

Soundararajan Ezekiel

Education

MBA Dual Degree (Finished 21 credits)
Ph.D. Mathematics, University of Pittsburgh (2000)
M.A. Mathematics, University of Pittsburgh (1995)
MCATTP, Computer Science, BIT, Ranchi, India (1988)
Certificate Degree in Artificial Intelligence, IIT, Kharagpur, India (1988)
M.Phil Mathematics, Madras Christian College, Madras, India (85-86)
P.G.Dip.in O.R. Operations Research, Anna University, Madras (84-85)
M.Sc. Mathematics, Loyola College, Madras, India. (82-84)
B.Sc. Mathematics, Madras University, India. (79-82)

Experience

2009- **Professor of Computer Science**

2002-2009: **Associate Professor of Computer Science**
Computer Science Department, Indiana University of Pennsylvania.
2000-2002: -**Assistant Professor of Computer Science**
Department of Computer Science, Ohio Northern University.
1996-2000: - **Teaching Fellow and Lab Coordinator**
Dept. of Mathematics, University of Pittsburgh.
1991-1996: -**Teaching Assistant**
Dept. of Mathematics, University of Pittsburgh.
1986-1991: -**Assistant Professor (Lecturer)**
Department of Computer Science, Sri Venkateswara College of Engg.
Madras University, Madras, India.

Courses Taught

1. **COSC 460 Theory of Computation**
 2. **COSC 427 Cryptography**
 3. **COSC 410 Computer Architecture**
 4. **COSC 405 Artificial Intelligence**
 5. **COSC 355 Computer Graphics**
 6. **COSC 316 Host Computer Security**
 7. **COSC 310 Data Structure and Algorithm**
 8. **COSC 304 Interactive Internet Programming with Java**
 9. **COSC 300 Assembly Language Programming**
 10. **COSC 220 Applied Computer Programming**
 11. **COSC 210 Object Oriented and GUI Programming**
 12. **COSC 110 Problem Solving and Structured Programming**
 13. **COSC 105 Fundamentals of Computer Science**
 14. **COSC 101 Micro-based Computer Literacy**
- Course taught in 2000-2002**
15. ECCS 491 Digital Image Processing
 16. CS 448 Foundations of Computing
 17. CS 440 Senior Project
 18. CS 429 Senior Project Definitions
 19. ECE 365 Computer Architecture
 20. ECE 341 Artificial Intelligence

21. CS 330 Organization of Programming Languages
22. ECE 268 Data Structures and Algorithms
23. ECCS 264 Assembly Language and Computer Organization

Recent Publications

Publications

1. **Reference-free multiscale blur detection tool for content-based image retrieval, Accepted for Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA**
2. **Comparative analysis of fusion metrics across anomaly detection algorithms, Accepted for Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA**
3. **Wavelet based Polarimetry analysis, Accepted for Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA**
4. **Anomaly Prediction in Non-Stationary Signals using Neural Network Based Multi-Perspective Analysis, Submitted to Neural Network Journal, Elsevier.**
5. **ElectroCardiogram Anomaly Detection: An Approach Via Wavelet Decomposition Filtering And Neural Networks, 2013 International Conference on Electrical, Control and Automation Engineering (ECAE2013) December 1-2, 2013, Hong Kong**
6. **Multi-Perspective Anomaly Prediction Using Neural Networks, AIPR 2013, Sponsored by IEEE, October 23-25, Washington DC.**
7. **Anomaly Prediction in Seismic Signals Using Neural Networks, AIPR 2013, Sponsored by IEEE, October 23-25, Washington DC.**
8. **Multi-Scale Decomposition Tool for Visual Media Reasoning, AIPR 2013, Sponsored by IEEE, October 23-25, Washington DC.**
9. **MULTI-SCALE DECOMPOSITION TOOL FOR VISUAL MEDIA REASONING (VMR), Technical Report, Air Force Summer Faculty Fellowship Program (SFFP) at Rome Air Force Research Lab, Rome, NY. 2013**

2010

10. **Wavelet Based Image Registration: SPIE Defense Security and Sensing, 5-9 April 2010, Orlando, Florida, USA.**
11. **Image Registration: Linear Programming Model and Wavelet Approach: Technical Report, Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/SN WRIGHT PATTERSON AF BASE, OHIO, 2007 , 2009 and 2010**
12. **Comparative Review of Security Vulnerabilities among Operating Systems, The 11th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2007. July 8-11, 2007 – Orlando, Florida, USA.**
13. **Comparative Review of Data Search and Retrieval among Operating Systems, 11th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2007. July 8-11, 2007 – Orlando, Florida, USA.**
14. **Iris Recognition for Personal Identification for Access to Handheld Devices, The 11th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2007. July 8-11, 2007 – Orlando, Florida, USA.**
15. **Investigation of Website Fingerprinting Against Tor, The 11th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2007. July 8-11,**

2007 – Orlando, Florida, USA.

16. **Website Fingerprinting Defenses for Tor**, The 11th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2007. July 8-11, 2007 – Orlando, Florida, USA.

2006

17. **Autonomous Robot: An Image and Signal Processing Approach**, 10th World Multi-Conference on Systemics, Cybernetics and Informatics, July 16-19, 2006, Orlando, Florida, USA.
18. **Iris Biometrics for Network Security**, 10th World Multi-Conference on Systemics, Cybernetics and Informatics, July 16-19, 2006, Orlando, Florida, USA.
19. **Model Based Object Recognition**, 10th World Multi-Conference on Systemics, Cybernetics and Informatics, July 16-19, 2006, Orlando, Florida, USA.
20. **Iris Biometrics for Network Security**, presented at Secure IT 2006: Information Technology and Network Security, Anaheim, California, Mar 21-24, 2006.

2005

21. **De-noising Signals: A Wavelet Approach**, 9th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2005), July 10-13, 2005, Orlando, Florida, U.S.A.
22. **A Wavelet Approach to Anomaly Intrusion Detection**, Third Annual Information Technology Security Conference, San Diego, CA April 19-22, 2005.
23. **Covert Storage Channels: A Brief Overview**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
24. **Covert Timing Channels: A Brief Overview**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
25. **Covert Channels: The Hidden Threat**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
26. **Steganography and Covert Channels**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
27. **Wavelet Based Iris Recognition**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
28. **A Digitally Divided Latin America**, the Pennsylvania Association of Computer and Information Science Educators (PACISE), Bloomsburg University, Bloomsburg, PA. April 1-2, 2005.
29. **Covert Timing Channels in Network and Multilevel Environments**, Academy of Business and Information Technology (ABIT), April 28-30, Monroeville, PA.
30. **Steganography: A Brief Overview**, Academy of Business and Information Technology (ABIT), April 28-30, Monroeville, PA.
31. **An Overview of Covert Channels**, Academy of Business and Information Technology

(ABIT), April 28-30, Monroeville, PA.

