

Professor Sanjit K. Mitra

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Sanjit K. Mitra received the B.Sc. (Hons.) degree in Physics in 1953 from Utkal University, Cuttack, India; the M.Sc. (Tech.) degree in Radio Physics and Electronics in 1956 from Calcutta University; the M.S. and Ph.D. degrees in Electrical Engineering from the University of California, Berkeley, in 1960 and 1962, respectively, and Doctor Honoris Causa degrees from the Tampere University of Technology, Finland and the Technical University of Bucharest, Romania. From June 1962 to June 1965, he was at the Cornell University, Ithaca, New York, as an Assistant Professor of Electrical Engineering. He was with Bell Telephone Laboratories, Holmdel, New Jersey, from June 1965 to January 1967. He has been on the faculty at the University of California since then, first at the Davis campus and since 1977 at the Santa Barbara campus as a Professor of Electrical and Computer Engineering, where he served as Chairman of the Department from July 1979 to June 1982. He has published over 640 papers in analog and digital signal processing, and image processing, twelve books, and holds five patents. He served as the President of the IEEE Circuits and Systems Society in 1986.

Dr. Mitra is the recipient of the 1973 F.E. Terman Award and the 1985 AT&T Foundation Award of the American Society of Engineering Education, the 1989 Education Award, and the 2000 Mac Van Valkenburg Society Award of the IEEE Circuits & Systems Society, the Distinguished Senior U.S. Scientist Award from the Alexander von Humboldt Foundation of Germany in 1989, the 1996 Technical Achievement Award and the 2001 Society Award of the IEEE Signal Processing Society, the IEEE Millennium Medal in 2000, the McGraw-Hill/Jacob Millman Award of the IEEE Education Society in 2001, the 2002 Technical Achievement Award of the European Association for Signal Processing (EURASIP), and the 2005 SPIE Technical Achievement Award of the International Society for Optical Engineering. He is the co-recipient of the 2000 Blumlein-Browne-Willans Premium of the Institution of Electrical Engineers (London) and the 2001 IEEE Transactions on Circuits & Systems for Video Technology Best Paper Award. He is an Honorary Professor of the Northern Jiaotong University, Beijing, China and the Technical University of Cluj-Napoca, Romania. He has been appointed an Honorary Citizen of Cluj-Napoca, Romania in 2005. He is a member of the U.S. National Academy of Engineering, an Academician of the Academy of Finland, a member of the Norwegian Academy for Technical Sciences, a Foreign Member of the Croatian Academy of Sciences and Arts, and a Foreign Member of the Academy of Engineering of Mexico. Dr. Mitra is a Fellow of the Institute of Electrical & Electronics Engineers (IEEE), American Association for the Advancement of Science (AAAS), and SPIE - The International Society for Optical Engineering.

Selected Publication List

1. "Block Implementation of Adaptive Digital Filters," IEEE Trans. on Circuits and Systems, Special Issue on Adaptive Filtering, Vol. CAS-28, September 1981, pp. 584-592 (with G.A. Clark and S.R. Parker).
2. "A Unified Approach to Time and Frequency Domain Realization of FIR Adaptive Digital Filters," IEEE Trans. on Acoustics, Speech, and Signal Processing, Vol. ASSP-31, October 1983, pp. 1073-1083 (with G.A. Clark and S.R. Parker).
3. "A New Two-Dimensional Window," IEEE Trans. on Acoustics, Speech, and Signal Processing, Vol. ASSP-33, August 1985, pp. 1058-1061 (with T-H. Yu).
4. "Application of Two-Dimensional Generalized Mean Filters for Removal of Impulse Noises from Images," IEEE Trans. on Acoustics, Speech, and Signal Processing, Vol. ASSP-32, June 1984, pp. 600-609 (with A. Kundu and P.P. Vaidyanathan).
5. "Complementary Two-Dimensional Digital Filters," Proc. IEEE (Letters), Vol. 74, 1986, pp. 229-230 (with Tian-Hu Yu).
6. "A New Algorithm for Image Edge Extraction Using a Statistical Classifier Approach," IEEE Trans. on Pattern Analysis and Machine Intelligence, vol. PAMI- 9, July 1987, pp. 569-577 (with A. Kundu).
7. "Transform Amplitude Sharpening: A New Method of Image Enhancement," Computer Vision, Graphics, and Image Processing, vol. 40, 1987, pp. 205-218 (with Tian-Hu Yu).
8. "On the Block Least Squares Adaptive Digital Filters Realized Using the Fast Fourier Transform," Proc. IEEE (Letters), vol. 76, October 1988, pp. 1383-1385 (with J. C. Lee).
9. "Image Smoothing Based on Local Image Models," Proc. IEEE International Conference on Systems Engineering, Dayton, Ohio, August 1989, pp. 81-84 (with Yao Wang)
10. "The Connectivity Hough Transform and Its Fast Implementation," Proc. International Conference on Image Processing, Singapore, September 1989, pp. 548-552 (with Y. Wang and R. Leonardi).
11. "Automated Detection of Chromosome Aberration Using Color Information," Proc. SPIE 1989 Symposium on Intelligent Robots and Computer Vision VIII: Algorithms and Techniques, Philadelphia, PA, November 1989, pp. 339-343 (with C-H Chen, Y. Wang and J. W. Gray) - (Invited Paper).

12. "The Recognition of Shapes in Binary Images Using a Gradient Classifier," IEEE Trans. on Systems, Man and Cybernetics, vol. SMC-19, November/December 1989, pp. 1595-1599 (with R. D. Brandt, Y. Wang and A. Laub).
13. "A Novel Nonlinear Filter for Image Enhancement," Proc. SPIE/SPSE Symposium on Electronic Imaging: Science and Technology, San Jose, CA, February 1991, pp. 303-309 (with T-H Yu and J. F. Kaiser).
14. "Edge Detection Based on Orientation Distribution," Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing, Toronto, Canada, May 1991, pp. 2569-2572 (with Y. Wang).
15. "Generalized Fast Convolution Implementations of Adaptive Filters," Proc. IEEE International Symposium on Circuits & Systems, Singapore, June 1991, pp. 2916-2919 (with M. R. Petraglia).
16. "Nonlinear Filters for Image Sharpening and Smoothing," Proc. IEEE International Conference on Systems Engineering, Dayton, OH, August 1991, pp. 241-244 (with T-H Yu) - (Invited Paper).
17. "Efficient Subband Analysis of Images by the Method of Moments," Journal of Electronic Imaging, vol. 1, No. 1, January 1992, pp. 68-72 (with Tian-Hu Yu).
18. "Efficient Image Interpolation Scheme Using Hybrid IIR Nyquist Filters," Optical Engineering, vol. 31, June 1992, pp. 1277-1283 (with T. Ramstad and Y. Wang).
19. "A New Robust Approach to Diffuse Edge Detection," Proc. 1992 IEEE Military Communications Conference (MILCON), San Diego, CA, October 1992, pp. 1116-1121 (with T-H Yu) - Invited Paper.
20. "Contour-Based Multisensor Image Registration," Proc. 26th Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, California, November 1992, pp. 182-186 (with H. Li and B. S. Manjunath).
21. "Image Representation Using Block Pattern Models and Its Image Processing Applications," IEEE Trans. on Pattern Analysis and Machine Intelligence, vol. 15, April 1993, pp. 321-336 (with Y. Wang).