.C. Bovik and D.C. Munson, "Optimal detection of object boundaries in uncorrelated speckle," *Optical Engineering*, vol. 25, no. 11, pp. 1246-1252, November 1986.
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Patents

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2. T.J. Terrell, *Introduction to Digital Filters*. Wiley, New York, 1988, in *IEEE Circuits and Devices Magazine*, vol. 6, no. 5, p. 59, September 1990.
3. Professor Bovik was the subject of the article "Algorithm assesses image and video quality," by Andrew Wilson, *Vision Systems Design* October 2006, available online:

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Thesis and Dissertation

1. A.C. Bovik, "Nonlinear filtering using linear combinations of order statistics," Coordinated Science Laboratory Report R-935, University of Illinois, Urbana, IL, January 1982 (also M.S. Thesis).
2. A.C. Bovik, "Noise-robust methods for image restoration and edge detection," Ph.D. dissertation, University of Illinois, Urbana, IL, May 1984.

Keynote Addresses, Plenary Addresses, Distinguished Lectures, and Other Invited Talks

1. Invited Talk, "L-filters," 1985 College of Engineering Annual Research Review, The University of Texas at Austin, May 1985.
2. Invited Talk, "Detection of Object Boundaries in Synthetic Aperture Radar Imagery," University of Illinois Coordinated Science Laboratory, Urbana, Illinois, June 1985.
3. Invited Talk, "On the Information Content of Handprinted Characters," Texas Instruments Invited Presentation, Dallas, Texas, March 1986.
4. Invited Talk, "A Microcomputer-based Stereo Computer Vision System," 1986 College of Engineering Annual Research Review, The University of Texas at Austin, May 1986.
5. Invited Talk, "Efficient Recognition of Handprinted Characters," Texas Instruments Invited Presentation, Dallas, Texas, July 1986.
6. Invited Talk, "Three-dimensional Computer Vision: Goals and Methods," Central Texas IEEE Section and ASSP-COMSOC Chapter Invited Presentation, Austin, Texas, October 9, 1986.
7. Invited Talk, "A Microprocessor-based Handprinted Character Recognition System," Texas Instruments Invited Presentation, Dallas, Texas, February 1987.
8. Invited Talk, "An Image Processing and Computer Vision Instructional Laboratory," IBM Corporation, Austin, Texas, May 1987.
9. Invited Talk, "Recognition of D'Nealian Script," Texas Instruments Invited Presentation, Dallas, Texas, August 1987.
10. Invited Talk, "Image Processing and Computer Vision Research," Motorola SABA Spring Meeting, Austin, Texas, April 1988.
11. Invited Talk, "Computational Texture Analysis Using Localized Spatial Filtering," Brooks Air Force Base, San Antonio, Texas, June 1988.
12. Invited Talk, "Computer Vision," University of Texas Electrical & Computer Engineering Visiting Committee, Austin, Texas, April 1989.
13. Invited Talk, "Three-dimensional Computer Vision," Texas Instruments Invited Presentation, Dallas, Texas, June 1989.
14. Invited Talk, "CCD Image Processing," Texas Instruments Invited Presentation, Dallas, Texas, February 1990.
15. Invited Talk, "Digital Image Processing - A Personal Overview," IBM Seminar, Austin, Texas, April 1990.
16. Invited Talk, "Computer Vision for Three-dimensional Microscopy," University of Liverpool,

- Quantitative Microscopy Group, Liverpool, England, February 1991.
17. Invited Talk, "Visual Pattern Image Sequence Coding," NASA Johnson Space Center, Houston, Texas, May 1991.
 18. Invited Talk, "Machine Vision Research in the Laboratory for Vision Systems," Motorola Semiconductor, Phoenix, Arizona, July 1991.
 19. Invited Talk, "Wavelet-based Image and Video Coding," IBM Corporation, Austin, Texas, November 1991.
 20. Invited Talk, "Local analysis of image frequencies," Division of Applied Sciences, Harvard University, Cambridge, Massachusetts, April 1992.
 21. Invited Talk, "Modulation Models for Image Processing and Multi-band Image Demodulation," Texas Instruments Invited Presentation, Dallas, Texas, April 1993.
 22. Invited Talk, "Active Vision Technology for a Semi-autonomous Rover," NASA Johnson Space Center, Houston, Texas, May 1993.
 23. Invited Talk, "The Practical Application of Active Focus Control for Depth Recovery," NASA Johnson Space Center, Houston, Texas, April 1994.
 24. Invited Talk, "FOVEA: A Foveated Vergent Active Stereo System," Center for Vision and Image Sciences, The University of Texas at Austin, Austin, Texas, May 1996.
 25. Invited Talk, "An Algebraic Approach to Multi-frame Blind Image Deconvolution," Phillips Research Laboratory, Kirtland Air Force Base, Albuquerque, New Mexico, November 19, 1996.
 26. Invited Talk, "AM-FM Image Models," Phillips Research Laboratory, Kirtland Air Force Base, Albuquerque, New Mexico, November 19, 1996.
 27. Invited Talk, "AM-FM Image Analysis," US Army Research Office First Annual Center for Imaging Science Review, Washington University, St. Louis, Missouri, January 17, 1997.
 28. Invited Talk, "Image Analysis Research at UT-Austin," Phillips Research Laboratory, Kirtland Air Force Base, Albuquerque, New Mexico, June 26, 1997.
 29. Invited Talk, "AM-FM Image Models and Applications," CICSIR Distinguished Lecture Series, The University of British Columbia, Vancouver, March 18, 1999.
 30. Invited Talk, "AM-FM Image Models and Applications," Signal and Image Processing Seminar Series, The University of Texas, Austin, April 23, 1999.
 31. Invited Talk, "Observations on Video Compression and a Demonstration of Video Quality Assessment," Video Services Forum, Bell Atlantic Corporation, New York City, May 5, 1999.
 32. Invited Talk, "Teaching Digital Image and Video Processing Using Labview," National Instruments Labview Conference, Austin, Texas, August 1999.
 33. Invited Talk, "Foveated Visual Communications," Department of Electrical and Computer Engineering Visiting Committee, The University of Texas at Austin, November 1999.
 34. Invited Talk, "AM-FM Models: New Image Representations for Multimedia Applications," The American College, Madurai, India, August 2000.
 35. **Plenary Speaker**, "AM-FM Models: New Image Representations for Multimedia Applications," *International Conference on Multimedia Processing and Systems*, Madras, India, August 14, 2000.
 36. **Texas A&M Distinguished Lecture Series**, "AM-FM Models: New Image Representations," Texas A&M University, College Station, Texas, November 10, 2000.
 37. **IEEE Signal Processing Society Distinguished Lecture**: "AM-FM Models: New Image Representations," Howard University, Washington, DC, March 30, 2001.
 38. **IEEE Signal Processing Society Distinguished Lecture**: "AM-FM Models: New Image

