Md. Kamrul Hasan, *Ph.D.*

Professor, Department of Electrical & Electronic Engineering,
Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, Bangladesh
Mobile: +880-(0)1552-365843, E-mail: khasan@eee.buet.ac.bd

CAREER OBJECTIVE

To work as a Professor of Electrical and Electronic Engineering, supervise quality postgraduate theses, and make a difference in students' lives.

RESEARCH INTEREST

Digital Signal Processing, Speech Processing, Data Compression, Image Denoising, System Identification, Spectral Estimation, Biomedical Signal Processing, Medical Imaging, and Adaptive Filtering.

EDUCATION

Chiba University, Chiba, Japan
PhD: March 1997, Obtained highest grade 'A' in all subjects, Sponsor: MONBUSHO SCHOLARSHIP.
Dissertation: Identification of Linear Systems with Unknown Input Signals.
M.Eng.: March 1995, Obtained highest grade 'A' in all subjects, Sponsor: MONBUSHO SCHOLARSHIP.

Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, Bangladesh
M.Sc. Eng *in EEE*: August 1991

B.Sc.Eng *in EEE*: December 1989, First Class with *Honors*.

DATE OF BIRTH

April 15, 1966

EMPLOYMENT

Kyung Hee University, Korea
Professor of International Scholar, Department of Biomedical Engineering (June 2011 - July 2011)
- Conducted research in Medical Imaging (CT, Ultrasound)

Kyung Hee University, Korea
Professor of International Scholar, Department of Biomedical Engineering (April 2010 - June 2010)
- Conducted research in Medical Imaging (CT, Ultrasound)

East West University, Bangladesh
Pro-Vice Chancellor (Academic) (March 2008- April 2009)
- To promote teaching and research excellence at East West University

Chiba University, Japan
Invited Research Professor, Department of Information and Computer Sciences (December 24, 2007 – February 16, 2008)
- Conducted research in ECG signal analysis

The University of Tokyo, Japan
Japan Society for the Promotion of Science (JSPS) Invited Research Fellow, Department of Information and Communication Engineering (October 2006 - December 2006)

Imperial College London, UK
Visiting Researcher, Department of Electrical and Electronic Engineering (August 2004 - April 2005)
- Enhancement of Reverberant Speech for Telecommunication Applications

Bangladesh University of Engineering and Technology (BUET)
Professor (June 2004 - to date), ***Associate Professor*** (March 2001- June 2004), ***Assistant Professor***/ ***Lecturer*** (December 1989 – February 2001), Department of Electrical and Electronic Engineering
- Offering post-graduate course on Advanced Digital Signal Processing
- Supervising post-graduate research and undergraduate projects
- Offering undergraduate course related to digital signal processing and communications

Chiba University, Japan
Japan Society for the Promotion of Science (JSPS) International Postdoctoral Fellow (November 1997 - April 1998)

Academic Administrative Responsibilities

- ***Associate Director*** (***Academic***), Institute of Information and Communication Technology (IICT), BUET (November 2005 – March 2007)
- ***Assistant Provost***, Chattri Hall, BUET (September 1998 – October 2002)
- ***Chief Project Organizer***, Bangladesh Telegraph and Telephone Board (BTTB) Billing Project (project worth Taka 20000000/-) done through IICT, BUET (1999 – 2000)

PROFESSIONAL MEMBERSHIP

- **Senior Member**, **IEEE** (Institute of Electrical and Electronic Engineers, Inc.)

