

Stefan A. Robila, Ph.D.

Professor of Computer Science

2018

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EDUCATION

2002, Ph.D., Computer Information Science, Syracuse University, NY

2000, M.S., Computer Science, Syracuse University, NY

1997, B.S., Computer Science, University of Iasi, Romania

PROFESSIONAL EXPERIENCE

01/2018 – present, Program Director, CISE, National Science Foundation, Alexandria, VA

09/2012 – present, Professor of Computer Science, Montclair State University, NJ

08/2017 – 09/2017, Visiting Academic, Medical Image Proc Gr., University of Geneva, Switzerland

01/2011 – 03/2011, Visiting Academic, Engineering Sciences, University of Oxford, UK

09/2010 – 12/2010, Visiting Researcher, Center for Image Analysis, Uppsala University, Sweden

09/2008 – 08/2012, Associate Professor of Computer Science, Montclair State University, NJ

10/2004 – present, Director, Center for Imaging and Optics, Montclair State University, NJ

09/2003 – 08/2008, Assistant Professor of Computer Science, Montclair State University, NJ

08/2002 – 08/2003, Assistant Professor of Computer Science, University of New Orleans, LA

05/2000 – 05/2002, Research Assistant, Syracuse University, NY

08/1998 – 05/2000, Teaching Assistant, Syracuse University, NY

08/1997 – 07/1998, Teaching Assistant, University of Iowa, NY

HONORS AND AWARDS

– Fulbright Visiting Specialist Roster Candidate (2016-2021)

– Featured Reviewer, ACM Computer Reviews, May 2015

– Annual Best Review Nominee (1 out of 20) ACM Computer Reviews, 2015

– **Phi Kappa Phi**, April 2011

– Association for Computing Machinery (ACM) **Senior Member**, January 2010

– Institute for Electrical and Electronics Engineers (IEEE) **Senior Member**, November 2008

– IEEE **Region 1 Award** Category 3H For Contributions to the Engineering Profession in Exemplary
Service as the LISAT Conference Proceedings Chair, May 2008

– Montclair State University **Teaching Fellow** 2008-2009

– Montclair State University, **Leadership Associate** 2008

- Who’s Who America’s Teachers and Educators 2007
- Who’s Who in America 2006
- Richard Tapia Celebration of Computing Conference Scholarship, Association for Computing Machinery (ACM), October 2005
- Faculty Scholarship Program, Montclair State University 2004 - present
- Wilbur LePage Scholarship for Outstanding Doctoral Candidate in Engineering, Syracuse University, Syracuse, NY, August 2002
- Syracuse University Graduate Summer Fellowship, Syracuse, NY, June 2000 – July 2000
- The Soros Foundation for an Open Society Travel Award, Iasi, Romania, August 1997
- Romanian Ministry of Education National Scholarship and Fellowship, Iasi, Romania, September 1992 – May 1997

GRANTS

External Funding (approx awarded total \$2,134,296) (from which \$1,814,161 as PI)

