# YUFENG ZHENG

Department of Advanced Technologies
Alcorn State University
1000 ASU Drive #360
Alcorn State, MS 39096, USA

601-877-6490 (O)
yufeng.zheng@r2image.com or yzheng@alcorn.edu
http://adtech.alcorn.edu/faculty/yzheng/index.html
http://yufengzheng.r2image.com/ and ~/TRS_Demo/

## A. EDUCATION

| | |
|---|---|
| 2001-2005 | Post-doc, Computer Science, University of Louisville (KY, USA) |
| 1994-1997 | Ph.D., Optical Engineering/Image Processing, Tianjin University (Tianjin, China) |
| 1991-1994 | M.S., Optical Engineering/Image Processing, Tianjin University (Tianjin, China) |
| 1985-1989 | B.S., Optical Engineering, Tianjin University (Rank: **Top 5** Tech. Institutes in China) |

## B. POSITIONS AND HONORS

### Positions

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|---|---|
| 2012-Present | Associate Professor (Tenured), Alcorn State University, Alcorn State, MS, USA |
| 2006-2012 | Assistant Professor (Tenure-track), Alcorn State University, Alcorn State, MS, USA |
| 2001-2005 | Post-doctoral Research Associate, University of Louisville, Louisville, KY, USA |
| 1999-2001 | CT Imaging Algorithm Senior Engineer, GE Hangwei Medical Systems Co. Ltd., Beijing, China |
| 1997-1999 | Sr. Software Engineer, Huawei Tech. Co., Beijing, China |
| 1989-1991 | Research Engineer, Changzhi Bearing Manufacturing Co., Shanxi, China |

### Honors

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|---|---|
| 2012 | 2012 President's Award for Research Excellence (honored by Alcorn State University) |
| 2012 | Utility Patent (# 8917914) in Face Recognition (Principal Inventor, Alcorn State University) <br> *Title of the Invention*: FACE RECOGNITION SYSTEM AND METHOD USING FACE PATTERN WORDS AND FACE PATTERN BYTES (DOCKET NO: 13/506224) |
| 2011 | Cisco Certified Network Professional (CCNP), CCNA; CCNA Security |
| 2009 | Certificate of the Highest Funded Grants (honored by the Advanced Tech. Dept. at ASU) |
| 2006- | (1) Sr. Lifetime Member of SPIE;  (2) Member of IEEE, Computer Society, & Signal Processing |
| 2003 | Provisional Patent in Glaucoma Classification (Principal Inventor, University of Louisville) <br> *Title of the Invention*: A NOVEL FEATURE EXTRACTION METHOD – WAVELET-FOURIER ANALYSIS AND ITS APPLICATION TO GLAUCOMA CLASSIFICATION (Docket# 1160.032PRV) |
| 2000-2001 | Twice winner of "Night on Downtown Award" honored by GE Medical Systems (Milwaukee, WI, USA) |
| 2000 | Six-Sigma Green Belt certified by GE Medical Systems at Beijing, China |
| 1999 | Certified Senior Engineer in Computer Software Development by Beijing Government, China |
| 1996 | Outstanding Student Award for Excellence in Research and Publication (at Tianjin University) |

### Experience

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|---|---|
| 2013 | Invited Speaker of 2013 International Conference on Optical Instrument and Technology, Beijing, China |
| 2011 | Invited Keynote Speaker of the IEEE ISSPIT 2011 on December 15 at Bilbao, Spain |
| 2011 | Invited Speaker of 6th Annual Night Vision Systems Conference (Washington, DC) by IDGA. |
| 2008 | Invited Speaker of 7th Annual Image Fusion Conference (Alexandria, VA) by IDGA. |
| 2007-Present | Program Director of Computer Networking & Information Technology, Alcorn State University, MS. |
| 2002- | Peer-reviewer of prestigious journals of SPIE, IEEE, Elsevier, etc. |

## C. RESEARCH GRANTS

- A DUAL FACE RECOGNITION SYSTEM FOR HUMAN IDENTIFICATION APPLICATIONS
  DOD ONR (*$409,123*)         Yufeng Zheng (PI)         2/1/2012-1/31/2015

To develop a dual face recognition system using visible and thermal images to enhance human identification applications such as role authentification, right authorization, activity accounting, law enforcement, environment surveillance, suspect monitoring and tracking.