- Representations,” Washington State University, Pullman, Washington, April 6, 2001.
39. **IEEE Signal Processing Society Distinguished Lecture:** “AM-FM Models: New Image Representations,” Rochester Institute of Technology, Rochester, NY, June 14, 2001.
 40. **Distinguished Lecture:** “AM-FM Models: New Image Representations,” Rose-Hulman Institute of Technology, Terre-Haute, Indiana, March 23, 2002.
 41. Invited Lecture: “Using Visual Attention in Video Processing and Communication,” The Colorado School of Mines, Golden, Colorado, July 2002.
 42. Invited Lecture: “Using Visual Attention in Video Processing and Communication,” The Indian Institute of Technology, Chennai, Tamilnadu, India, January 2003.
 43. Invited Lecture: “Image Quality Assessment: From Error Measurement to Structural Similarity,” The Indian Institute of Technology, Chennai, Tamilnadu, India, January 2003.
 44. Invited Talk, Quality Monitoring for Video Services over Networks, Time-Warner Corporation, Austin, Texas, March 2003.
 44. Invited Lecture: “Using Visual Attention in Video Processing and Communication,” The University of Virginia, Charlottesville, Virginia, April 2003.
 45. **Plenary Speaker,** “Attention-Grabbing Image Processing,” *IEEE Southwest Symposium on Image Analysis and Interpretation*, Lake Tahoe, Nevada, March 28-30, 2004.
 52. **Plenary Speaker,** “Teaching Image and Video Processing Using Labview,” *National Instruments NI Week*, Austin, Texas, June 2004.
 54. Invited Lecture, “Gabor Spiculation Filters for the Detection of Spiculated Masses in Digital Mammograms,” *Annual Conference, UT Center for Biomedical Engineering and UT Department for Biomedical Engineering*, Houston, Texas, December 6-7, 2004.
 55. Guest Lecturer, “Digital Image and Video Processing,” *UT Honors Colloquium*, Austin, Texas, July 22, 2005.
 56. Keynote Speaker, “New Measures for Image and Video Quality Assessment,” *Twelfth Annual Worldwide Virtual Instrumentation Conference and Exhibition*, Austin Convention Center, Austin, Texas, August 9, 2006.
 57. **Distinguished Lecture,** “Evidence-Based Detection of Spiculated Lesions,” Distinguished Lecturers Seminar, Computer Science Department, The University of Houston, Houston, Texas, September 29, 2006.
 58. Invited Talk, “Next Generation Video Coding and Image/Video Quality Assessment Algorithms,” *AT&T Labs University Collaboration Symposium*, Shannon Laboratory, Florham Park, New Jersey, August 3-4, 2006.
 59. Invited Talk, “Towards Video Surveillance,” *Freescale Semiconductor Corporation*, Austin, Texas, January 26, 2007.
 60. **Keynote Speaker,** “New Vistas in Image and Video Quality,” *SPIE Human Vision and Electronic Imaging Conference*, San Jose, California, January 29-February 1, 2007.
 61. Invited Talk, “On Image Quality Assessment,” *National Instruments Corporation*, Austin, Texas, February 7, 2007.
 62. Invited Talk, “State of the Art of Image and Video Quality Assessment,” *Freescale Semiconductor Corporation*, Austin, Texas, May 15, 2007.
 64. Invited Talk, “Wireless Video Surveillance,” *Freescale Semiconductor Corporation*, Austin, Texas, June, 2007.
 65. Invited Talk, “Object Tracking in Video Surveillance,” *Freescale Semiconductor Corporation*, Austin, Texas, August 7, 2007.
 66. **Plenary Talk,** “New Directions in Image and Video Quality Assessment,” *IEEE Signal*

- Processing Society International Workshop on Multimedia Signal Processing*, Chania, Crete, Greece, October 1-3, 2007.
67. **Plenary Talk**, "Image and Video Quality on Wireless Networks," *Texas Wireless Symposium*, Austin, Texas October 18, 2007.
 68. **Plenary Talk**, "Analyzing Image Quality," *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, March 24-27, 2008.
 69. Invited Talk, "Assessment of Range Image Quality by Structural Similarity," *21st Century Technology*, Austin, Texas, October 23, 2007.
 70. **Plenary Talk**, "Video Quality and Video Databases," *First IEEE International Workshop on IP Multimedia Communications*, Virgin Islands, USA, August 4-7, 2008.
 71. **Beckman Institute Distinguished Lecture**, "Light on Video Quality," The University of Illinois, September 5, 2008.
 72. **Azriel Rosenfeld Distinguished Lecture**, "MOVIE Index for Video Quality Assessment," The University of Maryland, October 3, 2008.
 73. **Plenary Talk**, "Quality is in the Eye of the Beholder," *IEEE International Conference on Image Processing*, San Diego, California, October 15, 2008.
 74. **Plenary Talk**, "Video Quality Assessment," *IEEE Region 10 Conference (TENCON)*, Hyderabad, India, November 18-21, 2008.
 75. Invited Talk, "Video Quality Metrics and their Applications," *Texas Instruments, Inc.*, Dallas, Texas, February 9, 2009.
 76. **Distinguished Lecture**, "Quality is in the Eye of the Beholder," Center for Perceptual Systems, The University of Texas at Austin, March 9, 2009.
 77. Invited Lecture, "Quality is in the Eye of the Beholder," *Video Services Forum*, Montreal, Canada, May 6, 2009.
 78. Panelist, "Tools, Targets and Trends," *First International Workshop on Quality of Multimedia Experience*, San Diego, California, July 30, 2009.
 79. Invited Talk, "Visual Quality Assessment: Past, Present, and Future," *Siemens Corporate Research*, Princeton, New Jersey, May 2010.
 80. **Plenary Address**, "Visual Quality: Seeing the Future," *IEEE Southwest Symposium on Image Analysis and Interpretation*, Austin, Texas, May 2010.
 81. **Inaugural Plenary Address**, "Blind Image Quality Assessment is Not Impossible," *First Optical Society of America Topical Meeting on Digital Image Processing and Analysis (DIPA)*, Tucson, AZ, June 2010.
 82. Invited Talk, "Visual Quality Assessment: Seeing the Future," *Texas Instruments, Inc.*, Dallas, Texas, June 2010.
 83. **Keynote Address**, "Similarity Measurements for Space Time and 3D Visual Quality Assessment and Inspection," *National Instruments NI Week Vision Summit*, August 2010.
 84. Invited Talk, "Automatic Video Quality Agents for Digital Video Network Monitoring," *Advanced Micro Devices, Inc.*, August 2010.
 85. Invited Talk, "Automatic Video Quality Agents for Digital Video Network Monitoring," *Cisco Systems, Inc.*, September 2010.
 86. Invited Talk, "Automatic Monitoring of Video Networks by Blind Video Quality Agents," *3M Corporation*, October 2010.
 87. **Plenary Address**, "New Dimensions in Visual Quality," *IS&T/SPIE Symposium on Electronic Imaging*, January 2011.
 88. **Keynote Address**, "Perceiving Distortions in Visual Signals," *European Workshop on Visual*

- Computing*, Paris, France, July 2011.
89. Invited Talk, "Review of Recent Results on VQA," Cisco Corporation, San Jose, California, October 2011.
 90. **Keynote Address**, "Blind Visual Quality Estimation Models: Flavors, Assumptions and Performance," *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, April 2012.
 91. Invited Talk, "Visual Quality Estimation: How Blind is Blind?," Texas Instruments, Inc., Dallas, Texas, April 2012.
 92. **Plenary Address**, "Image Quality Assessment: How Blind is Blind?," *Optical Society of America Meeting on Computational Optical Sensing and Imaging*, Monterrey, California, June 25, 2012.
 93. **Keynote Address**, "Natural Scene Statistics and the Perception of Visual Distortion," *Workshop on Digital Video Analytics and Processing*, IIT-Chennai, Chennai, India, December 2012.
 94. Invited Talk, "Video Quality Assessment Research," Intel and Cisco Corporations, via Webex, July 2012.
 95. **Keynote Address**, "Quality Assessment of Mobile Video," *International Workshop on Video Processing and Quality Metrics for Consumer Electronics*, Scottsdale, Arizona, January, 2013.
 96. Invited Talk, "Natural Scene Statistics, the Perception of Visual Distortion, and Visual Tasking," National Institute for Standards and Technology (NIST), October, 2012.
 97. **Distinguished Lecture**, "Perceptual Monitoring of Wireless Video Networks," Northwestern University, Evanston, Illinois, April 2013.
 98. **Keynote Address**, "Perspectives on Natural 3D Statistics," *IEEE Signal Processing Society Workshop on Image, Video, and Multidimensional Signal Processing*, Seoul, Korea, June 2013.
 99. **Distinguished Lecture**, "Natural Scene Statistics and the Perception of Visual Distortion," Chung-Ang University, Seoul, Korea, June 2013.
 100. Invited Talk, "Perceptual Monitoring of Wireless Video Networks," Qualcomm Corp, San Diego, California, August 2013.
 101. **Keynote Address**, "Perceptual Tools for Quality-Aware Video Networks," *SPIE Conference on Image Quality and System Performance*, San Francisco, California, January 2014.
 102. Invited Talk, "Wireless Video Quality Assessment," *Cisco Corporation*, via Webex, January 2014.
 103. Invited Talk, "Three Years of Wireless Video Quality Research," *Intel Corporation*, Santa Clara, California, January 2014.
 104. **Plenary Address**, "Tasking on Natural 3D Statistics," *IEEE Southwest Symposium on Image Analysis and Interpretation*, San Diego, California, April 2014.
 105. Eminent Speaker, "Natural Scene Statistics and the Perception of Visual Distortion," University of Virginia, Charlottesville, Virginia, April 2014.
 106. **Keynote Address**, "Tasking on Natural Image and Video Statistics," *Second IEEE Global Conference on Signal and Information Processing*, Atlanta, Georgia, December 2014.
 107. **Keynote Address**, "Tasking on the Natural Statistics of Pictures and Videos," *Eighth International Conference on Image and Graphics (ICIG)*, Tianjin, China, August 2015.
 108. **Plenary Address**, "Behavior and Video Quality," *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, March 2016.
 109. Invited Talk, "Tasking on the Natural Statistics of Pictures and Videos," Department of