1. 2018-2019. “Intergovernmental Personnel Act (IPA) Assignment, CISE Division”, *National Science Foundation*, PI, \$227,744.
2. 2017-2018. “Roboto-san: The contrasting visions of Artificial Intelligence and Robotics in Japanese and Western culture”, *New Jersey Council for Humanities*, Co-PI, \$20,000.
3. 2016-2019 “Acquisition of a High Performance Computing Environment for Advancement of Computational Science Research and Education”, PI, *National Science Foundation*, CNS-1625636, \$497,057
4. 2012-2015. “MRI: Acquisition of an Imaging System for the Study of Complex Fluids”, Senior Personnel, *National Science Foundation*, CBET- 1229113, senior personnel, \$171,135
5. 2012-2014. “REU Supplement - MRI: Acquisition of a High Performance Computer Cluster Supporting Computational Science Research and Learning”, PI, *National Science Foundation*, CNS-1219307, \$18,965
6. 2011-2014. “Decision Support System (DSS) for IT Management”, PI, *PSE&G (Public Service Enterprise Group) Technology Demonstration Grant Program*, PI, \$218,000
7. 2010-2014. “Montclair REU Site in Imaging and Computer Vision (iImagine)”, PI, *National Science Foundation*, IIS-1004447, \$287,760
8. 2010-2013. “MRI-R2: CSAM Acquisition of Scientific Computing Capacity”, Senior Personnel, *National Science Foundation*, DMS-0959461, \$129,000
9. 2009-2013. “MRI: Acquisition of a High Performance Computer Cluster Supporting Computational Science Research and Learning”, PI, *National Science Foundation*, CNS-0922644, \$190,010
10. 2007-2010. “Montclair REU Site in Imaging and Computer Vision (iImagine)”, PI, *National Science Foundation*, IIS-0648814, \$260,000
11. 2006-2007. “MobilITy - Using Tablet PCs in the IT”, PI, *Hewlett-Packard Technology Grant - U06TFH0014*, \$70,000
12. 2006-2007. “A New Course in Pattern Discovery”, PI, *The International Society for Optical Engineering (SPIE) Educational Grants - \$2,500*
13. 2005-2006. “Efficient Hyperspectral Image Processing”, PI, *Sun Microsystems Academic Excellence Grant Program T-US-697950-C- \$35,755*
14. 2005-2006. “Promoting Optics and Imaging Through Outreach Activities”, PI, *The International Society for Optical Engineering (SPIE) Educational Grants - \$2,000*

15. 2005. "Participation to the SPIE's Imaging Science Symposium", *The International Society for Optical Engineering (SPIE) Technical Programs Committee* - \$465
16. 2004. "Participation to the SPIE's Defense and Security Symposium", *The International Society for Optical Engineering (SPIE) Technical Programs Committee* - \$415
17. 2004-2005. "Center for Optics and Imaging Education", PI, *The International Society for Optical Engineering (SPIE) Educational Grants* - \$3,000
18. 2002. Society for Optical Engineering (SPIE) Student Travel Grant - \$490

Internal Funding (approx total \$27,750)

1. 2016-2017. "Roboto-San: The Contrasting Visions of Artificial Intelligence and Robotics in Japanese and Western Culture, Japan", Co-PI, *Montclair State University*, Global Education Grants Program - \$2,500
2. 2014-2015. "Social Network Data Integration for Cybersecurity", PI, *Montclair State University*, Separately Budgeted Research Program - \$4,000
3. 2014-2015. "CUDA GPU and Efficient Processing of Remote Sensing Data", PI, *Montclair State University*, CSAM Sokol Faculty / Student Research Program - \$2,000
4. 2012. "Participation in the IEEE ICALT 2012", PI, *Montclair State University* – Global Education Grants - \$800
5. 2009-2010. "Hyperspectral Image Acquisition System", PI, *Montclair State University* – Grant Proposal Development Program - \$2000
6. 2009. "Participation in the IEEE IGARSS 2009", PI, *Montclair State University* – Global Education Grants - \$800
7. 2007. "Participation in the IEEE IGARSS 2007", PI, *Montclair State University* – Global Education Grants - \$800
8. 2006-2007. "Efficient Use of RFID Technology for Equipment Tracking", PI, *Montclair State University* – Student Faculty Research Projects - \$1,500
9. 2006. "Participation in the ACM ITiCSE 2006", PI, *Montclair State University* – Global Education Grants - \$800
10. 2006-2007. "A Query System for Remote Sensing Data", PI, *Montclair State University*, CSAM Sokol Faculty / Student Research Program - \$2,000
11. 2005. "Participation in the IEEE ISSCS 2005", PI, *Montclair State University* – Global Education Grants - \$800
12. 2005-2006. "Real Time Feature Extraction for Remote Sensing", PI, *Montclair State University* – Separately Budgeted Research - \$2,000
13. 2004-2005. "Hyperspectral Image Acquisition", PI, *Montclair State University* – Student Faculty Research Projects - \$2,000
14. 2004-2005. "Remote Sensing Data Processing in a Distributed Environment", PI, *Montclair State University* – Separately Budgeted Research - \$2,000
15. 2002-2003. "Employment of Multimedia and Internet in Teaching Computer Science", PI, *University of New Orleans* – Faculty Initiative for Technology in Teaching - \$3,250
16. 2001. Syracuse University Travel Grant - \$500