- USING ADVANCED IMAGE FUSION AND ADAPTIVE IMAGE COLORIZATION TO ENHANCE MULTISENSORY INPUT
  DOD ARO (*$671,548*)            Yufeng Zheng (PI)            9/15/2008-9/14/2012
  To enhance computer vision and human vision by multispectral image fusion and night vision colorization.

- A THERMAL FACE RECOGNITION SYSTEM FOR SECURITY APPLICATIONS - A NOVEL APPROACH BY FACE PATTERN WORDS
  DHS ($338,027)            Yufeng Zheng (PI)            3/1/2010-9/12/2012
  To develop a reliable thermal face recognition system for national security applications such as prevention against terrorism, especially at nighttime.

- DEVELOPMENT OF A KNOWLEDGE BASE TO SUPPORT DETECTION AND DIAGNOSIS AND RESEARCH IN MAMMOGRAPHY
  DOD TATRC (*$2.4M*)            Yufeng Zheng (Co-PI)            9/15/2006-5/31/2011
  To detect breast cancers using digitized mammograms at their early stages.

## D.  RESEARCH INTERESTS

- Image processing and Pattern recognition
- Bio-inspired image analysis
- Information fusion (image/score fusion)
- Biometrics (face recognition)
- Machine learning and Computer vision
- Computer-aided diagnosis (medical imaging)

## E.  TEACHING EXPERIENCE

- Computer Graphics
- Digital Image Processing
- Physics for Medical Imaging
- Networking Fundamentals & Telecommunication
- Switching and Routing Basics
- WAN Technologies & Advanced Routing
- Biomedical Computing
- Data Structures and Algorithms
- C# Network Programming
- Web design & internet programming using C#

## F.  SELECTED PEER-REVIEWED PUBLICATIONS

### Book

1. Yufeng Zheng, "Image Fusion and Its Applications", ISBN 978-953-307-173-2, InTech, Croatia, June 2011.

### Book Chapters

1. Yufeng Zheng, "Using Score Fusion for Improving the Performance of Multispectral Face Recognition", Signal and Image Processing for Biometrics, Springer Berlin Heidelberg, ISBN 978-3-642-54080-6, 2014
2. Yufeng Zheng, Wenjie Dong, Genshe Chen, and Erik Blasch "The Objective Evaluation Index (OEI) for Evaluation of Night Vision Colorization Techniques", Image Fusion, ISBN 980-953-307-540-7, September 2013.
3. Yufeng Zheng, "An Exploration of Color Fusion with Multispectral Images for Night Vision Enhancement", Image Fusion and Its Applications, ISBN 978-953-307-173-2, 2011.
4. Gang Hu, Yufeng Zheng, Xin-qiang Qin, "Image Fusion based on integer lifting wavelet transform", Image Fusion and Its Applications, ISBN 978-953-307-173-2, 2011.
5. Yufeng Zheng, "Iterative Multiscale Fusion and Night Vision Colorization of Multispectral Images", Sensor Fusion and its Applications, pp.455-474, ISBN 978-953-307-101-5, 2010.
6. EA Essock, P Gunvant, Y Zheng, "Nerve Giber Analyzer GDx Progression", Optic Nerve Head and Retinal Nerve Fiber Analysis, Edited by Iester M, Garway-Heath D, Lemij H; Savona, Dogma. ISBN 88-87434-30-1, pp.111-113, 2005.

### Journal Papers

1. Yufeng Zheng, Erik Blasch, "A Comparative Evaluation of a Multispectral Stereo Face Recognition System", (Submitted to) Optical Engineering, 2015.
2. Yufeng Zheng, Erik Blasch, "An Exploration of the Impacts of Three Factors in Multimodal Biometric Score Fusion: Score Modality, Recognition Method, and Fusion Process", (Accepted by) Journal of Advances in Information Fusion, 2014.

3. Yufeng Zheng, Wenjie Dong, Erik Blasch, "[Qualitative and quantitative comparisons of multispectral night vision colorization techniques](#)" (*Open Access*), Optical Engineering, 51 (8), 087004, August 2012.