- Engineering, Beijing University of Technology, Beijing, China, August 2015.
110. **Distinguished Lecture**, “Natural Scene Statistics and the Perception of Visual Distortion,” Department of Electrical and Computer Engineering, The University of Texas at Austin, August 2015.
 111. **Plenary Address**, “New Challenges for Image Quality: A New Database and a New Modality,” *IEEE Southwest Symposium on Image Analysis and Interpretation*, Santa Fe, New Mexico, March 2016.
 112. Invited Talk, “Don’t Mess with My Picture Statistics,” *Peli Fest, a Festschrift in honor of Eli Peli*, Scherpens Eye Institute, Boston, Massachusetts, June 17, 2016.
 113. **Keynote Address**, “Leave my Picture Statistics Alone,” Thomas Huang Symposium, The Beckman Institute, Urbana, Illinois, October 1, 2016.
 114. **Keynote Address**, “Advances in Picture Quality: Vision Science and Algorithms,” *IEEE International Workshop on Signal Processing Systems*, Dallas, Texas, October 26-28, 2016.
 115. Invited Talk, “Perceptual Issues of Streaming Video (and How to Solve Them),” Huawei Strategy and Technology Workshop, Shenzhen, China, May 16, 2017.
 116. Invited Talk, “Perceptual Issues of Streaming Video,” SID Display Week, Los Angeles, California, May 26, 2017.
 117. **Keynote Address**, “Perceptual Issues of Streaming Video (and How to Solve Them),” *International Conference on Computer Analysis of Images and Patterns*, Ystad, Sweden, August 2017.
 118. Distinguished Lecture, “Natural Scene Statistics and the Perception of Visual Distortion,” Linköping University, Linköping, Sweden, August 2017.
 119. Invited Talk, “Natural Scene Statistics and the Perception of Visual Distortion,” Department of Statistics, The University of Texas at Austin, Austin Texas, October 2017.
 120. Invited Talk, “Picture Quality: Neuroscience Meets Video Engineering,” Department of Neuroscience, The University of Texas at Austin, Austin Texas, November 2017.
 121. **Plenary Address**, “The ‘Ins’ and ‘Outs’ of Perceptual Streaming Video,” *IEEE Southwest Symposium on Image Analysis and Interpretation*, Las Vegas, Nevada, April 2018.
 122. Invited Talk, “Peculiarities of a Picture Quality Predictor,” *Chellappa 65 Symposium*, June 4, 2018.
 123. **Keynote Address**, “Perception is Everything,” *Picture Quality Symposium*, San Francisco, California, June 2018.
 124. **Keynote Address**, “Consciousness of Stream: Perceptually Optimizing Global Video Quality,” *European Workshop on Visual Information Processing (EUVIP)*, Tampere, Finland, November 2018.
 125. Distinguished Lecture, “The Beginning and the End of Streaming (Quality),” The University of California at Riverside, Riverside, California, January 2019.
 126. **Keynote Address**, “Consciousness of Streaming (Quality),” *SPIE Conference on Image Quality and System Performance*, San Francisco, California, January 2019.
 127. Invited Talk, “Towards Blind Video Quality Prediction,” Facebook Research, Menlo Park, California, January 2019.
 128. Invited Talk, “Predicting UGC Video Quality,” YouTube, Mountain View, California, January 2019.
 129. Invited Talk, “Blind Streaming Video Quality,” U.S. Army Night Vision Laboratory, Austin, Texas. January 2019.

130. Distinguished Lecture, "Streaming Video Quality from Start to Finish," Johns Hopkins University, Baltimore, Maryland, March 26, 2019.
131. Distinguished Lecture, "Don't Mess with My Picture Statistics!," University of Houston, Houston, Texas, April 9, 2019.
132. Invited Talk, "Starting and Finishing Streaming Quality," Amazon Prime Video, Seattle, Washington, April 19, 2019.

Forty-six Plenary Addresses, Keynote Addresses, or Distinguished Lectures at international conferences, symposia, workshops, or universities.

Short Courses

1. "Digital Image Processing - A First Course," IBM Corporation, Austin, Texas, September 10-21, 1990.
2. "Machine Vision in Manufacturing," Instituto Tecnológico de Monterrey, Mexico City, January 5-9, 1992.
3. "Digital Image Processing," IBM Corporation, Austin, Texas, Fall 1992.
4. "Digital Image Processing," IBM Corporation, Austin, Texas, Fall 1994.
5. "Introduction to Digital Image Processing," Texas Instruments, Inc., Dallas, Texas, Winter 1995.
6. "Introduction to Digital Image Processing," Texas Instruments, Inc., Dallas, Texas, Spring 1995.
7. "Introduction to Digital Image Processing," Texas Instruments, Inc., Dallas, Texas, Summer 1995.
8. "Introduction to Digital Image Processing," Texas Instruments, Inc., Dallas, Texas, Fall 1995.
9. "Digital Signal Processing Theory," Texas Instruments, Inc., Dallas, Texas, Fall 1995.
10. "Digital Signal Processing Theory," Texas Instruments, Inc., Dallas, Texas, Winter 1996.
11. "Digital Image and Video Processing," Texas Instruments, Inc., Dallas, Texas, Spring 1996.
12. "Digital Image and Video Processing," Texas Instruments, Inc., Dallas, Texas, Summer 1996.
13. "Digital Signal Processing Theory," Texas Instruments, Inc., Dallas, Texas, Fall 1996.
14. "Digital Image and Video Processing," Texas Instruments, Inc., Dallas, Texas, Fall 1996.
15. "Digital Image and Video Processing," Texas Instruments, Inc., Dallas, Texas, Spring 1997.
16. "Digital Image and Video Processing," Texas Instruments, Inc., Dallas, Texas, Spring 1997.
17. "Digital Signal Processing Theory," Texas Instruments, Inc., Dallas, Texas, Spring 1997.
18. "Digital Signal Processing Theory," Raytheon Systems, Dallas, Texas, Fall 1997.
19. "Digital Image and Video Processing," Raytheon Systems, Dallas, Texas, Fall 1997.
20. "Digital Image and Video Processing," Raytheon Systems, Dallas, Texas, Spring 1998.
21. Tutorial: "Image and Video Compression," *International Conference on Multimedia Processing and Systems*, Madras, India, August 13-15, 2000.
22. "Digital Image and Video Processing," Xilinx Corporation, San Jose, California, Fall 2005.
23. Tutorial: "Visual Perception and Image Processing," *IEEE Region 10 Conference (TENCON)*, Hyderabad, India, November 18-21, 2008.
24. Tutorial: "Image Quality Assessment: Not So SSIMple," *NIP: International Conference on Digital Printing Technologies*, Austin Texas, September 19-23, 2010.