32. **Covert Storage Channels: An Overview**, Academy of Business and Information Technology (ABIT), April 28-30, Monroeville, PA.

2004

25. **A wavelet Approach to network Signal Analysis**, The IASTED International Conference on PARALLEL AND DISTRIBUTED COMPUTING AND NETWORKS- February 15-17, 2005, Innsbruck, Austria
26. **Hearing Aid speech enhancement: A Multiresolution Analysis**, The IASTED International Conference on INTERNET AND MULTIMEDIA SYSTEMS AND APPLICATIONS ~February 21-23, 2005, Grindelwald, Switzerland
27. **Automatic Fault Detection by using Wavelet Method**, The 23rd IASTED International Conference on MODELLING, IDENTIFICATION, AND CONTROL~MIC 2004~February 23-25, 2004, Grindelwald, Switzerland
28. **Barcode Identification by using Wavelet based Energy**, The 23rd IASTED International Conference on MODELLING, IDENTIFICATION, AND CONTROL~MIC 2004~February 23-25, 2004, Grindelwald, Switzerland

2003

29. **Medical Image Segmentation using Multifractal Analysis**, 21st IASTED International Multi-Conference, Artificial Intelligence and Applications (AIA '2003), February 10-13, 2003, Innsbruck, Austria.
30. **Seismic Signal Analysis using Correlation Dimension**, 21st IASTED International Multi-Conference, Applied Informatics-AI2003, February 10-13, 2003, Innsbruck, Austria.
31. **Wavelet and Fractal Methods for Data Hiding**, GOVSEC 2003, July 23-25, Washington D.C.
32. **Edge Detection using Minmax Measures**: 3rd IASTED International Conference Circuits, Signals, and Systems, May 19-21, 2003 Cancun, Mexico.
33. **Low-dimensional Chaotic Signal Characterization using Approximate Entropy**: 3rd IASTED International Conference Circuits, Signals, and Systems CSS 2003, May 19-21, 2003 Cancun, Mexico.
34. **Stock Market Data Analysis with Relative Dispersion Based Hurst Exponent**, Academy of Business and Information Technology, April 24-25, Pittsburgh, PA.
35. **Stock Market Data Analysis Using Rescaled Range (R/S) Analysis Method**: Academy of Business and Information Technology, April 24-25, Pittsburgh, PA.
36. **Wavelet and Fractal-Based Schemes for Digital Media Watermarking**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), 2003.

2002

37. **Fractal Geometry and its Application**, The Pennsylvania Association of Computer and Information Science Educators (PACISE), Slippery Rock University, Slippery Rock PA. April 4-5, 2002.
38. **Rescaled Range Method Based Topographical Image Analysis**, IASTED International Conference on Automation, Control and Information Technology

(ACIT 2002), Novosibirsk, Russia, June, 10-13, 2002.

39. **Texture Classification by Gray-Level Difference method based Fractal Dimension**, IASTED International Conference Signal and Image Processing (SIP 2002), Kauai, Hawaii, USA, August 12-14, 2002.
40. **Fractal Algorithm for Image Edge Enhancement and Detection**, IASTED International Conference Signal and Image Processing (SIP 2002), Kauai, Hawaii, USA, August 12-14, 2002.
41. **Magnetic Resonance Image Segmentation Technique by using Hurst Coefficients**, 2nd IASTED International Conference, Visualization, Imaging and Image Processing (VIIP 2002). Malaga, Spain, September 9-12, 2002.

2001

42. **Texture Based Image Compression by Using Quincunx Mask**, IASTED International Conference on Applied Informatics, Innsbruck, Austria, February 19 - 22, 2001.
43. **Seismic Signal Processing by Using Rescaled Range Analysis (R/S) based Fractal Dimension**, IASTED International Conference on Applied Informatics (AI2001), Innsbruck, Austria, February 19-22, 2001.
44. **Analysis of Soil Properties and Characteristics Using Rescaled Range(R/S) Method**, EUROIMAGE, 2001 International Conference on Augmented, Virtual Environments and 3D Imaging, MyKonos, Greece, May 30- June 1, 2001.
45. **Heart Rate Variability (HRV) Signal Processing by Using Wavelet Based Multifractal Analysis**, Digital Signal Processing and Control, IASTED International Conference, Measurement and Control (MECO'2001), Pittsburgh, Pennsylvania, USA, May 16-18, 2001.
46. **Wavelet Based Multifractal Analysis with an Application to Seismic Signal Processing**, The 5th World Multi-Conference on Systemics, Cybernetics and Informatics SCI 2001, Orlando, Florida USA, July, 22-25, 2001.
47. **Wavelet based Soil Analysis and Characteristics**, The 5th World Multi-Conference on Systemics, Cybernetics and Informatics SCI 2001 Orlando, Florida USA, July 22-25, 2001.

2000

48. **Image Analysis and Compression by using Wavelet based Texture Segmentations with the Hurst Exponent**, 4th World Multiconference on Systemics, Cybernetics and Informatics (SCI2000) and the 6th International Conference on Information Systems Analysis and Synthesis (ISAS2000), Orlando, USA, in July 23-26, 2000.

1998

43. **Fast Fractal Image Compression with Triangulation Wavelets**, Proceeding SPIE Conference on Wavelet Applications in Signal and Image Processing, 1998.
44. **Fast Fractal Image Compression with Triangular Multiresolution Block Matching**, ICIP1998, International Conference on Image Processing, October 4-7, Chicago, IL, 1998.