PROFESSIONAL AWARDS/HONORS

- JSPS Invited Research Fellow, Japan (October 2006 – December 2006)
- Research Associate, Imperial College London, UK (2004-2005)
- Regular Associate, ICTP, Italy (2004-2009)
- Best paper award (year 2003) from Research Institute of Signal Processing (RISP), Japan
- JSPS Postdoctoral Fellowship, Japan (1997-1998)
- Monbusho Scholarship, Japan (1991-1997)
- Merit Scholarship, Bangladesh University of Engineering and Technology (1984-1989)
- Education Board Scholarship (1983-1989)

PROFESSIONAL SERVICE

- Served as the Chairman of the Technical Committee, "International Conference on Information and Communication Technology (ICICT 2007)", March 7-9, 2007, Dhaka, Bangladesh, organized by the Institute of Information and Communication Technology (IICT), BUET with IEEE Bangladesh Section as the technical Co-Sponsor.
- Served as the Chairman of the Technical Committee, "International Workshop on Distributed Internet Infrastructure for Education and Research (IWIER 2003)", December 30-31, 2003- January 01, 2004, Dhaka, Bangladesh, organized by the Institute of Information and Communication Technology (IICT), BUET.
- Served as the member secretary of the Technical Committee, "International Conference on Electrical and Computer Engineering (ICECE 2002)", December 26-28, 2002, Dhaka, Bangladesh, organized by the Department of Electrical and Electronic Engineering, BUET with the IEEE Bangladesh section as the technical co-sponsor.
- Served as the member secretary of the Organizing Committee, "International Conference on Electrical and Computer Engineering (ICECE 2001)", January 5-6, 2001, Dhaka, Bangladesh, jointly organized by the Department of Electrical and Electronic Engineering, BUET and the IEEE Bangladesh section.
- Reviewer of technical papers, IEEE Trans. Signal Processing, 2006-date, IEEE Signal Processing Letters, 2002-date, IEEE Trans. Image Processing, 2003-date, IEEE Trans. Circuits and Systems-II, 2005-date, IEE Vision, Image & Signal Processing, 2005-date, Inverse Problems in Science and Engineering Journal (USA), 2005-date, Signal Processing (Elsevier Science B.V.), and reputed International Conference Proceedings.
- Served as the Chairman of the Technical Session on Digital Signal Processing, ICECE 2002, International Conference on Electrical and Computer Engineering, December 26-28, 2002, Dhaka, Bangladesh, organized by the Department of Electrical and Electronic Engineering, BUET with the IEEE Bangladesh section as the technical co-sponsor.
- Served as the Chairman of the Technical Session on Mobile and Wireless Technology I, TENCON 2000, IEEE Region 10 International Conference, September 24-27, 2000, Kuala Lumpur, Malaysia.
- Served as a member of the organizing committee and reviewer of the "International Conference on Computers and Information Technology (ICCIT'98)", December 14 – 15, 1998, Bangladesh.

- Participated in an Extended Research Workshop on *Mathematical Problems in Image Processing* from September 4-22, 2000 organized by the Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy.
- Participated in an Extended Research Workshop on *Neural Information Processing* from 3 May to 28 May 1999 organized by the Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy.
- Attended Chiba University, Japan as a research student from October 1991 to March 1993. The subject of research was 'Digital Signal Processing and Its application'. Proposed an extension of the existing overfitting lattice filter algorithm for ARMA parameter estimation from noisy observations.

RESEARCH COLLABORATION

- Dr. S. K. Alam, Riverside Research Institute, USA.
- Professor S. Y. Lee, Department of Biomedical Engineering, Kyung Hee University, Korea.
- Professor Keikichi Hirose, Department of Information and Communication Engineering, The University of Tokyo, Japan.
- Dr. P. A. Naylor, Communication and Signal Processing Group, Department of Electrical Engineering, Imperial College London, UK (*ended in 2007*).
- Professor Takashi Yahagi, Department of Information and Image Sciences, Chiba University, Japan (*ended in 2007*).

OTHER RESEARCH INSTITUTES & INDUSTIRIES VISITED

- Korean Institute for Advanced Science and Technology (KAIST), Korea (2007), SAMSUNG Electronics, Korea (2007), FUJITSU Limited, Japan (2006), OKI Wireless Communications Division, Japan (2006), NEC Corporation, Japan (2006), Cambridge University (Dept. of Engineering), UK (2005), Multimedia University, Malaysia (2000), Hitachi Research Center, Japan (1996), Nippon Steel, Japan (1995).

