

# **Abdul Wadood Abdul Waheed**

## **Contact**

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College of Computer and Information Sciences,  
King Saud University,  
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## **Major: Signal and Image Processing**

## **Minor: Image Watermarking, Steganography and Fingerprinting**

## **Research Interests**

Color image watermarking and fingerprinting, perceptual mutiresolutional analysis of images, steganography, biometric template protection, privacy and security.

## **Employment**

December 2011 to date      Assistant Professor, Department of Computer Engineering,  
King Saud University, Kingdom of Saudi Arabia.

## **Courses Taught**

Signals and Systems, Digital Signal Processing and Digital Image Processing.

## **Service Activities**

1. Head NCAAA Committee, Department of Computer Engineering, College of Computer and Information Sciences, King Saud University, 2013 to date.
2. Member Development and Quality Committee, College of Computer and Information Sciences, King Saud University, 2013 to date.
3. Member Development and Quality Committee, Department of Computer Engineering, College of Computer and Information Sciences, King Saud University, 2013 to date.

## **Research Grants**

1. Hybrid multi-biometric template protection approach based on Watermarking and Secure Sketch Place: General Direction of Research Grants (GDRG), King Abdulaziz City for Sciences and Technology (KACST), Riyadh Duration: Sep. 2015 – Aug. 2016 Responsibility: Co-Investigator.
2. Biometric template protection for enhanced security Place: Research Center, CCIS, King Saud University Duration: November 2012 – April 2014 Responsibility: Co-Investigator.

3. Chaos based image steganography algorithm Place: Research Center, CCIS, King Saud University Duration: November 2012– April 2014 Responsibility: Principal Investigator.

### **Education**

Doctor of Philosophy in Signal and Image Processing - 2011

University of Poitiers, Poitiers, France

Title of Thesis: Robust Multichannel Perceptual Color Image Watermarking and Private Anonymous Fingerprinting.

Master of Science in Information Technology and Communication - 2007

University of Limoges, Limoges, France

Title of Thesis: Error Correcting Codes for Image Watermarking.

Post Graduate Diploma in Computer Engineering - 2005

National University of Sciences and Technology, Rawalpindi, Pakistan

Bachelor of Computer Engineering - 2004

COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan

Title of Thesis: All Digital  $\pi/4$  Quadrature Phase Shift Keying ( $\pi/4$  QPSK) Modulator and Demodulator for High Speed Communications on an FPGA.

### **Journal Publications**

1. O. Almohammadi, S. Ghouzali, **W. Abdul**, E. Qazi, "Hybrid Multi-Biometric Template Protection Using Watermarking", The Computer Journal (ISI Indexed, IF: 0.787) [published online, doi:10.1093/comjnl/bxv107].
2. E. Qazi, H. Aboalsamh, A. Belghith, M. Hussain **W. Abdul**, M. Dahshan, S. Ghouzali "Challenges and solutions for Internet of Things Driven by IPv6", KSII Transactions on Internet and Information Systems Vol. 9, No. 12 (2015) pp 4739-4758 (ISI Indexed, IF: 0.561).
3. M. Zuair, A. Rahhal, **W. Abdul**, S. Ghouzali and E. Qazi "Spatial domain bit plane steganography", International Journal of Innovative Research in Technology and Science Vol. 3, No. 4 (2015), pp 32-37.
4. C. Moujahdi, S. Ghouzali, M. Mikram, **W. Abdul**, and M. Rziza "Inter-Communication Classification for Multi-View Face Recognition", International Arab Journal of Information Technology (IAJIT) Vol. 11, No. 4 (2014), pp 387-395 (ISI Indexed, IF: 0.390).
5. M. Bilal, S. Imtiaz, **W. Abdul**, S. Ghouzali and S. Asif, "Chaos based Zero steganography algorithm." Multimedia Tools and Applications. Vol. 72, No. 2 (2014) pp 1073-1092 (ISI Indexed, IF: 1.014).
6. **W. Abdul**, P. Carré and P. Gaborit "Error correcting codes for robust color wavelet

watermarking." EURASIP Journal on Information Security 2013, no. 1 (2013): 1-17.

### Conference Publications

1. **W. Abdul**, "Securing Biometric Authentication through Multimodal Watermarking" Third International Conference on Artificial Intelligence, Modelling and Simulation, December 2015, Kota Kinabalu, Malaysia.
2. M. Lafkih, P. Lacharme, C. Rsoenberger, M. Mikram, S. Ghouzali, M. Haziti, **W. Abdul**, D. Aboutajdine, "Application of New Alteration Attack on Biometric Authentication Systems" First International Conference on Anti-Cybercrime (ICACC-2015), Riyadh, Saudi Arabia 2015.
3. S. Ghouzali and **W. Abdul**, "Private Chaotic Biometric Template Protection Algorithm", IEEE Intl. Conf. on Image Information Processing (ICIIP), Dec. 2013, Shimla, India.
4. M. Bilal, S. Imtiaz, **W. Abdul** and S. Ghouzali, "Zero-steganography using DCT and Spatial Domain", ACS/IEEE Intl. Conf. on Computer Systems and Applications (AICCSA), May 2013, Fez, Morocco.
5. M. Bilal, S. Imtiaz, S. Asif, **W. Abdul**, "Power efficient scalable hybrid processor architecture", Second International Conference on Digital Information and Communication Technology and it's Applications (DICTAP), May 2012, Bangkok, Thailand.
6. **W. Abdul**, P. Carré, H. Saadane, P. Gaborit, "Watermarking using multiple visual channels for perceptual color spaces", IEEE International Conference on Image Processing (ICIP), October 2010, Hong Kong.
7. **W. Abdul**, P. Carré, P. Gaborit, "Human visual system-based color image steganography using the contourlet transform", SPIE 2010 - Media Forensics and Security II, USA.
8. **W. Abdul**, P. Gaborit, P. Carré, "Private anonymous fingerprinting for color images in the wavelet domain", SPIE 2010 - Multimedia on Mobile Devices, USA.
9. **W. Abdul**, P. Carré, P. Gaborit, "List decoding of Reed Solomon codes for wavelet based colour image watermarking scheme", IEEE International Conference on Image Processing (ICIP), November 2009, Cairo, Egypt.

### Seminars and Workshops

1. Steganography and Steganalysis, Paris, France, 2010.
2. Social Impacts of Sciences and Information Technology, Limoges, France, 2009.
3. Multiresolutional Analysis of Images, Poitiers, France, 2008.
4. Multimedia Protection, Lyon, France, 2007.
5. Workshop on Parallel Processing, Abbottabad, Pakistan, 2006.

## **Presentations**

1. Color image steganography using the contourlet transform and the human visual system, **W. Abdul**, P. Carré, P. Gaborit, Steganography and Steganalysis, Paris, France, 2010.
2. Multiresolution color image watermarking, P. Carré, P. Gaborit, F. Largeteau, **W. Abdul**, Multimedia Protection, Lyon, France, 2007.

## **Membership in Professional Organizations**

1. Member IEEE.