POSTERS PRESENTATIONS

Posters

1. **Research Appreciation Week Poster Sessions April 12, 2006**

1. Iris Recognition for network security
2. SANS Top 20 Vulnerabilities
3. Is Big brother watching you? Implantable RFID Devices
4. Software Engineering Attacks
5. Intrusion Prevention and Detection System: A step closer to a secure environment.
2. **Research Appreciation Week Poster Sessions April 13, 2005**
 6. A Digitally Divided Latin America
 7. Robotics: A Proposed Plan
 8. Iris Recognition Model: A Wavelet Approach
3. **Seventh Annual Sigma Xi Research Day Poster Sessions April 13, 2005**
 9. A Digitally Divided Latin America
 10. Robotics: A Proposed Plan
 11. Iris Recognition Model: A Wavelet Approach
 12. Steganography and Covert Channels
 13. An Overview of Covert Channels
 14. Covert Timing Channels in Network and Multilevel Environments
 15. Covert Storage Channels: An Overview
4. **Emerging Scholarship on Display by Faculty, Staff and students Research Appreciation Week Poster Sessions April 1 & 2, 2003**
 16. Wavelet Based Schemes for Digital Media Watermarking
5. **Fifth Annual Sigma Xi Research Day Poster Sessions April 7, 2003**
 17. Stock Market Data Analysis with Relative Dispersion Based Hurst Exponent
 18. Internet Usage among Indiana University of Pennsylvania Students
6. **SIGCSE 2002 Faculty Poster Session**
 19. Fractal-Based Texture Analysis
 20. Edge Detection by Relative Dispersion Analysis Based Fractal Dimension
7. **ANNIE 2004- Abstract**

Awards and Honors	<p>University Faculty Fellow at the Murtha Institute—Two year fellowship March 15, 2008- March 15, 2010</p> <p>Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/SN WRIGHT PATTERSON AF BASE, OHIO, 2010</p> <p>Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/SN WRIGHT PATTERSON AF BASE, OHIO, 2009</p> <p>Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/SN WRIGHT PATTERSON AF BASE, OHIO, 2007</p> <p>Sponsored Programs Award For Outstanding Achievement in Curriculum and Instruction 2005</p> <p>Research Navigator 2003-2004</p> <p>Government of India National Overseas Scholarship (1991-1994)</p>
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Thesis Title	Computational Fractal Methods for Image Analysis and Compression
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Research Interests	<ul style="list-style-type: none"> ◆ Biometrics ◆ Digital Forensics ◆ Covert Channels ◆ Fractal Image Analysis and Compression, ◆ Signal Processing
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Talks

- ◆ Fractal Market Analysis
- ◆ Operations Research
- ◆ Mathematical Finance
- ◆ Wavelet based Image and Signal Analysis
- ◆ Artificial Intelligence
- ◆ Steganography
- ◆ Natural Language Processing
- 1. Bowling Green State University-Seminar Presentation
- 2. Wright State University- Dayton Technology workshop
- 3. ONU- Math department Seminar Presentations
 - Fractal Image Compression
 - Multiscale Image Compression
 - Fractal Dimension
 - Rescaled Range (R/S) Analysis
 - An overview of Wavelets Part I
 - An overview of Wavelets Part II

Professional Activities

Member, Projects, Conferences, Workshops Attend

Session Chairs

1. Session Chair, for the IASTED International Conference on Applied Informatics, Innsbruck, Austria, Feb 10-13, 2003
2. Session Chair, for the IASTED International Conference on Applied Informatics, Innsbruck, Austria, Feb 10-13, 2003
3. Session Chair, for the third annual IASTED International Conference on Circuits, Signals and Systems (CSS-2003), Cancun, Mexico, 2003.
4. Session Chair, for the IASTED International Conference on Modelling, Identification, and Control, Grindelwald, Switzerland, Feb 23-25-2004
5. Session Chair, for the 9th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2005), July 10-13, 2005 Orlando, Florida, U.S.A.
6. Session Chair, for the 10th World Multi-Conference on Systemics, Cybernetics and Informatics, July 16-19, 2006, Orlando, Florida, USA.

Certification of Participations

7. AFRL Sensor Directorate 2007 2nd Quarter Security Briefing
8. AFRL Sensor Directorate 2007 Counter Intelligence Briefing
9. Air Force Records Management General Awareness Training- 2007
10. US Air Force Level 1 Awareness Training- 2007
11. US Air Force Information Assurance 2007
12. US Air Force Annual Ethics Training for OGE 450/SF 278, 1007
13. Who's Who Historical Society
 - a. 2002-2003
 - b. 2004-2005
 - c. 2005-2006
14. Certificate of Participation IASTED International Conference on Applied Informatics, Feb 10-13, 2003
 - d. Medical Image Segmentation using Multifractal Analysis
 - e. Seismic Signal Analysis using Correlation Dimension
15. Certificate of Participation IASTED International Conference on Circuits, Signal & Systems, May 21, 2003
 - f. Edge detection using MINMAX Measure
 - g. Low dimensional Chaotic Signal Characterization using Approximate

Entropy

16. **Certificate of Participation IASTED International Conference on Modelling, Identification and Control**
 - h. Automatic Fault Detection using Wavelet Method
 - i. Barcode Identification using Wavelet based Energy

Technical Committees

17. **IASTED Technical Committee Signal Processing 2001-2004**
18. **IASTED Technical Committee Image Processing 2002-2005**
19. **IASTED Technical Committee for the IASTED International Conference on Applied Modelling and Simulation (AMS 2002)**
20. **Technical and Program committee for 3 symposia**
 - Signal processing and Applications SPA02
 - Acoustics, Speech Processing and Applications ASPA 02
 - Image Processing and Applications IPA 02
21. **IASTED Technical Committee for the IASTED International Conference on Artificial and Computational Intelligence (ACI 2002)**
22. **IASTED Technical Committee for the IASTED International Conference on Modeling Identification and Control (MIC 2003)**
23. **IASTED Technical Committee for the IASTED International Conference on Communication Systems and Networks (CSN 2003)**
24. **International Technical Committee, 5th IASTED International Conference on Visualization, Imaging, & Image Processing – VIIP 2004**
25. **IASTED Technical Committee Biomedical Engineering (BioMED 2005) Innsbruck, Austria - February 16-18, 2005**
26. **International Technical Committee, 5th IASTED International Conference on Visualization, Imaging, & Image Processing – VIIP 2005**