RESEARCH GRANTS RECEIVED

Organization Offering the Grant	Project Title	Period
University Grants Commission of Bangladesh (Academic Innovation Fund, HEQEP Project)	Ultrasound based elasticity imaging system for cancer detection (Tk. 91,48,000/-)	2011-2012
Ministry of Science and Information & Communication Technology, Government of Bangladesh	Laboratory Development for Biometric Identification and Imaging Systems (Tk. 400,000/-)	2009-2010
Bangladesh Medical Research Council (BMRE), Dhaka, Bangladesh	Development of a Microcomputer Based Expert ECG Analyzer (Tk. 500,000/-)	2000-2001
Ministry of Science & Technology, Government of Bangladesh	Actively participated in planning and preparation of the laboratory development proposal ***Modernization of Digital Signal Processing Laboratory*** of EEE department of BUET (Tk. 20,60,000/-)	2000-2001
Ministry of Science & Technology, Government of Bangladesh	Digitization and Enhancement of Noise Corrupted Speech Signals (Tk. 600,000/-)	1999-2000
BRTC, BUET (via CASR)	Neuro-Fuzzy Model Based Data Compression System for Multimedia (Tk. 1,49,000/-)	1999-2000

POSTGRADUATE THESIS SUPERVISION

Level (Masters/Ph.D.)	Thesis Title	Year
Ph.D.	Ultrasound Based Tissue Characterization for Benign and Malignant Discrimination	2011 (On going)
M.Sc. Engg.	Direct Average Strain Estimation for Elastography Using Weighted Least-Squares Based Wavelet Cross-correlation Technique	2011 (On going)
M.Sc. Engg.	3-D Correction of Ring and Radiant Artifacts in Flat Panel Detector Based Cone Beam Volume CT Imaging	2011
M.Sc. Engg.	Detection and Correction of Stripes in the Sinogram for Suppression of Ring Artifacts in CT Imaging	2011
Ph.D.	Multi-microphone Speech Dereverberation With Noise for Hands-Free Communication	2009
M.Sc. Engg.	Improved Eigenfilter Design Method for Channel Shortening Equalizers for DMT Systems	2008
M.Sc. Engg.	Optimal Speech Enhancement Based on Dual Gain Wiener Filters and EMD Domain Post Filtering	2008
M.Sc. Engg.	Design of Delayless Subband Adaptive Filters Using Parallel Kalman Filters	2004
M.Sc. Engg.	Low Distortion Speech Enhancement in the DCT Domain using Optimal Estimate of the a *priori* SNR	2004
M.Sc. Engg.	Pitch Extraction of Noisy Speech using Dominant Frequency of Autocorrelation Function	2002
M.Sc. Engg.	Improved Wavelet-based Image Denoising Algorithm using Adaptive Center Weighted Median Filter	2002
M.Sc. Engg.	Speech Enhancement by Combined Application of Hard and Soft Thresholding with Bias-compensated Noise Level	2002
M.Sc. Engg.	Identification of Autoregressive Systems at a Very Low SNR using Damped Cosine Model of Autocorrelation Function	2002
M.Sc. Engg.	New Sub-image Block Classification for Channel Adaptive Image Compression using Dynamically Constructive Neural Network	2001
M.Sc. Engg.	Fuzzy Incorporated Noise Compensation Technique for Autoregressive Spectral Estimation	2000

CONTRIBUTION TO THE DEPARTMENT OTHER THAN TEACHING AND RESEARCH

a) Curriculum Improvement:

Postgraduate Program:

i. 2000: Designed a new course entitled *Advanced Digital Signal Processing* (Course No.EEE 6203) which has been approved by the Academic Council of BUET.

ii. 1997: As a member of BPGS (Board of Postgraduate Studies), actively participated in revision of various old courses and inclusion of new courses at Postgraduate level. Contributed in designing the course EEE 6001 (Engineering Analysis).