Grants and Contracts Received

State and Federal Grants

1. "Analysis and reconstruction of three-dimensional microscopic images," National Science Foundation, \$264,000 (Co-Principal Investigator), 1986-1988.
2. "Computer research into multiprocessing systems via hypercube architecture," National Science Foundation, \$70,000 (Investigator), 1986-1987.
3. "Research into three-dimensional computer vision and sensor integration: Texture, color, and stereopsis," Texas Advanced Research Program, \$293,603 (Principal Investigator), 1988-1990.
4. "Laser scanning microscope for three-dimensional microscopy," National Science Foundation, \$75,000 (Co-Principal Investigator), 1989-1990.
5. "Animated computer vision technology," Texas Advanced Technology Program, \$102,720 (Principal Investigator), 1989-1991.
6. "Very fast high-compression image sequence coding using simple spatio-temporal image patterns," National Aeronautics and Space Administration (NASA), \$57,407 (Principal Investigator), 1990-1991.
7. "Numerical instrumentation for shape and shape change analysis via three-dimensional microscopy," National Science Foundation, \$450,000 (Co-Principal Investigator), 1991-1994.
8. "Local spatio-temporal analysis in vision systems," Air Force Office of Scientific Research, \$3,200,000 (Co-Principal Investigator), 1993-1996.
9. "Animated computer vision technology for a semi-autonomous rover," National Aeronautics and Space Administration (NASA), \$64,108 (Principal Investigator), 1993-1994.
10. "High speed video coding and communication," Texas Advanced Technology Program, \$189,026 (Principal Investigator), 1993-1995.
11. "Multiresolution information archival and analysis system," National Aeronautics and Space Administration (NASA), \$750,000 (Co-Principal Investigator), 1994-1997.
12. "Scalable processing of multi-sensor and multi-spectral imagery," Phillips Air Force Base, \$60,000 (Co-Principal Investigator), 1994-1995.
13. "A research center in the scientific foundations of image representation and analysis," Army Research Office, \$650,000 (UT-Austin portion of \$4.5 Million divided among the Army Center for Imaging Science: Washington University, Harvard University, MIT and UT-Austin) (Investigator), 1995-2000.
14. "3-D analysis of microvessel angiogenesis via laser scanning confocal microscopy," Texas Advanced Research Program, \$201,250 (Co-Principal Investigator), 1995-1997.
15. "Image processing and data compression tools for satellite imaging," Phillips Air Force Base by subcontract through Schafer Associates, \$69,969 (Co-Principal Investigator), 1996-1997.
16. "AM-FM analysis of images and video," Air Force Office of Scientific Research, \$114,351 (Principal Investigator), 1997-2000.
17. "Foveated wireless video communication," Texas Advanced Technology Program, \$198,700 (Principal Investigator), 1999-2001.
18. "Computer vision systems for automatic target recognition and automatic recognition of human activities," Army Research Office (2/3) and UT-Austin matching funds (1/3), \$150,000 (Co-Principal Investigator), 2000-2001.
19. "New models of low-level visual search and applications to robotic vision, detection, and data mining," Texas Advanced Research Program, \$143,950 (Co-Principal Investigator), 2001-2003.
20. "Active stereoscopic visual search driven by natural scene statistics," National Science Foundation, \$250,000 (Principal Investigator), 2002-2005.

21. "Gabor spiculation filters for the detection of spiculated masses in digital mammograms," The Whitaker Foundation, \$20,000 (Principal Investigator), 2002-2003.
22. "Blind image and video quality assessment using natural scene statistics," National Science Foundation, \$250,000 (Principal Investigator), 2003-2006.
23. "High-speed multimedia transmission for space-time communication systems," Texas Advanced Technology Program, \$145,000 (Co-Principal Investigator), 2004-2005.
24. "Detection of spiculated masses and architectural distortions in digitized mammograms," Department of Defense US Army Medical Research and Materiel Command, \$90,000 (Principal Investigator), 2004-2007.
25. "Foundations of Visual Search," National Science Foundation, \$1,200,000 (Principal Investigator), 2004-2010.
26. "Vehicle Structure Recovery from a Moving Air Platform," Air Force Office of Strategic Research, Subcontract from 21 Technologies, Inc, \$32,000 (Principal Investigator), 2005-2006.
27. "Passive Optical Modeling," Air Force Office of Strategic Research, Subcontract from 21 Technologies, Inc, \$292,000 (Co-Principal Investigator), 2006-2008.
28. "Quality Assessment of Natural Videos," National Science Foundation, \$272,764 (Principal Investigator), 2007-2010.
29. "High-Definition and Immersive Acquisition, Processing, and Display Equipment for Video Processing and Vision Science Research and Education," National Science Foundation, \$205,912 (Principal Investigator), 2009-2011.
30. "Statistical Measurement, Modeling, and Inference on Natural 3D Scenes," National Science Foundation, \$496,614 (Co-Principal Investigator), 2009-2012.
31. "RFCODE: Robust Foveated Encoding," Air Force Office of Strategic Research, Subcontract from 21 Technologies, Inc, \$255,460 (Co-Principal Investigator), 2010-2012.
32. "Computer-Aided Detection of Breast Cancer," Texas Ignition Fund, \$50,000 (Co-Principal Investigator, ACB = \$25,000), 2010.
33. "Foveated Compression, Tracking and Search in Very Large Format Videos," Lawrence Livermore National Laboratory, \$60,000 (Principal Investigator, ACB = \$60,000), 2011.
34. "Intelligent Autonomous Video Quality Agents," National Science Foundation, \$499,944 (Principal Investigator, ACB = \$249,972), 2011-2014.
35. "Foveated Compression, Tracking and Search in Very Large Format Videos II," Lawrence Livermore National Laboratory, \$60,000 (Principal Investigator, ACB = \$60,000), 2012.
36. "Enhancement of Foggy Images," Korea Association of Industry, Academy, and Research Institute (KAIARI), subcontract via Hongik University, \$78,000 (Principal Investigator, ACB = \$78,000), 2012-2014.
37. "Objective Evaluation of the Effect of Image Quality on Visual Tasks," National Institute of Standards and Technologies (NIST), \$50,000 (Principal Investigator, ACB = \$50,000), 2012-2013.
38. "Objective Evaluation of the Effect of Image Quality on Visual Tasks, Phase 2" National Institute of Standards and Technologies (NIST), \$75,000 (Principal Investigator, ACB = \$75,000), 2013-2014.
39. "Objective Evaluation of the Effect of Image Quality on Visual Tasks, Phase 3" National Institute of Standards and Technologies (NIST), \$80,000 (Principal Investigator, ACB = \$80,000), 2014-2015.
40. "Tasking on Natural Image Statistics: 2D and 3D Object and Category Detection in the Wild,"

- National Science Foundation, \$441,933 (Principal Investigator, ACB = \$441,933), 2015-2019.
41. "Perception-Driven Technical Performance Evaluation of the Capabilities of Imagers," National Institute of Standards and Technologies (NIST), \$596,610 (Principal Investigator, ACB = \$596,610), 2015-2020.

Industrial Grants

1. "A Stereo Computer Vision Laboratory," IBM Corporation, 2 IBM PC/AT personal computers, peripheral equipment, and software, \$50,000 commercial value (Principal Investigator), 1984.
2. "Handprinted Character Recognition," Texas Instruments Research Grant, \$20,000 (Principal Investigator), 1985-1986.
3. "A Stereo Computer Vision Laboratory - Update," IBM Corporation, 2 IBM RT PC personal computers, peripheral equipment, and software, \$125,000 commercial value (Principal Investigator), 1986-1987.
4. "Handprinted Character Recognition II," Texas Instruments Research Grant, \$35,000 (Principal Investigator), 1986-1987.
5. "An Image Processing and Computer Vision Instructional Laboratory," IBM Corporation, 8 IBM RT PC personal computers, peripheral equipment, and software, \$400,000 commercial value (Principal Investigator), 1986-1987.
6. "Computer Equipment for Handprinted Character Recognition," TI Personal Computer, software, and peripherals, Texas Instruments, retail value \$6616, (Principal Investigator), 1987-1988.
7. "Handprinted Character Recognition III," Texas Instruments Research Grant, \$50,000 (Principal Investigator), 1987-1988.
8. "Three-dimensional Computer Vision," Texas Instruments Research Grant, \$45,000 (Principal Investigator), 1988-1989.
9. "CCD Image Processing," Texas Instruments Research Grant, \$40,000 (Principal Investigator), 1989-1990.
10. "Computing Shape Changes in Three-Dimensional Confocal Microscope Images," Cray Research Incorporated University Research & Development Grant Program, \$42,000, (Principal Investigator) 1990-1991.
11. "Automated 3-D Inspection of RF Power Transistor Assemblies," Motorola University Partnerships in Research Program, \$24,700 (Principal Investigator), 1990-1991.
12. "CCD image processing II," Texas Instruments Research Grant, \$45,000 (Principal Investigator), 1990-1991.
13. "Automated 3-D Inspection of RF Power Transistor Assemblies II," Motorola University Partnerships in Research Program, \$25,000 (Principal Investigator), 1991-1992.
14. "Integrating Visual and Acoustic Cues for Automatic Speech Recognition," Motorola DSP University Support Program, equipment, retail value \$6,204 (Principal Investigator), 1991-1992.
15. "Integrating Visual and Acoustic Cues for Automatic Speech Recognition," Motorola DSP University Support Program, equipment, retail value \$4,604 (Principal Investigator), 1991-1992.
16. "Automated 3-D Inspection of RF Power Transistor Assemblies III," Motorola University Partnerships in Research Program, \$25,000 (Principal Investigator), 1992-1993.
17. "Wavelet-based Image/video Coding and Code Conversion," IBM Corporation, \$70,000