4. Yufeng Zheng, "Orientation-based face recognition using multispectral imagery and score fusion", Optical Engineering 50 (11), 117202, November 2011.

5. Yufeng Zheng, "[Breast Cancer Detection with Gabor Features from Digital Mammograms](#)", Algorithms 2010, Vol. 3, pp.44-62, 2010.

6. Fengmei Zou, Yufeng Zheng, Zhengdong Zhou, Kwabena Agyepong, "Gradient Vector Flow Fields and Spiculated Mass Detection in Digital Mammography Images", Digital Mammography, Lecture Notes in Computer Science, pp.299-306, Springer Berlin / Heidelberg, Volume 5116 (2008).

7. Yufeng Zheng, Edward A. Essock, "A local-coloring method for night-vision colorization utilizing image segmentation, segment recognition, histogram matching and image fusion", Information Fusion, Vol. 9, No. 2, pp.186-199 (2008).

8. Gunvant, Pinakin; Zheng, Yufeng; Toth, MArta; Hollo, GAbor, "Atypical Retardation Pattern: Can Performance of Classification be Improved?", Optometry & Vision Science. 85(6):E482-E488, June 2008.

9. Pinakin Gunvant, Yufeng Zheng, Edward A. Essock, et. al., "Application of Shape-based Analysis Methods to OCT Retinal Nerve Fiber Layer Data in Glaucoma", Journal of Glaucoma, 16(6):543-548 (2007).

10. Edward A. Essock, Pinakin Gunvant, Yufeng Zheng, "Predicting Visual Field Loss In Ocular Hypertensive Patients Using Wavelet-Fourier Analysis Of GDx Scanning Laser Polarimetry", Optometry and Vision Science, VOL. 84, NO. 5, PP. E380–E386 (2007).

11. Yufeng Zheng, Edward A. Essock, Bruce C. Hansen, Andrew M. Haun, "A new metric based on extended spatial frequency and its application to DWT based fusion algorithms", Information Fusion, Vol. 8, No. 2, April 2007.

12. Edward A. Essock, Yufeng Zheng, Pinakin Gunvant, "Analysis of GDx-VCC Polarimetry Data by Wavelet-Fourier Analysis (WFA) Across Glaucoma Stage", IOVS, Vol. 46, No. 8, pp.2838-2847, August 2005.

13. Yufeng Zheng, Edward A. Essock, Bruce C. Hansen, "An advanced DWT fusion algorithm and its optimization by using the metric of image quality index", Optical Engineering, Vol.44, No.3, Mar 2005.

14. Pinakin Gunvant, Yufeng Zheng, Edward A. Essock, et. al., "Predicting Subsequent Visual Field Loss in Subjects with Disc Hemorrhage using RNFL Polarimetry", Journal of Glaucoma, Vol.14, No.1, Jan 2005.

15. Yufeng Zheng, Mark P. Wachowiak, Adel S. Elmaghraby, "Resolution improvement and detail enhancement for CT scout images", Journal of Electronic Imaging, Vol.14, No.1, Jan 2005.

16. Mark P. Wachowiak, Renata Smolíková, Yufeng Zheng, Jacek M. Zurada, Adel S. Elmaghraby, "An Approach to Multimodal Biomedical Image Registration Utilizing Particle Swarm Optimization", IEEE Transactions on Evolutionary Computation, Vol. 8, No. 3, pp.289-301, June 2004.

17. Bruce C. Hansen, Edward A. Essock, Yufeng Zheng, J. Kevin DeFord, "Perceptual Anisotropies in Visual Processing and Their Relation to Natural Image Statistics", Network: Computation in Neural Systems, 14 (2003) 501-526, June 2003.

18. Daoyin Yu, Yufeng Zheng, Wei Yu, Qingguo Geng, "Study on Echocardiographic Quantitative Analysis", Chinese Journal of Biomedical Engineering, Vol. 18 No. 3, September 1999.

19. Daoyin Yu, Qunfeng Zou, Wei Yu, Yufeng Zheng, "Image Connection and Its Application to Medical Ultrasonic Image", Chinese Journal of Biomedical Engineering, Vol. 17 No. 3, September 1998.

20. Daoyin Yu, Yufeng Zheng, "Precise Boundary Extraction of Echocardiographic Left-Ventricle Images", Chinese Journal of Biomedical Engineering, Vol. 15 No. 4, December 1996.