PUBLICATIONS AND PRESENTATIONS

Peer Reviewed Publications

*denotes undergraduate students, +denotes graduate student

1. B. Pacione⁺, S.A. Robila “Digital Piracy, Technology, the Legal System and Computing Education”, *Proceedings ISEC*, 1-4, 2018 (submitted)
2. K. Handelli⁺, S.A. Robila “A Cybersecurity High School Curriculum Guide”, *Proceedings SITE*, 1-7, 2018 (in press)
3. P. Persaud⁺, A. Varde, S.A. Robila, “Enhancing Autonomous Vehicles with Commonsense: Smart Mobility in Smart Cities”, *Proceedings IEEE ICTAI*, 1-5, 2017
4. K. Miller⁺, S.A. Robila “LIDAR for Scribbler 2- Enhancing Sensing Capabilities in an Educational Robot”, *Proceedings IEEE LISAT*, 1-5, 2017
5. E. Bilgin⁺, S.A. Robila “Road Sign Recognition System on Raspberry Pi”, *Proceedings IEEE LISAT*, 1-5, 2016
6. M. Butler⁺, S.A. Robila “Interface for Querying and Data Mining for the IMDb Dataset”, *Proceedings IEEE LISAT*, 1-5, 2016
7. M. Pawlish, A. Varde, S.A. Robila, C. Alvarez, C. Fleischl, G. Serviano, “The Greening of Data Centers with Cloud Technology”, *International Journal of Cloud Applications and Computing*, 5(4), 1-23, October-December 2015
8. F.K. Muriithi, D. Yu, S.A. Robila, “Vegetation response to intensive commercial horticulture and environmental changes within watersheds in central highlands, Kenya, using AVHRR NDVI data”, *GIScience & Remote Sensing*, 2015
9. M. Pawlish, A. Varde, S.A. Robila, C. Alvarez, C. Fleischl, G. Serviano, “GreenDSS tool for data center management”, *Int. Conf. on Information and Communication Systems (ICIS)*, pp. 1-6, 2014
10. M. Pawlish, A. Varde, S.A. Robila, A. Ranganathan, “A call for efficiency in data center”, *SIGMOD*, vol 43 no. 1, pp. 45-51, 2014
11. S. A. Robila, D. Ricart⁺, “Distributed Algorithms for Unmixing Hyperspectral Data using Nonnegative Matrix Factorization with Sparsity Constraints”, *Proceedings IEEE IGARSS*, in pp. 2156-2159, 2013
12. S. A. Robila, K. Pirate*, T. Hall*, “Impact of spatial complexity preprocessing on hyperspectral data unmixing” *Proc. SPIE 8743, Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XIX*, pp. 1-7., 2013
13. M. Pawlish, A. Varde, S.A. Robila, “Decision Support in Data Centers for Sustainability”, *Proc.IEEE Int. Conference on Data Mining Workshops (ICDMW)*, 2013, pp. 613-620
14. S. A. Robila, “Introducing Green Computing to General Education” *Proceedings of Society for Information Technology & Teacher Education Int. Conference (SITE)*, pp. 78-83, 2013.
15. M. Pawlish, A. Varde, S.A. Robila, “Cloud Computing for Environment Friendly Data Centers”, *Proceedings International Workshop on Cloud Data Management CloudDB*, 2012, pp. 43-48
16. S. A. Robila, “Linear unmixing-based feature extraction for hyperspectral data in a high-performance computing environment” *Proceedings SPIE Optics and Photonics* vol. 8515, pp. 1-6, 2012
17. S. A. Robila, “A Sustainability Component for a First-Year Course for Information Technology Students” *Proceedings Int. Conf. on Advanced Learning Technologies 2012 ICALT*, pp. 90-94.
18. M. Pawlish, A. Varde, S.A. Robila, “Analyzing Utilization Rates in Data Centers for Optimizing Energy Management”, *Proceedings Int. Green Computing Conference IGCC*, 2012, pp. 1-6.
19. S. A. Robila, M. Chang*, and N. Damico*, “Face Recognition using Spectral and Spatial Information” *Proceedings SPIE Optics and Photonics*, vol. 8135, pp. 8135Q-8., 2011