International Program Committees

27. **IASTED International Program Committee (IPC) for the IASTED International Conference on “Signal and Image Processing” 2002**
28. **International Program Committee for the IASTED International Conference on Circuits, Signals, and Systems, CSS 2003 May 19, 2003**
29. **International Program Committee, Signal Processing, Pattern Recognition and Applications ~SPPRA 2003~**
30. **International Program Committee, 5th IASTED International Conference on SIGNAL AND IMAGE PROCESSING ~SIP 2003~August 13-15, 2003, Honolulu, Hawaii, USA**
31. **International Program Committee, 3rd IASTED International Conference on Visualization, Imaging, & Image Processing – VIIP 2003, Benalmádena, Spain - September 8-10, 2003**
32. **IASTED International Program Committee (IPC) for the 7th IASTED International Conference on COMPUTER GRAPHICS AND IMAGING August 17-19, 2004 Kauai, Hawaii, USA**
33. **IASTED International Program Committee (IPC) for the 6th IASTED International Conference on Signal and Image Processing (SIP-2004), Honolulu, Hawaii, August 23-25 2004**
34. **International Program Committee, 4th IASTED International Conference on Visualization, Imaging, & Image Processing – VIIP 2004, Marbella, Spain - September 6-8, 2004**
35. **IASTED International Program Committee (IPC) for IASTED International Conference on Circuits, Signals and Systems (CSS-2004), Clear Water Beach , Florida November 28- December 1, 2004**
36. **International Program Committee, for the 9th WORLD**

- MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2005), July 10-13, 2005 Orlando, Florida.
37. International Program Committee (Telehealth 2005), Banff, Canada, 2005
 38. International Program Committee for Computer Graphics and Imaging (CGIM 2005), Honolulu, Hawaii, Aug 15-17 2005
 39. IASTED International Program Committee (IPC) for the 7th IASTED International Conference on Signal and Image Processing (SIP-2005), Honolulu, Hawaii, August 15-17, 2005
 40. IASTED International Program Committee (IPC) for IASTED International Conference on Circuits, Signals and Systems (CSS-2005), Marina del Rey, CA, USA - October 24-26, 2005
 41. International Program Committee (Telehealth 2006), Banff, Canada, July 3-5 2006
 42. IASTED International Program Committee (IPC) for IASTED International Conference on Circuits, Signals and Systems (CSS-2006), San Francisco, CA, USA – November 2006
 43. IASTED International Program Committee (IPC) for the 7th IASTED International Conference on Signal and Image Processing (SIP-2006), Honolulu, Hawaii, August 14-16 2006
 44. IASTED International Program Committee (IPC) for IASTED International Conference on Graphics and Visualization in Engineering GVE 2007
 45. International Program Committee (Telehealth 2007), Banff, Canada, May 30-June 01, 2007
 46. International Program Committee for Computer Graphics and Imaging (CGIM 2007)
 47. International Program Committee, the 9th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2005), July 13-16, 2006 Orlando, Florida, U.S.A.
 48. Web Based Communities Conference 2006
 49. Wavelet Digest Executive 2006
 50. IASTED International Program Committee (IPC) for IASTED International Conference on Circuits, Signals and Systems (CSS-2007)
 51. The IASTED International Conference on TELEHEALTH, 2008
 52. The 12th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2008
 53. International Program Committee for Computer Graphics and Imaging (CGIM 2007),
 54. International Program Committee for Computer Graphics and Imaging 2008
 55. The 13th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2009

WORKSHOPS

56. Second Annual Homeland Defense and Security Educational Summit, March 18-19, 2008 University of Maryland University College, MD.
57. Center for Computer Security and Information Assurance (EPASEC) 2006
58. Digital Forensics Workshop January 28-29, 2006 in Orlando, Florida
59. Second Annual IFIP WG 11.9 International Conference on Digital Forensics, National Center for Forensic Science, Orlando, Florida, Jan 29 - Feb 1, 2006
60. 21st Annual Spring Conference of the PACISE—Conference Chair
61. Information Assurance Summer Workshop- July 6-7, 2006(IUP)
62. Government Security Expo and Conference (GOVSEC 2005).
63. System of Systems Engineering Center of Excellence June 13-14, 2005
64. IUP-NSA Sponsored Information Assurance Workshop August 2-6, 2004
65. Pennsylvania Association of Computer and Information Science Educators April 2-3, 2004
66. Indiana University of Pennsylvania School of Continuing Education Planning

- for Assessment of Student Learning May 17, 2004
67. Hands on Network Security Workshop August 4-8, 2003
 68. Computer Science Colloquium “Signal Transmission Research” March 19, 2003
 69. NSF Cyber Security Workshop August 4-9, 2002
 70. Sigma Xi, the Scientific Research Society 2005
 71. Certificate of Participation in the Poster Session “Emerging Scholarship on Display by Faculty and Staff April 2, 2003
 72. Government Security Expo and Conference (GOVSEC 2003)
 73. Window of the Future, “Meaningful Performance-End-to-End”, 2002
 74. NASA Earth Science (ReaSoN) Research, Education and Application Solution Network “Pre-Proposal Conference” October 10, 2002
 75. NASA ESE Computational Technology requirement workshop, Washington DC. April 30- May 2, 2002
 76. GOVSEC (Government Security Expo and Conference) July 23-25 2004, Washington Convention Center, Washington DC
 77. Outcome Assessment Workshop

REVIEWER

Book / Chapter Reviews

- I. **Broadband Technology Opportunities Program (BTOP), National Telecommunications Information Administration, Department of Commerce, 2009.**
- II. **Peer Reviewer and Lead Reviewer: NASA Advanced Information Systems Technology (AIST)- October 2008.**
- III. **Book Review – Chapters 4, 5 and 6: Information Technology, Geoff Steinberg**
- IV. **Book Review: Computer Organization and Design: The Hardware /Software Interface, 3rd edition, Paterson and Hennessey.**
- V. **Object Oriented and GUI Programming by Wu**
- VI. **Book chapter: Scaling methods for soil physics—USDA.**
- VII. **Comparative review of Java books’ Chapters : Absolute Java by Savitch vs Object Oriented and GUI Programming by Wu**

Conferences and Journals (National and International)

1. **IASTED International Conference Signal and Image Processing April 2002**
 1. Vision-based Multiple Moving Targets Detection in a Mobile Camera Image Sequence.
 2. Experimental and Theoretical Analysis of Wavelet-Based Denoising Filter for Echocardiographic Images.
 3. Enhancing medical features in ultrasound images.
 4. A foveal architecture for stereo matching.
 5. A Method for Estimating the Fractal Dimension and Filtering of Fractal Noise in Periodic Signals.
 6. Ultrasound-based Liver Computer Assisted Surgery.
 7. New way to combine fractal compression with jpeg.
 8. Dirt Counting in Pulp: An Approach Using Standard Image Analysis Methods.
 9. Sample Size and optimal AR order selection for natural signals.
 10. Segmentation of Nuclei-extraction of unclear contour of convex-shaped object.
 11. A fast algorithm for real time eye movement quantification.