Undergraduate Program:

i. 2002: Served as the convener of the communication group of the syllabus committee for revising course curricula, Department of Electrical and Electronic Engineering, BUET.

ii. 2000: Designed a new course entitled *Digital Signal Processing* (Course No.EEE 403) which has been approved by the Academic Council of BUET on June 1, 1999.

iii. 2000: Revised a course entitled *Signals and Linear Systems* (Course No.EEE 301) which has been approved by the Academic Council of BUET on June 1, 1999.

iv. 1997: As a member of BUGS (Board of Under Graduate Studies), actively participated in revision of various old courses and inclusion of new courses at undergraduate level.

b) Laboratory Development:

Simulation Laboratory:

February 2002-October 2002: Supervised the over-all planning, construction and development of the new *Simulation Laboratory*.

Digital Signal Processing Laboratory:

April 1999-date: Initiated establishment of the new *Digital Signal Processing* Laboratory. Led and coordinated construction and development of this laboratory. Currently, working as the Lab-in-charge.

Circuit Laboratory

1999-2000: Led the efforts to renovate *Circuit Laboratory*.

Computer Lab

1999-2000: Actively participated in the extension and development of the computer Lab of EEE Department. The computing facility of this laboratory plays a key role in the teachers' and postgraduate students' research activity.

LIST OF PUBLICATIONS (Submitted/Published/Accepted Papers Only)

a. Journal Publications (*recognized and refereed Journals*):

1. **M. K. Hasan,** E. M. A. Anas, S. Y. Lee and S. K. Alam, "Direct mean strain estimation for elastography using nearest-neighbor weighted least-squares approach in the frequency domain", Ultrasound in Medicine and Biology, ***submitted,*** 2011.
2. E. M. A. Anas, S. Y. Lee and **M. K. Hasan**, "High quality 3-D correction of ring and radiant artifacts in flat panel detector based cone beam volume CT imaging", Physics in Medicine and Biology, IOP, ***in press,*** 2011.
3. E. M. A. Anas, S. Y. Lee and **M. K. Hasan**, "Comparison of ring artifact removal methods using flat panel detector based CT images", Biomedical Engineering Online, ***in press,*** 2011.
4. S. K. Roy, K. I. Molla, K. Hirose and **M. K. Hasan**, "Harmonic modification and data adaptive filtering based approach to robust pitch estimation", International Journal of Speech Technology (IJST), Springer, ***in press,*** 2011.
5. M. A. Haque, T. Islam and **M. K. Hasan**, "Robust speech dereverberation based on blind adaptive estimation of acoustic channels", IEEE Trans. Audio, Speech, Language Process**.,** vol.19, no.4, pp.775-787, May 2011.
6. E. M. A. Anas, S. Y. Lee and **M. K. Hasan**, "Classification of ring artifacts for their effective removal using type adaptive correction schemes", Computers in biology and medicine, Elsevier, vol. 41, no. 6, pp. 390- 401, 2011.
7. E. M. A. Anas and **M. K. Hasan**, "Exploiting correlation of ECG with certain EMD functions for ventricular fibrillation detection", Computers in biology and medicine, Elsevier, vol. 41, pp.110-114**,** 2011.
8. A. N. M. Ashrafuzzaman, S. Y. Lee and **M. K. Hasan**, "A self-adaptive approach for the detection and correction of stripes in the sinogram: Suppression of ring artifacts in CT imaging", EURASIP Journal on Advances in Signal Processing, Elsevier, doi:10.1155/2011/183547, Volume 2011, Jan. 2011.
9. M. A. Arafat, A. W. Chowdhury, and M. K. Hasan, "A simple time domain algorithm for the detection of ventricular fibrillation in electrocardiogram", Signal, Image and Video Processing (SIViP), Springer (UK), vol.5, pp.1-10, 2011.
10. E. M. A. Anas, S. Y. Lee and **M. K. Hasan**, "Removal of ring artifacts in CT imaging through detection and correction of stripes in the sinogram", Physics in Medicine and Biology, IOP, vol. 55, pp.6911-6930**,** 2010.
11. M. Ryyan Khan and **M. K. Hasan**, "A novel model for show-through in scans of duplex printed documents", *in press* ***(published online*** DOI 10.1007/s11760-010-0192-6***),*** Signal, Image and Video Processing (SIViP), Springer (UK), Mar. 2010.
12. E. M. A. Anas and **M. K. Hasan**, "Sequential algorithm for ventricular tachycardia and fibrillation identification based on mean signal strength and low-order EMD functions", Biomedical Engineering online (UK), DOI: 10.1186/1475-925X-9-43, 9:43, 2010.
13. **M. K. Hasan,** M. A. Haque, and T. Islam, "Channel shortening using spectrally constrained least-squares minimization technique", Journal IET Signal Processing (formerly IEE Proceedings, UK), vol.4, no.6, pp.698-707, Dec. 2010.
14. **M. K. Hasan,** F. Sadi, and S. Y. Lee, "Removal of ring artifacts in micro-CT imaging using iterative morphological filter", DOI 10.1007/s11760-010-0170-z, Signal, Image and Video Processing (SIViP), Springer (UK), *Published online*, June, 2010.
15. T. Hasan and **M. K. Hasan**, "MMSE estimator for speech enhancement considering the constructive and destructive interference of noise", Journal IET Signal Processing (formerly IEE Proceedings, UK), vol. 4, no. 1, pp.1-11, Jan**.** 2010.