21. Yufeng Zheng, "Displaying a True Color Bitmap Image on a TVGA Card", Application of the Computer Systems, December 1996.

22. Yufeng Zheng, Daoyin Yu, "The Visual Design of Image Processing in DOS Environment", Microcomputer & Its Applications, September 1996.

23. Wenyao Liu, Yufeng Zheng, "The Light Scattering Analysis System on Line", Chinese Journal of Scientific Instrument, Vol. 17 No. 1, Jan. 1996.

24. Yufeng Zheng, "Implementing Full-screen Animation on a TVGA Card", PC World China, September 1995.

### Conference Papers

1. Yufeng Zheng, Erik Blasch, "Cross-modal face recognition using multi-matcher face scores", Proc. SPIE 9474, SPIE Defense, Security, and Sensing 2015, Baltimore, United States.

2. Yufeng Zheng, Harold Szu, "Hypothesis on human eye perceiving optical spectrum rather than an image", Proc. SPIE 9496, SPIE Defense, Security, and Sensing 2015, Baltimore, United States.

3. Yufeng Zheng, Erik Blasch, "The advantages of stereo vision in a face recognition system", SPIE Defense,

Security, and Sensing 2014, Baltimore, United States.

4. Yufeng Zheng, Adel Elmaghraby, "Simulation of Face Recognition at a Distance by Scaling Down Images", IEEE ISSPIT 2013, December 12-15, 2013, Athens, Greece.

5. Yufeng Zheng, "An integrated multispectral face recognition system (invited paper)," 2013 International Conference on Optical Instrument and Technology, Beijing, China, 2013

6. Yufeng Zheng, Erik Blasch, "Score Fusion and Decision Fusion for the Performance Improvement of Face Recognition," 16th International Conference on Information Fusion, Istanbul, Turkey, 2013.

7. Yufeng Zheng, Kristopher Reese, Erik Blasch, Paul McManamon, "Qualitative evaluations and comparisons of six night-vision colorization methods", SPIE Defense, Security, and Sensing 2013, Baltimore, United States.

8. Yufeng Zheng, "A Vehicle Threat Detection System Using Correlation Analysis and Synthesized X-ray Images", SPIE Defense, Security, and Sensing 2013, Baltimore, United States.

9. Yufeng Zheng, Adel Elmaghraby, Kristopher Reese, "Performance Improvement of Face Recognition using Multispectral Images and Stereo Images", IEEE ISSPIT 2012, December 12-15, 2012, Ho Chi Minh City, Vietnam.

10. Yufeng Zheng, "Near Infrared Face Recognition Using Orientation-based Face Patterns", 2012 International Conference of the Biometrics Special Interest Group (BIOSIG), Darmstadt, Germany, Sept. 2012.

11. Yufeng Zheng, "An Overview of Night Vision Colorization Techniques using Multispectral Images: from Color Fusion to Color Mapping", 2012 International Conference on Audio, Language and Image Processing (ICALIP 2012), Shanghai, China, July 2012

12. Kristopher Reese, Yufeng Zheng, and Adel Elmaghraby, "A Comparison of Face Detection Algorithms in Visible and Thermal Spectrums", International Conference on Advances in Computer Science and Application (CSA 2012), Amsterdam, The Netherlands, 2012.

13. Yufeng Zheng, Chaoyang Zhang, Zhaoxian Zhou, "A wavelet-based method for multispectral face recognition," SPIE Defense, Security, and Sensing 2012, Baltimore, United States.

14. Harold Szu, Yufeng Zheng, Nian Zhang, "Interdisciplinary educational approach to the human sciences," SPIE Defense, Security, and Sensing 2012, Baltimore, United States.

15. Wenjie Dong, Yufeng Zheng, "An objective evaluation metric for color image fusion," SPIE Defense, Security, and Sensing 2012, Baltimore, United States.

16. Yufeng Zheng, Adel Elmaghraby, "A Brief Survey on Multispectral Face Recognition and Multimodal Score Fusion," (keynote speaker) IEEE ISSPIT 2011, December 14-17, 2011, Bilbao, Spain.

