SUNIL JAISWAL

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EDUCATION

PhD Candidate, Electronics and Computer Engineering,
The Hong Kong University of Science and Technology (HKUST)   Aug'2012 - Present

B. Tech in Electronics and Communication Engineering,   Aug'2008-May'2012
The LNM Institute of Information Technology (LNM-IIT), Jaipur, INDIA

EXPERIENCE

PhD Candidate | Multimedia Technology Research Center, HKUST, Hong Kong   Aug'2012 - Present

- Supervisors : Prof. Oscar C. Au (IEEE Fellow), Prof. Matthew McKay
- Topic of research: Multispectral/Color Imaging, 3D CT reconstruction, Image Quality Assessment
- Programming Language: C++, Matlab

Visiting Scholar | Visual Analytics and Imaging Lab, Stony Brook University, NY, USA   Apr – Jan' 2015

- Supervisor : Prof. Klaus Mueller
- Topic of research : 3D CT reconstruction, CT Artifact reduction, GPU Processing
- Programming Language: CUDA, C++, and Matlab.

Research Assistant | Center for Biomedical Image Analysis (CBIA), Masaryk University, Czech Republic   June – Aug'2011

- Supervisor : Prof. Michael Kozubek, Prof. David Svobda
- Topic of research: Visible Watermarking of 3D Medical Images
- Programming Language: C++, and Matlab.

Research Assistant | Indian Institute of Technology, Jodhpur (IIT Jodhpur), India   June – Aug 2010, 2012

- Supervisor : Prof. Anil Kumar Tiwari
- Topic of research: Image Interpolation and Compression

AWARDS/RECOGNITION

- SENG PhD fellowship, HKUST (Sept'2015 – Aug'2016), Postgraduate Scholarship, HKUST (Sept'2012-Aug'2015).
- HKUST Overseas Research Award for Visiting Stony Brook University, New York, USA and SUNY Korea.
- Travel Award from IEEE SPS Society for ICIP'2016, Phoenix (USA).
- Undergraduate *Best Paper Award* in I2MTC'2011 conference from IEEE Instrumentation and Measurement Society
- Research Travel Award, HKUST: (1) IEEE ICIP'2016 Phoenix, USA, (2) ICIP'2014, France, (3) ICIP'2013, Australia.
- Travel Award from IEEE IM society to attend IEEE I2MTC'2012 at Vienna, Austria.
- Microsoft Research Award for attending ISCAS'2011 in Rio De Janeiro, Brazil.

CONFERENCE ATTENDED

- IEEE International Conference of Image Processing (ICIP) 2016, 25-28'September, Phoenix, USA.
- AOTULE forum hosted by University of Melbourne, Australia, November, 2014 (*Represented School of Engineering, HKUST*).
- IEEE International Conference of Image Processing (ICIP) 2014, 27-30'October, Paris, France.
- Student Ambassador for Consul Generals Reception at HKUST, Hong Kong, 14 Oct'2014.
- ASPIRE FORUM hosted by Tsinghua University, Beijing, CHINA, 6-12 July, 2014 (*Represented School of Engineering, HKUST*)
- Hong Kong Electronics Symposium (HKES), Hong Kong, 14th April'2014
- IEEE International Instrumentation and Measurement Technology Conference (I2MTC) 2012, Graz, Austria, 13-16 May'2012
- IEEE International Conference of Image Processing (ICIP) 2013, Melbourne, Australia
- IEEE International Symposium on Circuits and Systems (ISCAS) 2011, Rio De Janeiro, Brazil, 15-18 May, 2011
- The National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), January 15-17, 2010 in Jaipur, INDIA

JOURNAL PUBLICATIONS

1. **S. Jaiswal**, L. Fang, V. Jakhetiya, J. Pang, O. Au, K. Mueller, "Adaptive Multispectral Demosaicking Based on Frequency Domain Analysis of Spectral Correlation," accepted in *IEEE Transactions of Image Processing,* November'2016

2. V. Jakhetiya, W. Lin**, S. Jaiswal**, S. Guntuku, O. Au, "Maximum a posterior and perceptually motivated Reconstruction algorithm: A Generic Framework," Accepted to *IEEE Transactions of Multimedia*, August, 2016.

3. V. Jakhetiya, W. Lin**, Q**iaohong Li, **S. Jaiswal**, "A Prediction Based Approach for Reduced-Reference Quality Assessment for Screen Content Images," Submitted to *IEEE Transactions of Multimedia* **(Revised version submitted after major revision acceptance)**

4. V. Jakhetiya, W. Lin, **S. Jaiswal**, S. Guntuku, O.C. Au, "Just Noticeable Difference for Natural Images using RMS Contrast and Feed-back Mechanism," Submitted *to IEEE Trans. Multimedia* **(Revised version submitted after major revision acceptance**)

CONFERENCE PUBLICATIONS

1. **S. Jaiswal**, L. Fang, V. Jakhetiya, M. Kuse, O.C Au, "Optimized High-Frequency Based Interpolation For Multispectral Demosaicking," Prof. of IEEE International Conference on Image Processing (ICIP), 25-28 Sept. 2016, Phoenix,USA.

2. **S. Jaiswal,** S. Ha, K. Mueller, "MADR: Metal Artifact Detection and Reduction for CT Imaging," Proc. of SPIE Medical Imaging, 27 Feb – 03 Mar 2016, San Diego, USA.

3. M. Kuse, **S. Jaiswal**, "Graph Modelling of 3D Geometric Information For Color Consistency of Multiview Images," Proc. of IEEE International Conference on Image Processing (ICIP), 27-30 Sept. 2015, Canada.

4. A. Zheng, Y. Yuan, **S. Jaiswal**, O. Au, "Motion Estimation Via Hierarchical Block Matching and Graph Cut," Proc. of IEEE International Conference on Image Processing (ICIP), 27-30 Sept. 2015, Quebec, Canada.

5. **S. Jaiswal**, O. Au, V. Jakhetiya, Y. Yuan, H. Yang, "Exploitation of Inter-Color Correlation for Color Image Demosaicking," Prof. of IEEE International Conference on Image Processing (ICIP), 27-30 Sept.2014, France

6. **S. Jaiswal**, O. Au, V. Jakhetiya, Y. Guo, A. Tiwari, "Adaptive Predictor Structure based Interpolation for Reversible Data Hiding," Prof. of International Workshop on Digital-forensics and Watermarking (IWDW), 1-4 Oct'2014

7. V. Jakhetiya, O. Au, **S. Jaiswal,** L. Jia, H. Zhang, "Fast and efficient intra-frame de-interlacing using observation model   based bilateral Filter," Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 4-9 May 2014, Florence, Italy

8. **S. Jaiswal**, O. Au, V. Jakhetiya, Y. Guo, A. Tiwari, "Efficient Adaptive Prediction Based Reversible Image Watermarking," Proc. of IEEE International Conference on Image Processing (ICIP) 2013, Sept. 15-18, 2013 at Australia.

9. **S. Jaiswal,** V. Jakhetiya, A. Tiwari, "An Efficient Image Interpolation Algorithm Based upon the Switching and Self Learned Characteristics of Natural Images," Proc. of IEEE International Symposium on Circuits and Systems (ISCAS), May 2011, Rio De Janeiro, Brazil

10. V. Jakhetiya**, S. Jaiswal** and A. Tiwari, "A Computationally Efficient Context based Image Interpolation Algorithm for natural Images," Proc. Of IEEE International Instrumentation and Measurement Technology Conference (I2MTC), 10-12 May 2011, China. (**Best Student Paper Award**).