16. F. Sadi, S. Y. Lee, and **M. K. Hasan**, "Removal of ring artifacts in computed tomographic imaging using iterative center weighted median filter", vol. 40, no. 1, pp.109-118**,** Computers in medicine biology, Elsevier, Jan. 2010.

17. M. Ryyan Khan, Hafiz Imtiaz, and **M. K. Hasan**, "Show-through correction in scanned images using joint histogram", Signal, Image and Video Processing (SIViP), Springer (UK), vol.4, pp.337-351, 2010.

18. **M. K. Hasan**, M. S. Apu, and M. K. I. Molla, "A robust method for parameter estimation of AR systems using empirical mode decomposition", Signal, Image and Video Processing (SIViP), Springer (UK), vol. 4, pp.451-461, 2010.

19. M. A. Arafat, J. Sieed, and **M. K. Hasan**, "Detection of ventricular fibrillation using empirical mode decomposition and Bayes decision theory", vol. 39, no. 11, pp.1051-1057**,** Computers in biology and medicine, Elsevier, Nov. 2009.

20. T. Islam and **M. K. Hasan**, "Improved eigenfilter design method for channel shortening equalizers for DMT systems", IEEE Signal Processing Letters, vol. 16, no. 5, pp.386-389, May 2009.

21. T. Hasan and **M. K. Hasan**, "Suppression of residual noise from speech signals using empirical mode decomposition", IEEE Signal Processing Letters, vol. 16, no. 1, pp.2-5, Jan. 2009.

22. M. A. Haque and **M. K. Hasan**, "Robust multichannel LMS-type algorithms with fast decaying transient for blind identification of acoustic channels", Journal IET Signal Processing (formerly IEE Proceedings, UK), vol. 2, no. 4, pp.431-441, Dec. 2008.

23. M. A. Haque and **M. K. Hasan**, "Noise robust multichannel frequency-domain LMS-type algorithms for blind channel identification", IEEE Signal Processing Letters, pp.305-308, vol.15, 2008.

24. M. A. Haque and **M. K. Hasan**, "Variable step-size multichannel frequency-domain LMS algorithm for blind identification of finite impulse response systems", Journal IET Signal Processing (formerly IEE Proceedings, UK), vol. 1, no. 4, pp.182-189, 2007.