12. Pseudo-diamond search method algorithm.
13. Internet-based Pattern Classification of Multichannel Human Electrogastragrams.
14. Recent Development of Magnet Resonance Angiography: Time-Of-Flight.
15. On iterative joint source channel decoding.
16. Total Least Squares Filter in Robot Navigation.
17. Comments on Using MLP and FFT for Fast Object/Face Detection.
2. **ACM: Journal on Educational Resources in Computing (JERIC) July 08, 2002**
 18. A new public-domain program for mixed signal simulation.
3. **Information Systems Education Conference (ISECON) August 2002**
 19. Is a Curricular Management System in Your Future?
 20. Teaching Online: What Price Student Satisfaction.
 21. LMMS: An 8-bit Micro code Simulations of the Little Man Computer.
 22. Estimation using use case points.
4. **Journal of Visual Communication and Image Representation 2003**
 23. Edge Detection Algorithms
5. **ACM: Computing Reviews**
 24. Temporal abstract classes and virtual temporal specifications for real-time systems.
6. **Signal Processing, Pattern Recognition a& Applications ~SPPRA 2003~**
 25. Kalman Filter and 3D Warping Based Image prediction for Real-time computer Generated Image Sequences.
 26. A new method of estimating compactly supported wavelet with desired support and vanishing moments from a given signal
 27. Analysis tools for gray level histogram.
 28. Detection of spatial orientation objects for automatic orientation fo arbitrary arranged metric images.
 29. New perceptual metric image quality evaluation.
 30. Automatic detection of goal event in real soccer image sequences.
 31. Wide-band compensation of presbycusis.
 32. Conditional data compression: the lossless case
7. **IASTED International Conference on Circuits, Signals, and Systems CSS 2003**
 33. Study on Denoising of Fractal Signal Based on Shannon Entropy
 34. The Chaos characteristic of transistor noise at low frequency
 35. A medium Grain Reconfigurable Cell Array for DSP
 36. Localization of Cyclostationary Coherent Sources in the Presence of Boh Multiplicative No Added Noise
8. **7th World Multiconference on Systemics, Cybernetics and Informatics, July 27-30, Orlando Florida, USA**
 37. Experimental Useful Echoes Identification Utilizing A Statistical Approach As A Pre-Estimator For High Accuracy Modified Maximum Likelihood Estimator
9. **ACM SIGPLAN Notices 38(5), 2003**
 38. "Optimizing indirect branch prediction accuracy in virtual machine interpreters" Ertl M., Gregg D. 38(5): 278-288,2003
 39. Points-to analysis using BDDS 38(5): 103-114,2003
10. **SIGCSE 2003- Reno, Nevada USA. Reviewed Date: September 12, 2002**
 40. Class Cohesion Revisited: On the Design of Class's features.
 41. Fundamentals of Computer Science Course.
11. **IASTED International Conference on "Modeling, Identification and Control – MIC 2003"**
 42. Paper Number 377-188 "Signal detection based on lifting wavelet and its application to ECG signal process"
12. **EISTA '04 International Conference on Education and Information**

- Systems: Technologies and Applications**
13. **The Second IASTED International Conference on BIOMEDICAL ENGINEERING BioMED 2004 February 16-18, 2004 Innsbruck, Austria**
 43. Frequency Compression and Frequency Transposition for Hearing Impaired
 14. **SIGCSE 2004 Technical Symposium on Computer Science Education, Norfolk, Virginia March 3-7, 2004.**
 44. A Three-Course Model for an Introductory Sequence
 45. Simple, Low-Cost Stereographics: VR for Everyone
 46. Reinventing Computer Science Curriculum: Implementing CS1 with Embedded Instructional Technology in Laboratories
 15. **IASTED International Conference on Circuits, Signals, and Systems 2004**
 47. Misfire Detection by a Wavelet Based Analysis of Crankshaft Speed Fluctuation
 48. Sampled Continuous Time Filter Banks and Frame Theory
 16. **The 8th World Multi-Conference on Systemics, Cybernetics and Informatics, July 18-21, 2004 - Orlando, Florida, USA**
 49. Video Image and Audio Represented in 4-D Matrix for Video Streams
 50. Maximum a Posteriori Single Channel Speech Enhancement Using Independent Component Analysis Technique
 17. **EISTA '05 International Conference on Education and Information Systems: Technologies and Applications July 14 - 17, 2005 in Orlando, Florida, USA**
 18. **Biomedical Engineering (BioMED) Innsbruck, Austria - February 16-18, 2005**
 51. EMG Signal Processing for Audio-EMG-based multi-modal Speech Recognition
 52. Fractal Analysis of Contours of Mammographic Masses
 19. **SIGCSE 2005 Technical Symposium on Computer Science Education, St Louis, Missouri, USA February 23-27 2005.**
 53. Web Services and Web Programming
 54. Junior High School Students Perception of Object Oriented Basic Concepts
 55. Introducing Polymorphism: A Lesson Plan
 56. Affective Objectives in a Programming Languages Course
 20. **Data and Knowledge Engineering (DKE) 2005**
 57. A Rough G-Means Algorithm to Repair Image Degradation.
 21. **The IASTED International Conference on signal and image processing(ACIT-SIP 2005) in cooperation with the Russian academy of sciences as part of the 2nd IASTED international multi-conference on Automation, Control, and Information Technology (ACIT 2005) Novosibirsk, Russia June 20-24, 2005**
 58. Shape Understanding System: 3-D Interpretation of the Visual Object
 59. 2D Array Ultrasonic Transducer Modeling for Beam Optimization in 3D Ultrasound Imaging
 60. Virtual Hardware Management for Real Time Signal Processing
 61. Signal modeling and analysis of profile reconstruction for dilute phase flow applications
 62. Solution for realization spatial sound in MIDI specification
 63. Theoretical approach for medical image enhancement in logarithmic representation
 64. ECG feature extraction using Daubechies wavelets
 65. Noise Reduction of Image Sequences Using Adaptive Weighted Averaging Filter without Knowing Noise Variance
 66. Variable Rate Enhanced Double-band Excitation LPC Speech Coding Algorithm