- (Principal Investigator), 1992-1993.
18. "Wavelets and Applications to Multiscale Signal Analysis," Texas Instruments Research Grant, \$18,000 (Principal Investigator), 1992-1993.
 19. "Automated 3-D Inspection of RF Power Transistor Assemblies IV," Motorola University Partnerships in Research Program, \$12,000 (Principal Investigator), 1993-1994.
 20. "High Performance Compression Technologies for High-Speed Workstation-To-Workstation Video Transmission," IBM Corporation, 1 IBM RS/6000 Power PC engineering workstation, peripheral equipment and software, \$20,000 commercial value (Principal Investigator), 1994-1995.
 21. "Digital Signal and Image Processing," Unrestricted Research Grant, Schlumberger Austin Research, \$25,000 (Principal Investigator), 1994-1995.
 22. "Digital Image Processing for FLIR," Unrestricted Research Grant, Texas Instruments, Inc., \$35,000 (Principal Investigator), 1995-1996.
 23. "Use of a Macintosh and Quicktake Camera for Image Processing in the Classroom to Aid Student Understanding," Apple Computer Corporation, one PowerMac 7200 engineering workstation, peripheral equipment, and software, \$15,000 commercial value (Principal Investigator), 1996
 24. "Digital Image Analysis," Unrestricted Research Grant, Texas Instruments, Inc., \$45,000 (Principal Investigator), 1996-1997.
 25. "Digital Video Quality Assessment," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$35,000 (Principal Investigator), 1996-1997.
 26. "Digital Image Analysis," Unrestricted Research Grant, Texas Instruments, Inc., \$20,000 (Principal Investigator), 1997-1998.
 27. "Digital Video Telecommunications Research and Teaching in the Laboratory for Image and Video Engineering (LIVE)," Intel Corporation, Equipment grant, cluster of Pentium NT workstations, \$250,000 (Principal Investigator), 1997-2000.
 28. "Image Halftoning Research," Unrestricted Research Grant, Hewlett-Packard Laboratories, Palo Alto, CA, \$15,000 (Co-Principal Investigator), 1997-1998.
 29. "Digital Video Quality Assessment II," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$30,000 (Principal Investigator), 1997-1998.
 30. "Wireless Video on the HomeBus," Motorola Semiconductor Products Sector, \$35,000 (Principal Investigator), 1997-1998.
 31. "Digital Image Analysis," Unrestricted Research Grant, Raytheon Systems, \$38,000 (Principal Investigator), 1998-1999.
 32. "Digital Image Analysis," Unrestricted Research Grant, Raytheon Systems, \$23,000 (Principal Investigator), 1999-2000.
 33. "Objective Quality Assessment for High Quality Digital Video," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$30,000 (Principal Investigator), 1998-1999.
 34. "Automatic Assessment of Compressed Digital Video Quality Using Human Visual Criteria," Dell Computer Corporation, \$38,320 (Principal Investigator), 1999-2000.
 35. "Wireless Video Coding," Lucent Technologies, \$30,000 (Principal Investigator), 1999-2000.
 36. "Web-based Instruction of Digital Signal, Image and Video Processing," TxTEC Consortium Curriculum Grant, \$11,700 (Principal Investigator), 1999-2000.
 37. "Web-based Instruction of Digital Signal, Image and Video Processing," TxTEC Consortium Faculty Incentive Grant, \$4,000 (Principal Investigator), 1999-2000.
 38. "Standards-compliant High-Quality Low-Bitrate Video Communications Using the

- TMS320C62x Processor," Texas Instruments, Incorporated, \$198,712 (Principal Investigator), 1999-2001.
39. "Equipment for Web-Based Video Instruction," TxTEC Consortium Curriculum Grant, \$2,700 (Principal Investigator), 2000-2001.
 40. "Biomedical Image Analysis I," Perceptive Scientific Instruments, \$10,000 (Co-Principal Investigator), 2000-2001.
 41. "Image Processing Research," Raytheon Corporation, \$15,000 (Principal Investigator), 2000-2001.
 42. "Digital Video Telecommunications Research and Teaching in the Laboratory for Image and Video Engineering (LIVE)," Intel Corporation, Equipment grant, cluster of Pentium III NT workstations, \$50,000 (Principal Investigator), 2000-2001.
 43. "Live Video Demonstrations for Teaching Digital Image and Video Processing," TxTEC Consortium Curriculum Grant, \$14,000 (Principal Investigator), 2001-2002.
 44. "Video Networking I," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$42,000 (Principal Investigator), 2001-2002.
 45. "Biomedical Image Analysis II," Perceptive Scientific Instruments, \$7,500 (Principal Investigator), 2001.
 46. "Digital video processing equipment grant," Texas Instruments DSC21 EVM Video Processing Equipment, Texas Instruments, Inc., \$15,000 commercial value (Principal Investigator), 2001.
 47. "Biomedical Image Analysis III," Perceptive Scientific Instruments, \$7,500 (Principal Investigator), 2002.
 48. "Video Networking II," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$10,000 (Principal Investigator), 2002.
 49. "Biomedical Image Analysis IV," Perceptive Scientific Instruments, \$20,000 (Principal Investigator), 2002-2003.
 50. "Video Networking III," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$40,000 (Principal Investigator), 2002-2003.
 51. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$2,500 (Principal Investigator), 2002-2003.
 52. "Biomedical Image Analysis V," Perceptive Scientific Instruments, \$20,000 (Principal Investigator), 2003.
 53. "Flourescence Microscopy," Advanced Digital Imaging Research, \$10,000 (Principal Investigator), 2003.
 54. "Biomedical Image Processing in Labview," National Instruments, Inc., \$10,000 (Principal Investigator), 2003.
 55. "Video Networking IV," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$40,000 (Principal Investigator), 2003-2004.
 56. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$2,500 (Principal Investigator), 2003-2004.
 57. "Digital Light Display Projector," Dell 3200MP Projector, Texas Instruments, Inc., commercial value \$1,839 (Principal Investigator), 2004.
 58. "Video Networking V," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$40,000 (Principal Investigator), 2004-2005.
 59. "Flourescence Microscopy," Advanced Digital Imaging Research, \$12,752 (Principal Investigator), 2004-2005.