25. M. A. Haque, M. S. A. Bashar, P. A. Naylor, K. Hirose and **M. K. Hasan**, "Energy constrained frequency-domain normalized LMS algorithm for blind channel identification", Signal, Image and Video Processing (SIViP), Springer (UK), pp.203-213, 2007.

26. N. D. Gaubitch**, M. K. Hasan**, and P. A. Naylor, "Generalized optimal step-size for blind multichannel LMS system identification"**,** IEEE Signal Processing Letters, vol. 13, no. 10, October 2006.

27. **M. K. Hasan**, S. Hussain, M. T. H. Setu, and M. N. I. Nazrul, "Signal reshaping using dominant harmonic for pitch estimation of noisy speech", Signal Processing, Elsevier Science B.V., vol. 86, no. 5, pp.1010-1018, 2006.

28. **M. K. Hasan,** N. M. Hossain, and P. A. Naylor, "A novel autocorrelation model-based identification method for ARMA systems in noise", IEE Proc.-Vis. Image Signal Process., vol. 152, no. 5, pp.520-526, October 2005.

29. **M. K. Hasan,** S. Salahuddin, and M. R. Khan, "A modified *a priori* SNR for speech enhancement using spectral subtraction rules", IEEE Signal Processing Letters, vol. 11, no. 4, pp.450-453, 2004.

30. **M. K. Hasan,** S. Salahuddin, and M. R. Khan, "Reducing signal-bias from MAD estimated noise level for DCT speech enhancement", Signal Processing, Elsevier Science B.V., vol. 84, no. 1, pp.151-162, 2004.

31. **M. K. Hasan,** A. K. M. Z. R. Chowdhury, and M. R. Khan, "Identification of autoregressive signals in colored noise using damped sinusoidal model", IEEE Trans. Circuits and Systems-I: Fundamental Theory and Applications, vol. 50, no. 7, pp.966-969, July 2003.

32. **M. K. Hasan,** S. A. Fattah and M. R. Khan, "Identification of noisy AR systems using damped sinusoidal model of autocorrelation function", IEEE Signal Processing Letters, vol. 10, no. 6, pp.157-160, June 2003.

33. S. M. M. Rahman and **M. K. Hasan**, "Wavelet-domain iterative center weighted median filter for image denoising", Signal Processing, Elsevier Science B.V., vol. 83, pp.1001-1012, April 2003.

34. **M. K. Hasan**, M. J. Hossain, and M. A. Haque, "Parameter estimation of multichannel autoregressive processes in noise", Signal Processing, Elsevier Science B.V., vol. 83, no. 3, pp.603-610, Feb. 2003.

35. **M. K. Hasan** and M. R. Khan, "Identification of autoregressive systems at a very low SNR using cosine model based estimation of autocorrelation function", Journal of Signal Processing, vol.7, no. 1, 15-21 January 2003.

36. M. S. A. Zilany, **M. K. Hasan** and M. R. Khan, "Signal-bias compensated noise level for wavelet speech enhancement", Journal of Signal Processing, vol.7, no. 1, pp.41-50, January 2003.

37. S. Salahuddin, S. Z. Al Islam, **M. K. Hasan**, and M. R. Khan, "Soft thresholding for DCT speech enhancement", IEE *Electron. Lett*., vol.38, no. 24, pp.1605-1607, Nov. 2002.

38. **M. K. Hasan** , M. S. A. Zilany, and M. R. Khan, "DCT speech enhancement with hard and soft thresholding criteria", IEE *Electron. Lett*., vol.38, no. 13, pp.669-670, June 2002.

39. M. I. H. Bhuiyan, **M. K. Hasan**, N. C. Hammadi and T. Yahagi, "Image compression with neural networks using dynamical construction algorithm", Journal of Signal Processing, vol.5, no.6, pp.445-454, November 2001.