67. Speech Enhancement Algorithm Based On Preprocessing VAD and KL Transform
68. Very low bit rate full-frame facial video coding based on principal component analysis
69. Enhanced prediction of motion pictures based on reconstructed decimated block
70. Automatic Determination of the Malignancy of the Pathological Images of the Prostate
71. Image artifacts in vibroacoustography
72. An adaptive particle filter for mobile robot fault diagnosis
73. Estimating the parameters of linear and quadratic fm signals at low signal to noise ratio
74. The Predictive Timer Synchronization Function - Efficient Network Synchronization of MANETs
75. Application of Statistical Characterization to the Rapid Detection of Deteriorating Modal Damping in Power Systems
76. Training of neural networks for image correction with natural images
77. Comparison of Gabor Wavelet & Neural Network-Based Face Detection Algorithms
22. **9th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2005), July 10-13, 2005 Orlando, U.S.A.**
 78. Adaptive Neural Network Filter in Compensation of Time Interleaved A/D Converter System.
 79. Radio Frequency Spectrum Monitoring and Transmission Type Classification on a General-Purpose Computing Platform
23. **The IASTED International Conference on TELEHEALTH (Telehealth 2005) July 19-21, 2005**
 80. On the two - phase modal for a pulsatile flow under periodic body acceleration
 81. Design and implementation Visual Evoked Potential recording system
24. **The Eighth IASTED International Conference on COMPUTER GRAPHICS AND IMAGING (CGIM 2005) ,Honolulu, Hawaii, USA August 15-17, 2005**
 82. Creating three-dimensional models of the knee using a combination of CT and MR imaging techniques
 83. Wavelet Noise Elimination & Its Application in Acoustic Leak Detection of Fast Reactor Steam Generator
 84. Image Processing Methods for Velocity Calculation of Blood Microcirculation
 85. A three-step approach to detect and remove grid lines in well-logging digitization
25. **The Fifth IASTED International Conference on Visualization, Imaging, & Image Processing – VIIP 2005 September 7-9, 2005 Benidorm, Spain.**
 86. Algorithm for comparing two different printouts
 87. Resting Image Encryption by output feedback
 88. Image Restoration with an Affine Constraint
 89. A Novel Image Fusion Algorithm based on Kernel-PCA, DWT and Structural Similarity
26. **Journal of Visual Communication and Image Representation 2005**
 90. LFD Based Edge Extraction for Object Counting
27. **The Third IASTED International Conference on CIRCUITS, SIGNALS, AND SYSTEMS CSS 2005 October 24-26, 2005 Marina del Rey, CA, USA**
 91. Application of Wavelets neural Network to temperature compensation of Diffused-Silicon Pressure Transducer
 92. Detection of Power Quality Disturbances Using wavelet analysis
 93. A Novel Structural Similarity based Image Fusion Algorithm for Night

- Vision Applications
94. Subjective video quality metrics based on failure statistics
 95. On Color Contrast Enhancement
28. **Journal of Business and Information Technology (JBIT 2005)**
 96. Knowledge Processing Environments in the Internet Era
 97. The Proliferation of Acronyms in the Discourse of Computer Science: Effects on Research in the Field
 29. **Journal of Business and Information Technology (JBIT)- 2005**
 98. Knowledge Processing Environments in the Internet Era
 30. **Journal of the ACM (JACM)**
 99. Hybrid Texture Synthesis
 100. Virtual Machine Showdown: Stack versus Registers
 31. **Technical Symposium on Computer Science Education, Houston, Texas USA March 1-5, 2006, SIGCSE 2006**
 101. Formal Aspect of Mathematical Logic
 102. Designing an Adaptive Learning Module to Teach Software Testing
 103. Student Response System for Large Enrollment Courses
 32. **NASA Faculty Award for Research (FAR) Peer Reviewer September 2001**
 104. Synthesis of Monomers for Development of Processable and Stable High-temperature Polyimides.
 105. Calculations of Homology of Finite Groups using Computer Algebra.
 106. Characterization of Microstructure in Structural Composites.
 107. A detail study of Possible Planet Construction Zones.
 33. **IASTED Applied Modeling and Simulation (AMS 2002), Cambridge, USA September 10, 2002**
 108. Monte Carlo simulation for light transport in biological tissue.
 109. A fast Segmentation Algorithm and its application in Biomedical Image Analysis.
 34. **Computer Science Teaching Center (CSTC), May 13, 2002**
 110. The knob & Switch Computer: A computer architecture simulator for introductory computer science.
 111. Effective Binary perspectives in algorithmic problem solving
 35. **ACM: Journal on Educational Resources in Computing (JERIC) July 08, 2002**
 112. A new public-domain program for mixed signal simulation.
 36. **IASTED Artificial and Computational Intelligence (ACI 2002)**
 37. **IASTED conference on Software Engineering & Applications (SEA, 02)**
 38. **5th IASTED International Conference on SIGNAL AND IMAGE PROCESSING ~SIP 2003~August 13-15, 2003, Honolulu, Hawaii, USA**
 113. Signal processing challenges in high frequency surface wave radar
 114. Fractal Enhancement of Edges in Interpolated Images
 115. A Novel Approach to Neurite Tracing in Fluorescence Microscopy Images
 116. A Binarization Approach for CT-MR Registration Using Normalized Mutual Information
 39. **The 3rd IASTED International Conference on COMMUNICATIONS, INTERNET, AND INFORMATION TECHNOLOGY CIIT 2004 November 22-24, 2004 St. Thomas, US Virgin Islands**
 40. **Signal and Image Processing ~ SIP 2006~**
 117. Autonomous cropping and feature extraction using time-frequency marginal distribution for LIP radar classification
 118. Performance evaluation of direct Fourier method in 3D PET by means of accurately determined projection data
 119. Overlapped block motion compensation based on irregular grid
 120. Improved online fingerprint verification using novel STFT enhancement and MLS based matching techniques
 121. MAP approach to blind de-convolution by means of inverse filtering