20. J. Peng, G. Seetharaman, W. Fan, S.A. Robila, and A. Varde, "Chernoff Dimensionality Reduction-- Where Fisher Meets FKT". *Proceedings of SIAM International Conference on Data Mining*, pp. 271-282, 2011
21. S. A. Robila, G. Busardo⁺, "Hyperspectral Data Processing in a High Performance Computing Environment" in *Proceedings IEEE PDSEC IPDPS*, 2011, pp. 1424-1431, 2011
22. J. Peng, S.A. Robila, F. Wei, G. Seetharaman, "Analysis of Chernoff criterion for linear dimensionality reduction", *Proceedings IEEE Conference on Systems Man and Cybernetics (SMC)*, pp. 3014-3021, 2010
23. J. Peng, S.A. Robila, W. Fan, G. Seetharaman, "Margin Based Dimensionality Reduction and Generalization", *The Open Journal of Artificial Intelligence*, vol. 4, pp. 55-64, 2010
24. S. A. Robila, "Considerations on Unsupervised Spectral Data Unmixing and Complexity Pursuit", *Proceedings IEEE IGARSS*, pp. 987 – 990, 2010
25. S. A. Robila, M. Butler⁺, "Parallel Unmixing of Hyperspectral Data Using Complexity Pursuit", *Proceedings IEEE IGARSS*, pp. 1035-1038, 2010
26. G. Roughton*, A.S. Varde, S.A. Robila, and J. Liang, "A feature-based approach for processing nanoscale images," in *Proceedings SPIE Scanning Microscopy*, vol. 7729, pp. 772911-9, 2010
27. A. Wimberly*, S. A. Robila, and T. Peplau*, "Spectral face recognition using orthogonal subspace bases," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XVI*, vol. 7695, pp. 76952E-10, 2010
28. B. Kaipa⁺, S.A. Robila, "Statistical Steganalysis of Images Using Open Source Software " *Proceedings IEEE LISAT 2010*, pp.1-5, 2010
29. S. A. Robila, "Band reduction for hyperspectral imagery processing," in *Proceedings SPIE Computational Imaging VIII*, vol. 7533, pp. 75330W-9, 2010
30. S. A. Robila, "Spectral Image Processing Using Sparse Linear Transforms", *Proceedings IEEE IGARSS*, pp. IV-534-7, 2009
31. S.A. Robila, "Quo vadis face recognition: Spectral considerations," *Proceedings IEEE LISAT 2009*, pp.1-5, 2009
32. S. A. Robila*, A. LaChance*, and S. Ruff, "Investigating face recognition from hyperspectral data: impact of band extraction," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XV*, vol. 7334, pp. 73341Y-10, 2009
33. M. Schockling*, R. Bonce*, A. Gutierrez, and S. A. Robila, "Visualization of hyperspectral images," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XV*, vol. 7334, pp. 733423-12, 2009
34. D. Wang, L. Xu, J. Peng, S.A. Robila, "Subdividing Hexagon-Clustered Wireless Sensor Networks for Power Efficiency", *Proceedings IEEE International Conference on Communications and Mobile Computing*, pp. 454-458, 2009
35. S. A. Robila, L. G. Maciak⁺ "Considerations on Parallelizing Nonnegative Matrix Factorization for Hyperspectral Data Unmixing", *IEEE Geosciences and Remote Sensing Letters* , vol. 6, no. 1, pp. 57-61, 2009
36. C. A. Neylan*, T. Rush*, A. Gutierrez, and S. A. Robila, "Hyperspectral image processing: a direct image simplification method," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XIV*, vol. 6966, pp. 69661Y-9, 2008
37. S. Sidiqi⁺, S. A. Robila, J. Peng, D. Wang, "Sparse Representations for Hyperspectral Image Classification", *Proceedings IEEE IGARSS 08*, vol.2, no., pp.II-577-II-580, 2008
38. S. A. Robila, "Toward hyperspectral face recognition," in *Proceedings SPIE Image Processing: Algorithms and Systems VI*, vol. 6812, pp. 68120X-9, 2008

