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Education

- Ph.D., Electrical Engineering, University of Alabama in Huntsville, 2009
- M.S., Electrical Engineering, University of South Alabama, 2004
- M.S., Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology, 2003
- B.S., Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology, 1998

Publications (Since 2008)

Refereed Journal Papers

1. Jesmin Khan, **Sharif M. A. Bhuiyan**, Gregory Murphy and Morgan Arline, "Embedded Zerotree Wavelet Based Data Denoising and Compression for Smart Grid", *IEEE Transactions on Industry Applications*, April 2015.
2. Mohammad S. Alam, **Sharif M. A. Bhuiyan**, "Trends in Correlation based Pattern Recognition and Tracking in Forward Looking Infrared Imagery," *Sensors*, Vol. 14, No. 8, pp. 13437-13475, July 2014.
3. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Gregory V. Murphy and Mohammad S. Alam, "Noise Removal from ECG signal using Empirical Mode Decomposition", *Journal of Biomedical Image Processing*, Vol. 1, No. 2, pp. 45-56, August 2014.
4. **Sharif M. A. Bhuiyan**, Sherell Carey, Jesmin F. Khan, "Analysis of signal trend by a pseudo-EMD method with applications to weather and speech data," *Advances in Adaptive Data Analysis*, Vol. 5, No. 2, pp. 1350009: 1-21, April 2013.
5. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Mohammad S. Alam, Reza R. Adhami, "Color image trend adjustment using a color bidimensional empirical mode decomposition method," *Journal of Electronic Imaging*, Vol. 21, No. 3, pp. 033019:1-15, July 2012.
6. Jesmin F. Khan, Reza R. Adhami, **Sharif M. A. Bhuiyan**, "Feature Points Extraction from the Local Frequency Map of an Image," *Journal of Electrical and Computer Engineering*, Vol. 2012, Article ID 182309, pp. 1-15, 2012.

7. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Reza R. Adhami, "Image segmentation and shape analysis for road sign detection," *IEEE Transactions on Intelligent Transportation Systems*, Vol. 12, No. 1, pp. 83-96, March 2011.
8. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Reza R. Adhami, "A novel approach of edge detection via a fast and adaptive bidimensional empirical mode decomposition method," *Advances in Adaptive Data Analysis*, Vol. 2, No. 2, pp. 171-192, April 2010.
9. **Sharif M. A. Bhuiyan**, Nii O. Attah-Okine, Kenneth E. Barner, Albert Y. Ayenu-Prah, Reza R. Adhami, "Bidimensional empirical mode decomposition using various interpolation techniques," *Advances in Adaptive Data Analysis*, Vol. 1, No. 2, pp. 309-338, April 2009.
10. Jesmin F. Khan, Mohammad S. Alam and **Sharif M. A. Bhuiyan**, "Automatic Target Detection in FLIR Imagery via Probabilistic Neural Networks," *Applied Optics*, Vol. 48, No. 3, pp. 464-476, 2009.
11. Jesmin F. Khan, Reza R. Adhami and **Sharif M. A. Bhuiyan**, "A Customized Gabor Filter for Unsupervised Color Image Segmentation," *Image and Vision Computing*, Vol. 27, No. 4, pp. 489-501, March 2009.
12. **Sharif M. A. Bhuiyan**, Reza R. Adhami, Jesmin F. Khan, "Fast and adaptive bidimensional empirical mode decomposition using order-statistics filter based envelope estimation," *EURASIP Journal on Advances in Signal Processing*, Vol. 2008, Special Issue on the Empirical Mode Decomposition and the Hilbert-Huang Transform, Article ID 728356, pp. 1-18, 2008.

Referred Conference Papers (International)

1. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, and Gregory Murphy, "Noise Removal from Power System Signals," *Proc. of 40th Annual Conference of IEEE Industrial Electronics Society (IECON 2014)*, (Dallas, Texas, USA, October 29 – November 01, 2014).
2. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Gregory Murphy and Jonathan Williams, "PMU Data Analysis in Smart Grid using WPD," *Proc. of 40th Annual Conference of IEEE Industrial Electronics Society (IECON 2014)*, (Dallas, Texas, USA, October 29 – November 01, 2014).
3. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Mohammad S. Alam, "Power enhanced extended maximum average correlation height filter for target detection," *Proc. of IEEE SoutheastCon 2014*, (Lexington, Kentucky, USA, March 13-16, 2014)
4. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Gregory Murphy and Morgan Arline, "Embedded Zerotree Wavelet Based Data Compression for Smart Grid", *Proc. of IEEE IAS Annual Meeting 2013*, (Orlando, Florida, USA, October 6-11, 2013).
5. **Sharif M. A. Bhuiyan**, Sherell Carey, Jesmin F. Khan, "Trend Analysis of Sea Surface Temperature and Sea Level Pressure Employing a Pseudo-EMD method," *Proc. of IEEE SoutheastCon 2013*, (Jacksonville, Florida, USA, April 04-08, 2013).
6. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, and Mohammad S. Alam, "Spectral unmixing of hyperspectral data for oil spill detection," *Proc. of SPIE*, (Optical Engineering and Applications 2012: Optics and Photonics for Information Processing VI), Vol. 8498, 2012, (San Diego, California, USA, August 2012).
7. **Sharif M. A. Bhuiyan**, Jesmin F. Khan and Mohammad S. Alam, "Spatial domain sharpening of color image employing bidimensional empirical mode decomposition," *Proc. of SPIE* (Defense, Security and Sensing 2012: Optical Pattern Recognition XXIII), Vol. 8398, 2012, (Baltimore, Maryland, USA, April 2012).