- 122.Character image retrieval method using Bipartite Matching and Pseudo Bipartite Matching
- 41. Medical Engineering and Physics Journal**
- 123.Parametric studies in optical imaging of tumors through temporal log-slope difference mapping
- 124.Machine vision and feedback control system allow the precise control of vascular deformation in vitro
- 42. SIGCSE 2007 Technical Symposium on Computer Science Education, Kentucky, USA**
- 125.How is object-orientation presented in textbooks- the weaknesses of Java Textbook
- 126.Interface-based Programming Assignments and Automatic Grading of Java Programs
- 127.Ink Flow from instructor to student: A study of instructor and Student Notes in a Digital Electronics Course
- 43. The IASTED International Conference on Circuits, Signals, and Systems ~CSS 2006~**
- 128.Chaos in Digital Filters
- 129.Implementation of Single List SPECK Codec System For Image Compression
- 130.A New Adaptive Weighted Averaging Filter in Image Sequences
- 131.A New Nonlinear Image Sequences Filtering
- 132.A New Fuzzy Algorithm in Image Sequences Filtering
- 133.A Statistical Approach in Watermarking Images using Wavelet
- 134.Simplification of Frequency Domain Equalization Using Channel Shortening Algorithms
- 135.International Network For Distance Learning (DL)
- 136.Improvement on set membership identification algorithm using zonotopes
- 137.Improvement on set membership state estimation algorithm using zonotopes
- 138.Using Of FPGA In Trigger System Of BESIII - High Energy Physics Experiment
- 139.Swift Transition Weight Analysis for Asynchronous Finite State Machines
- 140.Influence Of Worst Case Crosstalk Due To Multiple Aggressors On Single Victim In DSM Chips
- 141.Analysis of Bit Error Rate for Interconnect Pipelining
- 142.Wide-Diameters of the Hyper-L Triple-Loop Network
- 143.A Power Allocation and Control Algorithm for Digital Subscriber Lines
- 144.Receiver Constellation Waveform Subspace Preprocessing for Burst Alamouti Block STC CPM Modulation
- 145.Fading Analysis of The 3GPP Rural Area channel
- 146.Soft Burst Mode Dimming Control for CCFL Inverter
- 147.VLSI Implementation Of Core Complaint To SPI4.2 For Broadband Applications
- 148.Effects Of Input Variations In Interconnection Trees
- 149.Self-Temperature Compensation of NDIR CO2 Gas Sensor
- 150.Rough Machining Process and Its Simulation for Robot Integrated Surface Sculpturing System
- 151.The Integrated Circuits Technological Parameters Visualization
- 44. 10th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2006), July 16-19, 2006 Orlando, U.S.A.**
- 152.Arabic Speech Activity Detection Using Wavelet Based Spectral Analysis
- 153.FPGA Implementation of Real-Time Image Processing Algorithms for Electro-Optical Surveillance Systems
- 154.Blind Channel Estimation for Single Carrier and Multi-carrier Systems
- 155.Lossless Compression of Medical Images Using Hilbert Space-Fillings

- Curve
156. An Efficient Image Matching Algorithm
157. Mismatch Cancellation for Low-IF Wireless QAM Receivers using an Optimum Block Adaptive ICA Algorithm with Individual Adaptation
158. An Image Signature Based PCNN for Skilled Forgery Signature Detection
45. **COMPUTER GRAPHICS AND IMAGING ~ CGIM 2007 ~**
159. Advanced Image Compression Using Huffman Encoder by Combining EZW Encoding with Texture Modeling
160. Combination of a Sequence of Images with Different Lighting to Create a Virtual Image with Maximal Color Contrast
161. Design of Low Memory Lifting Scheme Wavelet Transform on FPGA Using Block Processing
162. Multi-Agents Model To Enhance The Navigation Process In A Virtual Environment
163. Aspect-Ratio And Size-Controlled Patterned Triangulations Of Boundary Representations
164. Face Detection And Localization In Color Images Using Genetic Algorithm
165. Color Night Vision Using Contourlet Transform Based Image Fusion And Optimization
166. A Nonoblivious Watermarking Scheme For Embedding Spread Spectrum-Like Watermarks In The Wavelet Domain
167. Real-Time Rendering Of ICE
168. Modeling And Visualization Of Fruit Growth Of Fruit Trees
169. VAM: Video-Aided Modeling For Shape Reconstruction And Re-design
170. Fast Construction Of Flow Structures
171. Real-Time Eye Detection And Tracking Effectively To Predict Driver Fatigue
172. Tracking-Based Segmentation And Volume Rendering For Assessing Stenosis Of Coronary Arteries In MS-CTA Images
173. Noise Detection And Removal In Realtime Video Streams As Compared With Static Images
174. Hue variance Prediction
175. Context Definition For Estimating Camera Motion Through Planar Deformation
176. A 3d Shape Retrieval Method Based On Continuous Spherical Wavelet Transform
177. A Prototype System For 3d Error Visualization And Assessment Of Digital Elevation Models
178. Efficient Face Recognition For Wireless Surveillance Systems
179. A Virtual Library Of Mechanical Watch Movements
180. Data presenter: A Life-Like Agent Explaining Tables And Graphs
181. A Novel Approach For Skew Correction For Machine Printed And Handwritten Documents
182. Simultaneous Enhancement Of Spatial Resolution And Dynamic Range From Multiple Images
183. Multi-Scale Image De-Noising And De-Cluttering Using Cross-Scale Mathematical Morphology
184. Fast Rendering Of Leaves
185. Hand Registration Scheme For Hand Tracking/Recognition
46. **IADIS Web Based Communities 2006**
186. Can virtual communities be a new competitive business model in the customers view
187. The role of virtual communities in consumers decision process consumer electronic products
188. Peer-Peer Business Communities: Mapping Public Choreography

- Protocols to implementations Mechanisms
189. Critical factors affecting the assimilation of Web Tech. in Africa
47. **Communication Systems and Applications ~CSA 2006~**
190. An integrated multifractal model for VBR video
48. **The IASTED International Conference on TELEHEALTH 2006**
191. Data security using biotechnologies
192. Evaluation of Retrieving and Storing Image Techniques in Database
193. High Performance Storage and Transmission of Medical Images
194. Image Compression Standard Comparison: An overview of JPEG, JPEG2000, GIF, PNG, and Fractal
195. Performance Analysis of 3G Mobile security protocol
49. **GRAPHICS AND VISUALIZATION IN ENGINEERING ~ GVE 2007~**
196. Efficient Multiple Independent Motion Segmentations
50. **JOURNAL OF MEDICAL ENGINEERING AND PHYSICS**
197. Modified Deterministic Annealing Algorithm for Robust Image Segmentation
51. **11th WORLD MULTICONFERENCE ON SYSTEMICS, CYBERNETICS AND INFORMATICS (WMSCI 2007), 2007 Orlando, Florida, U.S.A.**
198. Low power acoustic sensing and decision making remote sensor
199. Fingerprint Minutiae Matching Algorithm Based on Neural Network
200. Wavelet-based OFDM Blind Channel Estimation
201. A Layer-based Chinese Document Image Encoding Method
202. Vibration signal analysis and feature extraction based on wavelet energy spectrum
52. **SIGCSE 2008 Technical Symposium on Computer Science Education, Portland, Oregon, USA**
203. Teaching cryptography with Open-source software
204. Visualization of Bioinformatics Algorithm
205. Graphics Package for the First Day and Beyond

Grants Applied

Funded: -

1. ACPAC Digital Forensic Project- PI Amount \$3200
2. IUP Cyber Troopers –Scholarship Program –Amount 83, 849 Role CO-PI
3. Study and Prototype Development for an Unclassified Covert Channel Analysis—Amount 102,242.36 –Role CO-PI
4. IUP Cyber Service –Scholarship for Services –Amount 62,830 Role CO-PI
5. IUP 2002-2003 Program in Support of Diversity and Equal Opportunity: A Plan for Retention of Underrepresented Student Populations in IUP's Computer Science Department: (Amount: \$24,720), Role: Co- Director.
6. ACPAC Robotics Project- PI
7. IUP Research Fellowship: Support for Travel to International Conferences, (Amount: \$1,500) Role: Principle Investigator (PI).
8. IUP Research Fellowship: Support for Travel to International Conferences, (Amount: \$1,500) Role: Principle Investigator (PI).
9. Faculty Development Grant, Ohio Northern University, Summer 2001.