40. M. A. Haque**, M. K. Hasan** and H. Tazawa**,** "Investigation of the nonlinearity in the heart rate dynamics", Medical Engineering & Physics, Elsevier Science B.V., vol.27, no.2, pp.27-31, 2001.

41. **M. K. Hasan** and K. I. U. Ahmed, "Further results on autoregressive spectral estimation from noisy observations", Trans. IEICE Fundamentals vol.E84-A, no.2, pp.577-588, Feb. 2001.

42. M. A. Haque**, M. K. Hasan**, M. E. R. Khan, M. Z. Islam and A. Saha, "Fractal modeling of time series data", Journal of Electrical Engineering, June 2000.

43. **M. K. Hasan**, M. A. Haque and G. N. Ali, "New iterative schemes for the input and parameter estimation of nonminimum phase ARMA systems", Journal of Electrical Engineering, vol.EE 27, no. II, pp.39-45, December 1999.

44. **M. K. Hasan** and T. Yahagi, "On the improvement of accuracy of input and parameter estimation of nonminimum phase MA systems", Journal of Signal Processing, vol.1, no.3, pp.195-204, May 1997.

45. **M. K. Hasan**, M. M. Mollah and T. Yahagi, "Maximum likelihood estimation of autoregressive systems degraded by colored noise", Journal of Signal Processing, vol.1, no.2, pp.125-133, March 1997.

46. **M. K. Hasan**, M. M. Mollah and T. Yahagi, "Identification of two-dimensional autoregressive systems from observations containing noise", Journal of Signal Processing, vol.1, no.1, pp.53-62, January 1997.

47. **M. K. Hasan** and T. Yahagi, "A new time-domain design method of IIR approximate inverse systems using all-pass filters", Trans. IEICE Fundamentals, vol.E79-A, no.11, pp.1870-1878, Nov. 1996.

48. **M. K. Hasan** and T. Yahagi, "An iterative method for the identification of multichannel autoregressive processes with additive observation noise", Trans. IEICE Fundamentals, vol.E79-A, no.5, pp.674-680, May 1996.

49. **M. K. Hasan**, S. Shimizu and T. Yahagi, "Design of approximate inverse systems using all-pass networks, Trans. IEICE Fundamentals", vol.E79-A, no.2, pp.248-251, Feb. 1996.

50. M. M. Shahidul Hassan and **M. K. Hasan**, "Dependence of second breakdown in transistor on load inductance and reverse base drive", Journal of Electrical Engineering,vol.EE23, no.I & II, pp.29-36, Dec. 1995.
51. **M. K. Hasan** and T. Yahagi, "New results on the ARMA modeling of AR signal plus white noise process", Trans. ISCIE, vol.8, no.11, pp.667-669, Nov. 1995.
52. **M. K. Hasan**, S. Shimizu and T. Yahagi, "Optimal design of approximate inverse systems in the frequency domain", Trans. ISCIE, vol.8, no.11, pp.670-672, Nov. 1995.
53. T. Yahagi and **M. K. Hasan**, "Estimation of noise variance from noisy measurements of AR and ARMA systems: application to blind identification of linear time-invariant systems", Trans. IEICE Fundamentals, vol.E77-A, no.5, pp.847-855, May 1994.
54. **M. K. Hasan**, T. Yahagi and M. A. A. Henriques, "An approach to ARMA model identification from noise corrupted output measurements", Trans. IEICE Fundamentals, vol.E77-A, no.4, pp.726-730, April 1994.
55. M. A. A. Henriques, **M. K. Hasan** and T. Yahagi, "An extension to the overfitting lattice filter for ARMA parameter estimation with additive noise", Trans. IEICE Fundamentals, vol.E77-A, no.3, pp.482-485, March 1993.

b) International Conferences (*refereed*):