17. Yufeng Zheng, "Face detection and eyeglasses detection for thermal face recognition," IS&T/SPIE Electronic Imaging Conference, 22-26 January 2012 in Burlingame, California, United States.

18. Dan Shen, Genshe Chen, Yufeng Zheng, "Game theoretic approach to similarity based image segmentation", SPIE Optical Engineering + Applications Conference, August 2011, San Diego, United States.

19. Yufeng Zheng, "A channel-based color fusion technique using multispectral images for night vision enhancement", SPIE Optical Engineering + Applications Conference, August 2011, San Diego, United States.

20. Yufeng Zheng, "An Orientation-based Face Recognition Algorithm", The IASTED International Conference on Computer Vision 2011, Vancouver, BC, Canada (2011).

21. Yufeng Zheng, "A Hidden Markov Model for Multimodal Biometrics Score Fusion", Proc. SPIE 8064, 80640D (2011), Orlando, United States.

22. Yufeng Zheng, "A Novel Orientation Code for Face Recognition", Proc. SPIE 8056, 805606 (2011), Orlando, USA.

23. Yufeng Zheng, "A Novel Thermal Face Recognition Approach Using Face Pattern Words", Proc. SPIE, Vol. 7667, 766703 (2010), Orlando, USA.

24. Yufeng Zheng, "An orientation-based fusion algorithm for multisensor image fusion", Proc. SPIE, Vol. 7710, 77100K (2010), Orlando, USA.

25. Yufeng Zheng, "Multi-scale Fusion Algorithm Comparisons: Pyramid, DWT and Iterative DWT", 12th International Conference on Information Fusion, pp. 1060-1067, Seattle, USA, 2009.

26. Yufeng Zheng, Kwabena Agyepong, "Component-based target recognition inspired by human vision", Proc. SPIE, Vol. 7335, 73350V (2009).

27. Yufeng Zheng, "Bio-inspired color image enhancement model", Proc. SPIE, Vol. 7341, 73410D (2009).

28. Chengcheng Li, Yufeng Zheng, Kwabena Agyepong, "Prediction of IMF Percentage of Live Cattle by Using Ultrasound Technologies with High Accuracies", WASE International Conference on Information Engineering 2009 (ICIE '09), Volume 2, pp. 474 - 478 (2009)

29. Fengmei Zou, Yufeng Zheng, Zhengdong Zhou, Kwabena Agyepong, "Gradient Vector Flow Field and Mass Region Extraction in Digital Mammograms", 2008 21st IEEE International Symposium on Computer-Based Medical Systems, pp. 41-43 (CBMS 2008).

30. Yufeng Zheng, "Gaussian model-based statistical matching for image enhancement and segmentation," Proceedings of the SPIE, Vol. 6978, pp. 697802-1-697802-11 (2008).

31. Yufeng Zheng, Kwabena Agyepong, Ognjen Kuljaca, "Multisensory data exploitation using advanced image fusion and adaptive colorization", Proc. SPIE, Vol. 6968, pp. 69681U-69681U-12 (2008).

32. Yufeng Zheng, Kwabena Agyepong , "Mass Detection with Digitized Screening Mammograms by Using Gabor Features", Proceedings of the SPIE, Vol. 6514, pp.651402-1-12 (2007).

33. Yufeng Zheng, Adel Elmaghraby, Hichem Frigui, "Three-band MRI image fusion utilizing the wavelet-based method optimized with two quantitative fusion metrics", Proc. SPIE, Vol. 6144, pp. 61440R-1-61440R-12 (2006).

34. Yufeng Zheng, Bruce C. Hansen, Andrew M. Haun, Edward A. Essock, "Coloring Night-vision Imagery with Statistical Properties of Natural Colors by Using Image Segmentation and Histogram Matching", Proc. SPIE, Vol. 5667, pp. 107-117 (2005).

35. Yufeng Zheng, Edward A. Essock, Bruce C. Hansen, "An Advanced Image Fusion Algorithm Based on Wavelet Transform – Incorporation with PCA and Morphological Processing", Proc. SPIE, Vol. 5298, pp. 177-187 (2004).

36. Yufeng Zheng, Edward A. Essock, "A Novel Feature Extraction Method – Wavelet-Fourier Analysis and Its Application to Glaucoma Classification", Proceedings of 7th Joint Conference on Information Sciences, pp. 672-675, Cary, North Carolina, 2003.