Not- Funded: -

1. REU Site for Digital Forensics: Amount \$229,206.00

2. Wavelet Based Biometric Identification for Network Security: IUP SENATE FELLOWSHIP GRANTS PROGRAM: Amount \$6891. 97
3. CPATH CB — Integrating Interdisciplinary Computer Information Assurance Awareness and Operational Coursework into Academic Computing Programs. Submitted to NSF.
4. SFS: Building the New Breed of Information Assurance Professionals for Cyber Space Defense. Submitted to NSF.
5. CCLI: Digital Forensics Laboratory: Amount \$145,890.00
6. Department of Homeland Security Information Assurance Awareness Education and Training Amount:- \$848,705.78:- Role PI
7. PSSHE Diversity and Equity Grant (\$ 12, 360) Role PI
8. IUP Cyber Troopers Capacity Building – Amount 86, 890. Role CO-PI
9. Drug Information Agency (DIA): Multidimensional Non-Linear Spectral Estimation (MNSE): A wavelet based study of Heart Rate Variability (HRV) Signal by using Multifractal Analysis (Amount: \$25,000): Role: PI.
10. National Science Foundation (NSF): Acquisition of a Higher-Performance Computer for Undergraduate Research and Research Training; (Amount: \$136,867): Role: Co-Principal Investigator (Co-PI).
11. National Science Foundation (NSF): NSF Computer Science, Engineering and Mathematical Scholarship (CSEMS)- NSF 01-62; (Amount: \$68,750): Role: Co-Principal Investigator (Co-PI).
12. The Office of Naval Research Young Investigator Program: Wavelet, Fractal and Multifractal Image & Signal Analysis and Compression, (Amount: \$201,713): Role: Principal Investigator (PI).
13. NASA- Advanced Information Systems Technology (AIST) Program: Multiscale Data Compression, (Amount: \$415,887): Role: Principal Investigator (PI).
14. National Science Foundation (NSF) NSF- 02-168 ----Wavelet and Fractal Based Techniques for Data Compression, Analysis, and Hiding, (Amount: \$387,059): Role: Principle Investigator (PI).
15. IUP Senate Fellowship Grant: Fractal and Wavelet Image and Signal Analysis, (Amount: \$6,953): Role: Principal Investigator (PI).
16. National Cooperative Highway Research Program and XML Schemes for Exchange of Transportation Data – NCHRP (\$454,029 : Role:(PI))
17. SC05 Education Program
18. SIGCSE Special Project

Service

SERVICE

University

1. University Wide Promotion Committee

Served in UWPC for Full Professor Rank

2. University Senate and Awards Committee Member

Represents the department in the University Senate on all matters pertinent to the department.

3. University APSCUF

Represents the department in the APSCUF Representative Council on all matters pertinent to the department.

4. APSCUF Temporary Faculty Committee chair

The APSCUF Temporary Faculty Committee is dedicated to represent the concerns of temporary faculty and to increase temporary faculty participation in the APSCUF community.

5. Middle States Themes and Standard 14 Committee.

Assessment of student learning demonstrates that the institution's students have knowledge, skills, and competencies consistent with institutional goals and that student at graduation

have achieved appropriate higher education goals.

- 6. IUP Recruitment Expo**
- 7. University Awards Committee**
- 8. Engineering Task Force Committee**
- 9. Legislative Assemblies**
- 10. New Faculty Orientation**
- 11. Engineering Task Force**

College

12. Applied media and simulation games Center Supporting Faculty

Had a role in starting the AMSGC, with the communication media dept

13. NS&M Research 2002-2005

Represents the department in making decisions on the support of funding for Research Projects from the College of Natural Sciences and Mathematics.

Department

14. Graduate Committee 2002-2009

Coordinator, contact person for graduate programs.

15. Facilities 2002-2006

Responsible for recommending the purchase of hardware, software, equipment and furnishings faculty offices, the department office, the Tompkins Lab, and the departmental carts to be purchased from ESF funds or Foundation funds.

16. Computer Science Club Advisor 2003-2006, 2008-2009

Coordinate club activities and meetings with the elected student officers. Complete reorganization of the club such as webpage, application of university recognition and application for ACM (Association for Computing Machinery) student chapter.

17. Computer Science Department Web Page Coordinator 2004-2005

Taking minutes for department meetings.

18. PACISE Board of Governors 2003-2009

19. PACISE Vice president 2008-2009

20. PACISE President 2009-

21. Department Promotion Committee member 2004-2005

22. Graduate Review Committee Chairperson 2002-2007

23. Faculty Meeting Secretary 2003-2004

24. Evaluation Committee 2004-2005, 2008-2009

25. Summer School Committee 2005-2006

26. Colloquium Committee 2005-2006

27. Recruitment & Retention Coordinator 2005-2008

28. Information Assurance Students Coordinator 2005-2006

29. Social Advisor (Informal) 2005-2006

30. PACISE 2006 Planning Committee Chair

31. Department Tenure Committee Chair 2008-2009

32. Student help Coordinator 2006-2007

Member of Technical organization

1. Gartner
2. Information Week
3. International Biometric Group
4. Security Pipeline
5. Sun Microsystems
6. Vision Systems Design
7. Image Processing Europe
8. The Computing Research Association (CRA)
9. Lightwave
10. Military & Aerospace Electronics
11. Laser Focus World
12. National Semiconductor
13. TechOnLine Webcast
14. WebCT
15. Earth System Modeling Framework (ESMF) project
16. Coreco Imaging
17. CERT Advisory
18. CleanRooms E-News