8. Paheding Sidike, Jesmin F. Khan, Mohammad S. Alam, Ravi Gollapalli, **Sharif M. A. Bhuiyan**, "Efficient classification of multispectral imagery for oil spill detection," *Proc. of International Conference on Advances in Electrical Engineering (ICAEE, 2011)*, (December 2011, Dhaka, Bangladesh)
9. Jesmin. F. Khan, **Sharif M. A. Bhuiyan**, "Evaluation of the Number of Segments using Weighted Entropy," *Proc. of 2011 Joint IEEE Conference on Industrial Technology (ICIT) & 43rd Southeastern Symposium on System Theory (SSST)*, (Auburn, Alabama, USA, March 2011).
10. Jesmin. F. Khan, **Sharif M. A. Bhuiyan**, Kazi M. Rahman, "Voltage Enhancement of A Two-phase Inverter Using SVPWM," *Proc. of 2011 Joint IEEE Conference on Industrial Technology (ICIT) & 43rd Southeastern Symposium on System Theory (SSST)*, (Auburn, Alabama, USA, March 2011).
11. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Gregory V. Murphy, Mohammad S. Alam, "Empirical mode decomposition of the ECG signal for noise removal," *Proc. of SPIE (Defense, Security and Sensing: Optical Pattern Recognition XXII)*, Vol. 8055, 2011, (Orlando, Florida, USA, April 2011).
12. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Reza R. Adhami, "A bidimensional empirical mode decomposition method for color image processing," *Proc. of 2010 IEEE Workshop on Signal Processing Systems (SiPS)*, pp. 272-277, (October 2010, San Francisco, California, USA).
13. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Mohammad S. Alam, "Trend adjustment in color images using bi-dimensional empirical mode decomposition," *Proc. of SPIE*, Vol. 7696, pp. 76961R:1-12, (*SPIE Defense, Security, and Sensing; Optical Pattern Recognition XXI*), (Orlando, Florida, USA, April 2010).
14. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Reza R. Adhami, "Empirical mode decomposition based interest points for road sign detection," *Proc. of 2010 IEEE Workshop on Signal Processing Systems (SiPS)*, pp. 278-283, (October 2010, San Francisco, California, USA).
15. **Sharif M. A. Bhuiyan**, Jesmin F. Khan, Nii O. Attoh-Okine, Reza R. Adhami, "Study of Bidimensional Empirical Mode Decomposition Method for Various Radial Basis Function Surface Interpolators," *Proc. of Eighth IEEE International Conference on Machine Learning and Applications (ICMLA 2009)*, pp. 18-24, 2009, (Miami, Florida, USA, December 2009).
16. Jesmin F. Khan, **Sharif M. A. Bhuiyan**, Reza R. Adhami, "Distortion invariant road sign detection," *Proc. of 2009 IEEE International Conference on Image Processing (ICIP 2009)*, pp. 841-844, 2009, (Cairo, Egypt, November 2009).
17. Jesmin F. Khan, Reza R. Adhami, **Sharif M. A. Bhuiyan**, "Image segmentation based road sign detection," *Proc. of IEEE SoutheastCon 2009*, pp. 24-29, 2009, (Atlanta, Georgia, March 2009).
18. **Sharif M. A. Bhuiyan**, Reza R. Adhami, Jesmin F. Khan, "Edge detection via a fast and adaptive bidimensional empirical mode decomposition," *Proc. of 2008 IEEE International Workshop on Machine Learning for Signal Processing*, pp. 199-204, 2008 (Cancun, Mexico, October 2008).
19. **Sharif M. A. Bhuiyan**, Reza R. Adhami, Jesmin F. Khan, "A novel approach of fast and adaptive bidimensional empirical mode decomposition," *Proc. of 2008 IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP)*, pp. 1313-1316, 2008 (Las Vegas, Nevada, USA, March-April 2008).

20. Jesmin F. Khan, Reza R. Adhami, **Sharif M. A. Bhuiyan**, Kenneth E. Barner, "Empirical mode decomposition based interest point detector," *Proc. of 2008 IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP)*, pp. 1317-1320, 2008, (Las Vegas, Nevada, USA, March-April 2008).
21. Jesmin F. Khan, Reza R. Adhami, **Sharif M. A. Bhuiyan**, "Unsupervised image segmentation utilizing penalized inverse expectation maximization algorithm," *Proc. of 2008 IEEE International Conference on Acoustics, Speech and Signal processing (ICASSP)*, pp. 937-940, 2008, (Las Vegas, Nevada, USA, March-April 2008).
22. **Sharif M. A. Bhuiyan**, Reza R. Adhami, Heggere S. Ranganath, Jesmin F. Khan, "Aurora Image Denoising with a Modified Bidimensional Empirical Mode Decomposition Method," *Proc. of IEEE SoutheastCon 2008*, pp. 527-532, 2008 (Huntsville, Alabama, USA, April 2008).
23. Jesmin F. Khan, Reza. R. Adhami and **Sharif M. A. Bhuiyan**, "Color Image Segmentation Utilizing a Customized Gabor Filter," *Proc. of IEEE SoutheastCon 2008*, pp. 539-544, 2008 (Huntsville, Alabama, USA, April 2008).
24. Jesmin F. Khan, Reza R. Adhami and **Sharif M. A. Bhuiyan**, "Interest Points Detection based on Local Frequency Information of an Image," *Proc. of IEEE SoutheastCon 2008*, pp. 569-574, 2008 (Huntsville, Alabama, USA, April 2008).