37. Yufeng Zheng, Xiaohui Cui, Mark P. Wachowiak, Adel S. Elmaghraby, "CT Scout Z-resolution Improvement with Image Restoration Methods", Proc. SPIE Int. Soc. Opt. Eng. 5032, 1851 (2003), San Diego, 2003.

38. Yufeng Zheng, Ji Du, Long Qi, Daoyin Yu, "Echocardiographic Visual Processing and Quantitative Analysis", Proc. SPIE, Vol. 2866, pp.46-49, Nanjing, China, 1996.

## G. PROFESSIONAL SERVICE AND DEVELOPMENT

### Professional Service

- 2014- Co-chair of Conference "Independent Component Analyses, Compressive Sampling, Large Data Analyses (LDA), Neural Networks, Biosystems, and Nanoengineering", SPIE DSS 2015, Baltimore, MD
- 2014 Lead Guest Editor of "Biologically Inspired Methods for Imaging, Cognition, Vision, and Intelligence" Special Issue on, Journal of Computational Intelligence and Neuroscience
- May 6, 2014, 4/23/2015
  Instructor of a SPIE Short Course (SC1135) entitled "Multispectral Image Fusion and Night Vision Colorization", SPIE DSS 2014, Baltimore.
- August 2013 Support a student to attend the Student Chapter Leadership Workshop (to represent the SPIE Alcorn Chapter) and the Optics + Photonics conference in San Diego, California.
- Feb. 2013 Organized and hosted a student seminar at Alcorn campus under the SPIE Student Chapter
- August 2012 The establishment of "SPIE Student Chapter at Alcorn" (Role: Faculty Advisor)
- June 2012 Sponsor and Organizer of the "Image Analysis Workshop II" held at Alcorn State University
- April 2012 Technical support of the national 2012 Opportunity Funding Corporation's Venture Capital Business Plan Competition April 20-21 in Atlanta. Alcorn was placed *fourth* (of 23 teams) in the competition that would commercialize the thermal recognition software developed by Dr. Yufeng Zheng.
- 2012 The Editorial Board Member of The Scientific World Journal (in Signal Processing area)
- 2012 The technical program committee for ISSPIT 2012 (2012 The IEEE Symposium on Signal Processing and Information Technology)
- 2012 The technical program committee for ICCSII 2012 (2012 IEEE Conference on Control, Systems & Industrial Informatics)
- 2011-Present Webmaster of the "ICA-Wavelet" website (where recording the award winners in the areas of ICA, Wavelets, Nanoengineering, Compressive Sampling, System Biology, and Biomedical Wellness)
- 2011 Technical Program Committee and Session Chair of SPIE Defense, Security and Sensing Conference 2012
- Jun 2011 Session Chair of the "Recognition Detection and Estimation" at the IASTED Conference on Computer Vision (Vancouver, Canada)

- 2011-          SPIE Visiting Lecturer (http://spie.org/x47500.xml)
- Jan 2011     Sponsor and Organizer of the "Image Analysis Workshop" held at Alcorn State University
- Oct. 2010    Book Editor of "Image Fusion and Its Applications", ISBN: 978-953-307-173-2.
- Jan 2008     Technical Program Committee for ISCC'08 (13th IEEE Symposium on Computers and Communications)
- 2007-          Program Director of Computer Networking & Information Technology, Department of Advanced Technologies, Alcorn State University, MS.
- 2007-          Director of Pattern Recognition and Imaging Analysis Lab, Alcorn State University, MS.
- 2006-          Adjunct Faculty, Department of Computer Science, Alcorn State University, MS.
- 2002-          Reviewer of journals of SPIE, IEEE, ACM, Elsevier, and etc.

