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Present Position

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Publications

Refereed Journal Papers

Published/Accepted

1. **Jesmin Khan**, Sharif Bhuiyan, Gregory Murphy and Johnathan Williams, "Data Denoising and Compression for Smart Grid Communication", accepted for publication in *IEEE Transactions on Signal and Information Processing over Networks*.
2. **Jesmin Khan**, Sharif Bhuiyan, Gregory Murphy and Morgan Arline, "Embedded Zerotree Wavelet Based Data Denoising and Compression for Smart Grid", *IEEE Transactions on Industry Applications*, 06 April 2015.
3. **Jesmin Khan**, Sharif Bhuiyan, Gregory Murphy and Mohammad 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. **Jesmin Khan**, Sharif Bhuiyan and Reza Adhami, "Hierarchical Clustering of EMD based Interest Points for Road Sign Detection", *ELSEVIER Journal of Optics and Laser Technology*, Vol. 57, pp. 271-283, April 2014.
5. **Jesmin Khan** and Sharif Bhuiyan, "Weighted Entropy for Segmentation Evaluation", *ELSEVIER Journal of Optics and Laser Technology*, Vol. 57, pp. 236-242, April 2014.
6. Sharif M. A. Bhuiyan, Sherell Carey and **Jesmin F. Khan**, "Analysis of signal trend by a pseudo-EMD method with applications to weather and speech data," *WorldScientific Journal of Advances in Adaptive Data Analysis*, Vol. 5, No. 2, Article ID 1350009, pp. 1-21, 2013.
7. **Jesmin F. Khan**, Sharif M. A. Bhuiyan, Kazi M. Rahman and Gregory V. Murphy, "Space vector PWM for two phase VSI," *ELSEVIER International Journal of Electrical Power and Energy Systems*, Vol. 51, pp. 265-277, 2013.
8. Sharif M. A. Bhuiyan, **Jesmin F. Khan**, Mohammd S. Alam, Reza R. Adhami, "Color image trend adjustment using a color bidimensional empirical mode decomposition method," *SPIE Journal of Electronic Imaging*, Vol. 21, No. 3, 2012.
9. **Jesmin F. Khan**, Reza R. Adhami, Sharif M. A. Bhuiyan, "Feature Points Extraction from the Local Frequency Map of an Image," *EURASIP Journal of Electrical and Computer Engineering*, Vol. 2012, Article ID 182309, pp. 1-15, 2012.
10. **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.
11. 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," *WorldScientific Journal of Advances in Adaptive Data Analysis*, Vol. 2, No. 2, pp. 171-192, April 2010.
12. **Jesmin F. Khan**, M. S. Alam and Sharif M. A. Bhuiyan, "Automatic Target Detection in FLIR Imagery via Probabilistic Neural Networks," *OSA Journal of Applied Optics*, Vol. 48, No. 3, pp. 464-476, 2009.
13. **Jesmin F. Khan**, Reza R. Adhami and Sharif M. A. Bhuiyan, "A Customized Gabor Filter for Unsupervised Color Image Segmentation," *ELSEVIER Journal of Image and Vision Computing*, Vol. 27, No. 4, pp. 489-501, March 2009.
14. **Jesmin F. Khan**, Kenneth E. Barner and Reza R Adhami, "Feature Point Detection Utilizing the Empirical Mode Decomposition," *EURASIP Journal on Advances in Signal Processing*, Vol. 2008, Special Issue on the Empirical Mode Decomposition and the Hilbert-Huang Transform, Article ID 287061, pp. 1-13, 2008.

15. 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*, Special Issue on the Empirical Mode Decomposition and the Hilbert-Huang Transform, Article ID 728356, pp. 1-18, 2008.

Conference Proceedings Papers

Published/Accepted

1. **Jesmin Khan**, Sharif Bhuiyan, and Gregory Murphy, “Noise removal from power system signals”, published in *Proc. of IEEE Industrial Electronics Society Conference IECON2014*.
2. **Jesmin Khan**, Sharif Bhuiyan, Gregory Murphy and Johnathan Williams, “PMU Data Analysis in Smart Grid using WPD”, published in *Proc. of IEEE Industrial Electronics Society Conference IECON2014*.
3. **Jesmin Khan**, Sharif Bhuiyan, Gregory Murphy and Morgan Arline, “Embedded Zerotree Wavelet Based Data Compression for Smart Grid”, published in *Proc. of IEEE Industry Application Society (IAS) Annual Meeting 2013*.
4. Sharif M. A. Bhuiyan, **Jesmin F. Khan** and Mohammad S. Alam, “Power enhanced extended maximum average correlation height filter for target detection,” published in *Proc. of IEEE SoutheastCon 2014*.
5. Sherell Carey, Sharif M. A. Bhuiyan, **Jesmin F. Khan**, “Trend Analysis of Sea Surface Temperature and Sea Level Pressure Employing a Pseudo-EMD method,” published in *Proc. of IEEE SoutheastCon 2013*.
6. Paheding Sidike, **Jesmin F. Khan**, Mohammad S. Alam, and Sharif M. A. Bhuiyan, “Spectral Unmixing of Hyperspectral Data for Oil Spill Detection”, published in *Proc. of SPIE Optics and Photonics for Information Processing VI*, 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, and 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, Gregory V. Murphy, and Mohammad S. Alam, “Empirical Mode Decomposition of the ECG signal for Noise Removal,” (Invited Paper) *Proc. of SPIE Defense, Security and Sensing*, (Orlando, Florida, USA, April 2011)
10. **Jesmin. F. Khan**, Sharif M. A. Bhuiyan, Kazi M. Rahman, “Voltage Boost to a Two-phase Inverter by 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, “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).
12. **Jesmin F. Khan**, Sharif M. A. Bhuiyan, Reza R. Adhami, “Road sign detection by clustering the EMD based interest points,” *Proc. of 2010 IEEE Workshop on Signal Processing Systems (SiPS)*, pp. 278-283, (October 2010, San Francisco, California, USA).
13. 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).
14. 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).
15. **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).
16. Sharif M. A. Bhuiyan, **Jesmin F. Khan**, Nii O. Attah-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).
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. **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).
 20. **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).
 21. 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).
 22. **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).
 23. **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).
 24. 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).