60. "Face Recognition," Advanced Digital Imaging Research, \$25,504 (Principal Investigator), 2004-2005.
61. "Face Recognition," Advanced Digital Imaging Research, \$25,504 (Principal Investigator), 2004-2005.
62. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$2,500 (Principal Investigator), 2004-2005.
63. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$5,000 (Principal Investigator), 2005.
64. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$10,000 (Principal Investigator), 2005-2006.
65. "Flourescence Microscopy," Advanced Digital Imaging Research, \$25,504 (Principal Investigator), 2005-2006.
66. "Face Recognition," Advanced Digital Imaging Research, \$51,008 (Principal Investigator), 2004-2005.
67. "Video Networking VI," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$40,000 (Principal Investigator), 2006.
68. "Image Quality for Postal Systems," Unrestricted Research Grant, U.S. Postal Service by Subcontract to Autim, Inc., \$30,000 (Principal Investigator), 2006.
69. "Image Quality for the U.S. Mint," Unrestricted Research Grant, U.S. Mint by Subcontract to Autim, Inc., \$10,000 (Principal Investigator), 2006.
70. "Wireless Video Surveillance I," Unrestricted Research Grant, Freescale Semiconductor, \$25,000 (Co-Principal Investigator), 2006.
71. "Semiconductor Inspection," Unrestricted Research Grant, KLA-Tencor, \$30,000 (Principal Investigator), 2006-2007.
72. "Video communication research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$10,000 (Principal Investigator), 2006-2007.
73. "Visual inspection," Unrestricted Research Grant, National Instruments, \$40,000 (Principal Investigator), 2006-2007.
74. "Video networking VII," Unrestricted Research Grant, Southwestern Bell Telephone Company, \$40,000 (Principal Investigator), 2007.
75. "Wireless Video Surveillance II," Unrestricted Research Grant, Freescale Semiconductor, \$20,000 (Principal Investigator), 2007.
76. "Semiconductor Inspection II," Unrestricted Research Grant, KLA-Tencor, \$30,000 (Principal Investigator), 2007-2008.
77. "Wireless Video Surveillance III," Unrestricted Research Grant, Freescale Semiconductor, \$20,000 (Principal Investigator), 2007.
78. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$10,000 (Principal Investigator), 2007-2008.
79. "Objective Video Quality Measurement," Unrestricted Research Grant, AT&T, \$40,000 (Principal Investigator) 2008.
80. "Advanced Perceptual Video Quality Measurement," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2008.
81. "Video Quality Assessment for In-Flight Entertainment Systems," Boeing, \$99,000 (Co-Principal Investigator), 2008.
82. "Video Quality Assessment," Agilent, \$39,640 (Principal Investigator), 2008.
83. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates

- Program, \$15,000 (Principal Investigator), 2008-2009.
84. "Objective Video Quality Measurement," Unrestricted Research Grant, AT&T, \$49,000 (Principal Investigator), 2009.
 85. "Blind Image Quality Assessment," Unrestricted Research Grant, Videoclarity, Inc., \$18,000 (Principal Investigator), 2009.
 86. "Delivery and Assessment of High Quality Video over UDP/IP Networks," Boeing, \$100,000 (Principal Investigator), 2009.
 87. "Advanced Perceptual Rate Control," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2009.
 88. "Spinal Imaging," Orthokinematics, \$50,000 (Principal Investigator), 2009.
 89. "Video Communication Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$10,000 (Principal Investigator), 2009-2010.
 90. "Blind Video Quality Algorithms," Unrestricted Research Grant, AT&T, \$49,000 (Principal Investigator), 2010.
 91. "Advanced Perceptual Rate Control II," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2010.
 92. "Perceptual Optimization of Wireless Video Networks," Unrestricted Research Grant, Intel Corporation and Cisco Corporation, \$900,000, (Co-Principal Investigator), 2010-2012.
 93. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$10,000 (Principal Investigator), 2010-2011.
 94. "Objective Measurement of Stereoscopic Visual Quality," Unrestricted Research Grant, Cisco Corporation, \$99,438, (Principal Investigator), 2011.
 95. "Blind Video Quality Algorithms II," Unrestricted Research Grant, AT&T, \$49,000 (Principal Investigator), 2011.
 96. "Objective Quality Assessment of Stereo Videos," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2011.
 97. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$20,000 (Principal Investigator), 2011-2012.
 98. "Objective Quality Assessment of Stereo Videos II," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2012.
 99. "Objective Measurement of Stereoscopic Visual Quality II," Unrestricted Research Grant, Cisco Corporation, \$99,348, (Principal Investigator), 2012.
 100. Equipment Grant, Intel, Inc. 8 Intel Xeon and I6 Processors, \$24,000, (Principal Investigator), 2012.
 101. "Blind Video Quality Assessment," Video Clarity, Inc., \$17,000 (Principal Investigator), 2012.
 102. Equipment Grant, Intel Inc., RAID Servers and RAID memory units, \$15,000 (Principal Investigator), 2012.
 103. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$17,000 (Principal Investigator), 2012-2013.
 104. "Study on Subjective Perception of Video Rebuffering Events," Avvasi, Inc., Unrestricted Research Grant, \$18,000 (Principal Investigator), 2013.
 105. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$15,000 (Principal Investigator), 2013-2014.
 106. "Perceptual Quality of Automotive Surround View Projection Systems," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2013.
 107. "Spinal Image Analysis," St. David's Texas Neuroscience Institute, Unrestricted Research

- Grant, \$37,500 (Co-Principal Investigator), 2013-2014.
108. "Study on Subjective Perception of Video Rebuffering Events II," Avvasi, Inc., Unrestricted Research Grant, \$18,000 (Principal Investigator), 2014.
 109. "Perceptual Quality of Automotive Surround View Projection Systems II," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2014.
 110. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$14,000 (Principal Investigator), 2014-2015.
 111. "Spinal Image Analysis II," St. David's Texas Neuroscience Institute, Unrestricted Research Grant, \$15,952 (Co-Principal Investigator), Spring 2015.
 112. "Blind Video Quality Algorithms III," Unrestricted Research Grant, AT&T, \$49,000 (Principal Investigator), 2015.
 113. "Perceptual Quality of Automotive Surround View Projection Systems III," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2015.
 114. "Subjective Study of In-capture Video Distortions," Qualcomm, Inc., \$45,000 (Principal Investigator), 2015-2016.
 115. "Perceptual Prediction of Streaming Video Artifacts," Netflix, Inc., \$85,000 (Principal Investigator), 2015-2016.
 116. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$19,000 (Principal Investigator), 2015-2016.
 117. "Tesla K-40 GPU Board for 3D Computer Vision Research," Nvidia Corporation, Stated Value \$906 (Principal Investigator), 2016.
 118. "Perceptual Prediction of Streaming Video Artifacts II," Netflix, Inc., \$90,000 (Principal Investigator), 2016-2017.
 119. "Perceptual Quality of Automotive Surround View Projection Systems III," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator), 2016.
 120. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$14,000 (Principal Investigator), 2016-2017.
 121. "Perceptual Issues of Streaming Video," Unrestricted Research Grant, Huawei, Inc., \$100,000 (Principal Investigator), 2017-2018.
 122. "Perceptual Quality of Automotive Surround View Projection Systems IV," Unrestricted Research Grant, Texas Instruments, \$35,000 (Principal Investigator, ACB = \$35,000), 2017.
 123. "Perceptual Prediction of Streaming Video Artifacts III," Netflix, Inc., \$95,000 (Principal Investigator, ACB = \$95,000), 2017-2018.
 124. "Virtual Reality Research," Research Gift from Private Donor, \$15,000 (Principal Investigator, ACB = \$15,000), 2017.
 125. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$14,000 (Principal Investigator), 2017-2018.
 126. "Subjective and Objective Studies of Perceptual Issues of Viewing Virtual Reality," Oculus Research, \$192,510 (Principal Investigator), 2017-2018.
 127. "Deep Learning Perceptual Video Compression," Electronics and Telecommunications Research Institute (Korea), \$121,000 (Principal Investigator), 2018.
 128. "Perceptual Quality Assessment of Images and Videos," Facebook Research, \$863,921 (Principal Investigator), 2018-2021.
 129. "Assessing the Quality of Encoded/Transcoded Videos with Imperfect References," YouTube, \$85,705 (Principal Investigator), 2019.
 130. "Quality Assessment of User-Generated Videos," YouTube, \$52,000 (Principal Investigator),

- 2019.
131. "Quality Assessment of High Frame Rate Videos," YouTube, \$52,000 (Principal Investigator), 2019.
 132. "Subjective and Objective Studies of Perceptual Issues of Viewing Virtual Reality II," Oculus Research / Facebook Reality Labs, \$201,292 (Principal Investigator), 2018-2019.
 133. "Perceptual Prediction of Streaming Video Artifacts IV," Netflix, Inc., \$103,126 (Principal Investigator), 2018-2019.
 134. "Wireless Video Research," Unrestricted Research Grant, WNCG Industrial Affiliates Program, \$14,000 (Principal Investigator, ACB = \$14,000), 2018-2019.
 135. "Perceptual Studies and Algorithms for Compressed Virtual Reality," Oculus Research / Facebook Reality Labs, \$208,843 (Principal Investigator), 2019-2020.
 136. "Real-Time Blind Video Quality Prediction on High-Motion Studio / Professional Grade Content," Amazon Prime Video, \$199,090 (Principal Investigator), 2019-2020.
 137. "Video Annotation and Statistics Toolkit for Crowdsourcing Quality Assessment," Intelligent Automation, Inc., \$19,917 (Principal Investigator), 2019-2020.
 138. "Perceptual Video," Unrestricted Research Gift, Facebook Video, \$110,000 (Principal Investigator, ACB = \$110,000), 2019-2020.
 139. "Perceptual Prediction of Streaming Video Artifacts V," Netflix, Inc., \$110,000 (Principal Investigator), 2019-2020.