## Invited Presentations

- 11/21/2013    "The advantages of stereo vision in a face recognition system", presented to the 3D Display Workshop, Beijing Institute of Technology, Beijing, China.
- 7/31/2013     "Optical Imaging and Photonic Systems for Use in Defense and Homeland Security", presented to the 8th Annual Night Vision Systems Conference (IDGA), Arlington, VA.
- 7/9/2013       "Multispectral Image Fusion and Night Vision Colorization," Tutorial for the 16th International Conference on Information Fusion, Istanbul, Turkey, 2013
- 12/12/2011    "An exploration of multiscale image fusion methods and their applications", presented to the IDGA's 10th Annual Image Fusion, Alexandria, VA.
- 7/25/2011     "A Fast Color Fusion Method for Night Vision Enhancement", presented to the 6th Annual Night Vision Systems Conference (IDGA), Washington, DC.
- 11/13/2010    "Advances in Digital Image Processing", presented to high school students, Saturday Science Academy, Alcorn State University, Lorman, MS.
- 9/3/2010       "A Novel Thermal Face Recognition Approach Based on Orientation Code", presented to the Graduate Seminar, University of Louisville, Louisville, KY.
- 6/21/2010     "A Novel Thermal Face Recognition Approach", presented to the School Graduate Seminar, University of Science and Technology Beijing, Beijing, China.
- 6/19/2010     "Breast Cancer Detection with Gabor Features", presented to the College Graduate Seminar, Tianjin University, Tianjin, China.
- 5/11/2010     "Multisensory Data Exploitation Using Advanced Image Fusion and Adaptive Colorization", presented to the DoD Program Mini-Workshop, University of Texas-Pan American, Edinburg, TX.
- 4/30/2010     "A Novel Thermal Face Recognition Approach", presented to the Graduate Seminar, The University of Southern Mississippi, Hattiesburg, MS.
- 11/21/2008    "Multisensory Image Fusion and Night Vision Colorization", presented to the 7th Annual Image Fusion Conference (IDGA), Alexandria, VA.
- 10/21/2005    "Night-vision Colorization Utilizing Image Segmentation, Classification and Histogram Matching", presented to the Graduate Seminar, University of Louisville, Louisville, KY
- 3/14/2004     "A Wavelet-Fourier Analysis Method for Glaucoma Detection using GDx-VCC Polarimetry Data", presented to the Graduate Seminar, University of Louisville, Louisville, KY
- 1/11/2002     "Image Restoration Application in CT Imaging – Scout z-Resolution Improvement and Off-Focal Radiation Correction", presented to the Graduate Seminar, University of Louisville, Louisville, KY

## Professional Development

- 8/3-6/2015    "The Advances In Imaging: Emerging Devices and Visual Mining", MIT Professional Education's short course, Cambridge, MA
- 4/29/2013     "Basic Optics for Engineers", a short course in SPIE DSS 2013 conference, Baltimore, MD
- 7/23-25/2012  "7th Annual Night Vision Systems Conference", Washington, D.C. Metro Area
- 6/18-20/2012  "Cisco Academy Conference 2012", San Jose, CA
- 4/24/2012     "Multispectral and Hyperspectral Image Sensors", a short course in SPIE DSS 2012 conference, Baltimore, MD.
- 11/16/2009    "The USDA-CSREES Grantsmanship Workshops", Arlington, VA.

- 2/9/2007 "The NSF Faculty Early Career (CAREER) Development Proposal Workshop", Las Vegas, NV
- 10/27/2006 "The NSF Major Research Instrumentation (MRI) Workshop", Baltimore, MD.
- Fall 2004 *Visual Processes*, graduate course taken at University of Louisville
- Spring 2004 *Advanced Statistics II*, graduate course taken at University of Louisville
- Fall 2003 *Advanced Statistics I*, graduate course taken at University of Louisville
- Spring 2002 *Artificial Intelligence*, graduate course taken at University of Louisville

## Research Collaboration

- University of Louisville; University of Southern Mississippi; University of Louisiana at Lafayette; University of Texas - Pan American
- Intelligent Fusion Technology, Inc.; US Air Force Research Laboratory; US Army NVESD

## H. BRIEF STATEMENT

What are in common among Teaching, Research, and Service? *Passion, Creation, and Improvement*. There is no perfect thing in the world. Thus, we keep discovering nature, inventing technology, and improving product with our curiosity and passion. I live not only on the virtual network but also in the real world. Visit the following webpage (http://www.r2image.com/TRS_Demo/), and feel a professional teacher and an active researcher who has his passion and creation.

*TAKE THE CHANCE, AND WE WILL WIN.*

(UPDATED ON 7/26/2015)