56. S. K. Roy, M. K. I. Mollah, K. Hirose, and **M. K. Hasan,** "Dominant Harmonic Modification with Data Adaptive Filter Based Algorithm for Robust Pitch Estimation", Proc. of IEEE International Symposium on Circuits and Systems (ISCAS 2011), pp.2417-2420, May 15-18, 2011, Rio de Janeiro, Brazil.
57. E. M. A. Anas, J. Kim, S. Y. Lee and **M. K. Hasan**, "Ring artifact corrections in flat-panel detector based cone beam CT", Proc. of SPIE Medical Imaging Conf., February 12-17, 2011, Florida, USA.
58. S. K. Roy, M. K. I. Mollah, K. Hirose, and **M. K. Hasan,** "Pitch estimation of noisy speech signals using EMD-Fourier based hybrid algorithm", Proc. of IEEE International Symposium on Circuits and Systems (ISCAS 2010), Accepted, May 30-June 2, 2010, Paris, France.
59. M. A. Haque and **M. K. Hasan,** "Fast adaptive frequency-domain mutually referenced equalizers for SIMO channels with noise", Proc. of International Conference on Electrical and Computer Engineering (ICECE 2010), pp.522-525, December 18-20, 2010, Dhaka, Bangladesh.
60. E. M. A. Anas, S. Y. Lee and **M. K. Hasan,** "Removal of ring artifacts in X-ray micro tomography using polyphase decomposition and spline interpolation", Proc. of International Conference on Electrical and Computer Engineering (ICECE 2010), pp.638-641, December 18-20, 2010, Dhaka, Bangladesh.
61. A. Arafat and **M. K. Hasan**, "Automatic detection of ECG characteristic wave boundaries using empirical mode decomposition", Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2009), pp.461-465, April 19-24, 2009, Taipei, Taiwan.
62. M. A. Wahab, M. Adel Uzzaman, M. S. Hai, M. A. Haque and **M. K. Hasan**, "Variable step-size LMS for nonblind system identification with noise", Proc. of International Conference on Electrical and Computer Engineering (ICECE 2008), vol. 1, pp. 428-433, December 20-22, 2008, Dhaka, Bangladesh.

63. T. Islam, S. P. Majumder, and **M. K. Hasan**, "Noise optimized minimum delay spread equalizer design for DMT transceivers", Proc. of International Conference on Electrical and Computer Engineering (ICECE 2008), vol. 2, pp.898-901, December 20-22, 2008, Dhaka, Bangladesh.

64. T. Islam and **M. K. Hasan,** "On MIMO channel shortening for cyclic-prefixed system", Proc. of IEEE International Conference on Wireless Communications, Networking and Mobile Computing (WiCOM 2008), October 12-14, 2008, Dalian, China.

65. M. K. I. Mollah, K. Hirose, N. Minematsu, and **M. K. Hasan,** "A multiband approach for voiced/unvoiced discrimination of speech signals", Proc. of 2008 International Workshop on Nonlinear Circuits and Signal Processing (NCSP 2008), March 6-8, 2008, Gold Coast , Australia.

66. M. K. I. Mollah, K. Hirose, N. Minematsu, and **M. K. Hasan,** "Pitch estimation of noisy speech signals using empirical mode decomposition", Proc. of INTERSPEECH (INTERSPEECH 2007), August 27-31, 2007, Antwerp, Belgium.

67. E. Deger, M. K. I. Mollah, K. Hirose, N. Minematsu, and **M. K. Hasan,** "EMD based soft thresholding for speech enhancement", Proc. of INTERSPEECH (INTERSPEECH 2007), August 27-31, 2007, Antwerp, Belgium.

68. M. A. Haque and **M. K. Hasan,** "Performance comparison of the frequency-domain multichannel normalized and variable step-size LMS algorithms", Proc. of 15th European Signal Processing Conference (EUSIPCO 2007), September 3-7, 2007, Poznan, Poland.

69. T. Hasan and **M. K. Hasan,** "A Probabilistic speech enhancement filter utilizingthe constructive and destructive interference of noise", Proc. of 15th European Signal Processing Conference (EUSIPCO 2007), September 3-7, 2007, Poznan, Poland.

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