University Grants

1. "Image Analysis using Local Statistics," Bureau of Engineering Research, The University of Texas at Austin, \$5,000 (Principal Investigator), 1984-1985.
2. "Boundary Detection in Speckle Images," University Research Institute, University of Texas, \$4,980 (Principal Investigator), 1984-1985.
3. "Development of a Stereo Computer Vision Laboratory," University Research Institute, University of Texas, \$4,980 (Principal Investigator), 1985-1986.
4. "Active Vision," University of Texas Challenge for Excellence in Computer Engineering, \$14,000 (Principal Investigator), 1990-1991.
5. "New Developments in Multi-scale Signal Processing with Application to Animated Computer Vision," University Research Institute Faculty Research Assignment, University of Texas, \$28,790 (Principal Investigator), 1991-1992.
6. "Digital Image and Video processing on the World Wide Web using National Instruments' LabVIEW," University of Texas Academic Development Funds, \$4,000 (Principal Investigator), 1997.
7. "Foveated Visual Search: from Humans to Machines," Interdisciplinary Research Initiative, University of Texas, \$100,000 (Co-Principal Investigator), 2000-2001.
8. "Using Visual Attention in Video Processing and Communication," Dean's Fellowship, College of Engineering, The University of Texas at Austin, \$56,000 (Principal Investigator), 2002.
9. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2005-2006.
10. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2006-2007.
11. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2007-2008.

12. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2008-2009.
13. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2009-2010.
14. "Stereo CAD for 3D Breast Imaging," Research Grant, The University of Texas at Austin, \$6,000 (Principal Investigator), 2010.
15. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2010-2011.
16. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2011-2012.
17. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2012-2013.
18. "EE 381V Digital Video," College of Engineering Academic Development Funds, \$10,587 (Principal Investigator), 2012-2013
19. Endowment Funds, Curry-Cullen Trust Endowed Chair Professorship, The University of Texas at Austin, \$25,000 (Principal Investigator), 2013-2014.
20. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2014-2015.
21. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2015-2016.
22. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2016-2017.
23. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2017-2018.
24. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2018-2019.
25. Endowment Funds, Cockrell Family Regents Endowed Chair Professorship, The University of Texas at Austin, \$80,000 (Principal Investigator), 2019-2020.

Graduate Student Supervision

Professor Bovik has graduated or is presently supervising the following students:

M.S. Completed:

Acton, Scott	Kladopoulos, K.	Sanders, Kirk
Arnow, Thomas	Krishnan, Vidhya	Schwartzkopf, Wade
Bernstein, Alan	Lacour, Patrick	Seshadrinathan, Kalpana
Brooks, Robin	Larcom, Ronald	Sharma, Shubham
Chen, Ming-Jun	Lee, Joonsoo	Shueh, Fen-Fen
Chu, Chen-Chau	Lindsey, Laurence	Sheikh, Hamid
Craevich, Danielle	Luck, Brette	Simms, Andrew
Dehel, Thomas	Malpica, William	Spires, Shannon
Emmoth, Tomas	Messerschmitt, Tina	Suriamoorthy, Kartick
Floren, Andrew	Mittal, Anish	Von Bavel, Nicholas
Ghadiyaram, Deepti	Moorthy, Anush	Wehnes, Jeffrey
Gibson, Michael	Pai, Hung-Ta	Xie, Zhengyi
	Pai, Ritha	

Gopal, Nanda	Panayi, George
Griffin, Christopher	Rashid, Mosfeq
Grosenbacher, Timothy	Reynolds, A-Lan
Gupta, Praful	Restrepo, Alfredo
Harding, David	Saad, Michele
Jou, Jinn-Yeu	Sabir, Farooq
Kaser, Jenny	Sampat, Mehul
Klarquist, William	

Ph.D. Completed, Year, Dissertation Titles:

1. Longbotham, Harold (1988) "Deterministic Theory of Order Statistic Filters"
(Deceased. Formerly Professor at University of Texas, San Antonio, TX)
2. Macías-Garza, Fernando (1988) "Implementation and Limitations of Scanning Light Microscopy for the Determination of Three-Dimensional Structure from Optical Serial Sections"
(Currently President of Document-OS, Austin, Texas)
3. Kim, Nak (1989) "Computation of Shape from Stereo Images with Application to Biological Shape Analysis"
(Currently Professor at Hankuk University of Foreign Studies, Seoul, Korea)
4. Naaman, Laith (1990) "Design of Least-Squares Order Statistic Filters"
5. Chen, Dapang (1990) "Visual Pattern Image Coding"
(Currently DSP Team Leader Research Engineer at National Instruments, Austin, TX)
6. Jordan, John (1990) "On Using Chromatic Information in Stereo Correspondence" - selected winner of the University of Texas all-campus Outstanding Dissertation Award
(Currently Vice President of Research at KLA-Tencor Instruments, San Jose, CA)
7. Restrepo, Alfredo (1990) "Locally Monotonic Regression and Related Techniques for Signal Smoothing and Shaping"
(Currently Professor at University of the Andes in Bogota, Colombia)
8. Super, Boaz (1992) "Understanding Images of Textured Surfaces"
(Currently Senior Research Engineer at Motorola, Inc., Schaumburg, Illinois)
9. Bartels, Keith (1993) "The Analysis of Biological Shape and Shape-Change from Multi-Dimensional Image Sequences"
(Currently Research Engineer at Southwest Research Institute, San Antonio, TX)
10. Silsbee, Peter (1993) "Computer Lipreading for Improved Accuracy in Automatic Speech Recognition"

11. Acton, Scott (1993) (Currently Research Engineer at Qualcomm, Boulder, CO)
 “Generalized Deterministic Annealing with Application to Nonconvex Optimization Problems in Image Processing”
 FELLOW OF THE IEEE
 (Currently Professor at University of Virginia, Charlottesville, VI)
12. Chen, Tieh-Yuh (Terry) (1995) “Stereo Disparity from Local Image Phase: New Models for Image Modulation, Coarse-to-Fine Processing, and Disparity Channels”
 (Currently Section Chief at Chung-Shan Institute of Science and Technology, Taiwan)
13. Klarquist, William (1995) “FOVEA: A Foveated Vergent Active Stereo Vision System for Dynamic Three-Dimensional Scene Recovery”
 (Currently Research Engineer at SAIC, Denver, CO)
14. Yim, Changhoon (1996) “Multiresolution 3-D Range Segmentation Using Focus Cues”
 (Currently Professor at Konkuk University, Konkuk, South Korea)
15. Havlicek, Joseph (1996) “AM-FM Image Models”
 (Currently Professor at University of Oklahoma, Norman, OK)
16. Pattichis, Marios (1998) "AM-FM Transforms and Applications"
 (Currently Professor at The University of New Mexico, Albuquerque, NM)
17. Wei, Dong (1998) "Theory and Applications of Coiflet-Type Wavelets"
 (Currently Research Engineer at Huawei, Inc., Dallas, TX)
18. Kite, Thomas (1998) "Design and Quality Assessment of Forward and Inverse Error Diffusion Halftoning Algorithms"
 (Deceased. Formerly Vice President of Engineering at Audio Precision, Beaverton, OR)
19. Pai, Hung-Ta (1999) "Multichannel Blind Image Restoration"
 (Currently Professor at the National Taipei University, Taipei, Taiwan)
20. Lee, Sanghoon (2000) “Foveated Video Compression and Visual Communications Over Wireless and Wireline Networks”
 (Currently Professor at Yonsei University, Seoul, South Korea)
21. Barnett, Barry (2000) “Multiparty Videoconferencing Using Motion Compensated Visual Pattern Image Sequence Coding”

22. Wang, Zhou (2001) (Currently Consultant for International Business Machines, Inc., Austin, TX)
“Rate Scalable Foveated Image and Video Communications”
FELLOW OF THE IEEE
(Currently Professor at the University of Waterloo, Ontario, Canada)
23. Ling, Jian (2001) “The Development of Raman Imaging Microscopy to Visualize Drug Actions in Living Cells”
(Currently Research Engineer at Southwest Research Institute, San Antonio, TX)
24. Liu, Shizhong (2001) “DCT-Domain Video Foveation and Transcoding for Heterogeneous Video Communication”
(Currently Research Engineer for Qualcomm, San Diego, CA)
25. Swartzkopf, Wade (2002) “Maximum Likelihood Techniques for Joint Segmentation-Classification of MFISH Images”
(Currently Research Engineer at Integrity Applications Inc., Washington, DC)
26. Sheikh, Hamid Rahim (2004) “Image Quality Assessment Using Natural Scene Statistics”
(Currently Research Engineer at Samsung Research, Dallas, TX)
27. Rajashekar, Umesh (2005) “Statistical Analysis and Selection of Visual Fixations”
(Currently Post-Doctoral Research Associate at New York University, New York, NY)
28. Sabir, Muhammad Farooq (2006) “Source-Channel Distortion Modeling for Image and Video Communication”
(Currently Senior Engineer at AT&T Corporation, Dallas, TX)
29. Choi, Hyohoon (2006) “Automatic Segmentation and Classification of Multiplex-Flourescence In-Situ Hybridization Chromosome Images”
(Currently Research Engineer at Samsung Corporation, Seoul, Korea)
30. Sampat, Mehul (2006) “Evidence-Based Detection of Spiculated Lesions”
(Currently Research Fellow, Center for Neurological Imaging, Brigham and Women's Hospital & Harvard Medical School, Cambridge, MA)
31. Monaco, James Peter (2006) “Active Binocular Vision: Phase-Based Registration and Optimal Foveation”
(Currently Research Engineer at VuComp, Inc., Dallas, TX)
32. Raj, Raghu (2007) “Optimal Visual Search Strategies Using Natural Scene Statistics”

33. Tavassoli, Abtine (2007) (Currently Research Engineer at The Naval Research Laboratory, Washington, DC)
“Discovery and Representation of Human Strategies for Visual Search”
(Currently Managing Scientist at Exponent, Inc., Los Angeles, CA)
34. Channappayya, Sumohana (2007) “Image Communication System Design Based on the Structural Similarity Index”
(Currently Professor at Indian Institute of Technology, Hyderabad, Andra Pradesh, India)
35. Arnow, Thomas (2008) “Foveated Object Recognition by Corner Search”
(Currently Professor at Palo Alto College, San Antonio, TX)
36. Seshadrinathan, Kalpana (2008) “Video Quality Assessment Based on Motion Models” (Currently Research Engineering Manager at Apple, Cupertino, CA)
37. Gupta, Shalini (2008) “Novel Algorithms for 3-D Face Recognition”
(Currently Research Engineer at Nvidia Research, Berkeley, CA)
38. Liu, Yang (2010) “Scene Statistics in 3D Natural Environments”
(Currently Post-Doctoral Researcher at Harvard Medical School and Wellesley College, Boston, MA)
39. Coffman, Thayne (2011) “Stochastic Methods in Computational Stereo”
(Currently Analyst at RGM Advisors, Austin, TX)
40. Jahanbin, Sina (2011) “Recognition of 3D Faces”
(Currently Research Engineer at Research Engineer at Apple, Cupertino, CA)
41. Gopinath, Ajay (2012) “Feature Modeling and Tomographic Reconstruction of Electron Microscopy Images”
(Currently Research Engineer at LightLab Imaging, part of St. Jude Medical Systems)
42. Soundararajan, Rajiv (2012) “Information Theoretic Methods in Distributed Compression and Visual Quality Assessment”
(Currently Professor at Indian Institute of Science, Bangalore)
43. Moorthy, Anush Krishna (2012) “Natural Scene Statistic Based Blind Image Quality Assessment and Repair”
(Currently Research Engineer at Netflix, Los Gatos, CA)
44. Chen, Ming-Jun (2012) “Visual Perception and Quality of Distorted Stereoscopic 3-D Images”
(Currently Research Engineer at Google, Mountain View, CA)
45. Muralidhar, Gautam (2012) “Computer-Aided Analysis and Interpretation of Breast Imaging Data”
(Currently Senior Data Scientist at Nio, Inc.)

46. Saad, Michele (2013) “Blind Image and Video Quality Assessment Using Natural Scene and Motion Models” (Currently Research Engineer at Adobe, Austin, TX)
47. Mittal, Anish (2013) “Natural Scene Statistics-based Blind Visual Quality Assessment in the Spatial Domain” (Currently Research Engineering Manager at HERE, Berkeley, CA)
48. Chen, Chao (2013) “Visual Quality-Optimized Adaptive Video Streaming over Wireless Channels,” (Currently Research Engineer at Netflix, Los Gatos, CA)
49. Lee, Juhun (2014) “Quantitative Analysis of Aesthetic Outcomes of Reconstructive Surgery: Disfigurement After Facial Reconstruction” (Currently Post-Doc at UT Southwestern Medical Center University, Dallas, TX)
50. Su, Che-Chun (2014) “Applied Statistical Modeling of Three-Dimensional Natural Scene Data” (Currently Research Engineer at Amazon, Seattle, WA)
51. Choi, Lark-Kwon (2015) “Flicker Perception on Digital Videos” (Currently Research Engineer at Qualcomm, San Diego, CA)
52. Isikdogan, Furkan (2017) “Automatically Creating Spatiotemporal River Maps of the World Using Remotely Sensed Images” (Currently Research Engineer at Intel Corp, Santa Clara, CA)
53. Ghadiyaram, Deepti (2017) “Perceptual Quality Assessment of Real-World Images and Videos” (Currently Research Engineer at Facebook, Menlo Park, CA)
54. Bampis, Christos (2018) “Perceptual Video Quality and Quality of Experience for Adaptive Video Streaming” (Currently Research Engineer at Netflix, Los Gatos, CA)
55. Goodall, Todd (2018) “Inspection and Evaluation of Artifacts in Digital Video Sources” (Currently Research Engineer at Oculus Research, Seattle, WA)
56. Sinno, Zeina (2019) “Statistical and Perceptual Properties of Images and Videos with Applications” (Currently Research Engineer at Apple, Cupertino, CA)

Ph.D. in Progress (not admitted to candidacy yet):

Chen, Li-Heng	Chen, Meixu	Madasudana, Pavan
Jin, Yize	Kim, Sungsoo	Lee, Dae Yeol
Niu, Haoran	Paul, Somdyuti	Yu, Xiangxu
Zhengqiang, Ying	Zhengzhong, Tu	

Ph.D. Admitted to Candidacy:

Gupta, Praful

Pan, Janice

Teaching

Professor Bovik has taught the following courses at The University of Texas at Austin:

Graduate

EE 380L - Computer Vision (Fall '84, Fall '85, Fall '86, Fall '87, Fall '88, Fall '89, Fall '90)

EE 381K - Digital Signal Processing (Spring '86, Spring '87, Spring '88, Spring '93, Spring '94, Spring '95, Spring '96, Spring '97, Spring '98, Spring '99, Spring '00, Spring '01, Spring '02, Spring '03, Fall '03, Fall '04, Fall '05, Fall '06, Fall '07, Fall '10, Fall '11, Fall '12)

EE 381K - Introduction to Stochastic Processes (Spring '89)

EE 381V/381K – Digital Video (Spring '14, Spring '15, Spring '16, Spring '17)

Undergraduate

EE 351K - Probability & Random Processes (Spring '85, Fall '85, Spring '86, Fall '86, Spring '90, Spring '91)

EE 379K/371R - Digital Image Processing (Fall '91, Fall '92, Fall '93, Fall '94, Fall '95, Fall '96, Fall '97, Fall '98, Fall '99, Fall '00, Fall '01, Fall '02, Summer '03, Spring '04, Spring '05, Spring '06, Spring '07, Spring '08, Spring '10, Spring '11, Spring '12, Spring '13, Fall '13, Fall '14, Fall '15, Fall '16, Fall '17, Fall '18, Fall '19)