39. S. A. Robila and N. A. Senedzuk⁺, "Grid computing for hyperspectral data processing," in *Proceedings SPIE Next-Generation Spectroscopic Technologies*, vol. 6765, pp. 67650A-9, 2007
40. S. A. Robila, B. G. Wachsmuth, C. Scharff, and J. L. Popyack, "Mobile instructional laboratory environments and their use in computing sciences", *Journal of Computing in Colleges*, vol. 23, no. 3, 114-118, 2008
41. J. Peng, S. A. Robila, "Weighted Additive Criteria for Linear Dimension Reduction", *Proceedings IEEE ICDM*, pp.619-624, 2007
42. S. A. Robila, "Information Disclosure Incidents and Computer Security Education", *Proceedings ASEE MidAtlantic Conference*, 7 pgs on CD, 2007
43. S. A. Robila, L. Maciak⁺, "Sequential and Parallel Feature Extraction using Nonnegative Matrix Factorization", *Proceedings IEEE LISAT*, 1-7, DOI: 10.1109/ LISAT.2007.4312637, 2007
44. S. A. Robila, "New Developments in Target Detection in Hyperspectral Imagery Using Spectral Metrics and Spectra Extraction", *Proceedings ASPRS National Conference*, 11 pgs on CD, 2007
45. S. A. Robila and L. G. Maciak⁺, "A parallel unmixing algorithm for hyperspectral images," in *Proceedings SPIE Intelligent Robots and Computer Vision XXIV: Algorithms, Techniques, and Active Vision*, vol. 6384, pp. 63840F-11, 2006
46. S. A. Robila, "A Class of Detection Filters for Targets and Anomalies in Multispectral / Hyperspectral Imagery", *Proceedings IEEE CVPR*, 132-140, 2006
47. S. A. Robila, "Use of Remote Sensing Applications and its Implications to the Society", *Proceedings IEEE ISTAS*, 1-6, 2006
48. J. Ragucci^{*}, S. A. Robila, "Social Aspects of Phishing", *Proceedings IEEE ISTAS*, 1-5, DOI: 10.1109/ISTAS.2006.43758935, 2006
49. S. A. Robila, L. Maciak⁺, "Novel Approaches for Feature Extraction in Hyperspectral Images", *Proceedings IEEE LISAT*, pp. 1-7, 2006
50. S. A. Robila, J. Ragucci^{*}, "Don't be a Phish: Steps in User Education", *Proceedings ITiCSE*, 237-241, 2006.
51. S. A. Robila, "Real Time Processing of Hyperspectral Images", *Proceedings ASPRS Annual Conference*, 5 pgs. on CD, 2006
52. S. A. Robila, A. Kumar, G. Trajkovski, J. Popyack, S. Poger, "Undergraduate Research – Students' Rewards and Challenges", *Journal of Computing in Colleges*, vol. 21, no. 2, 166-171, 2005
53. S. A. Robila, "Using Spectral Distances for Speedup in Hyperspectral Image Processing", *International Journal of Remote Sensing*, vol 26, no. 24, 5629-5650, 2005
54. S. A. Robila, A. N. Kumar, D. Baldwin, C. Bates Congdon, "Considerations on Undergraduate Computer Science Research", *Journal of Computing in Colleges*, vol. 20, no. 5, 91-95, 2005
55. S. A. Robila, C. Bredlau, "Writing Requirements in Computer Security", in *Proceedings ACM SIGITE*, 385-386, 2005
56. S. A. Robila, "Distributed Computing and Computer Security Education", in *Proceedings ACM SIGITE*, 383-384, 2005
57. S. A. Robila, A. Gershman^{*}, "Spectral Matching Accuracy in Processing Hyperspectral Data", in *Proceedings IEEE ISSCS*, 163-166, 2005
58. S. A. Robila, "Interdisciplinary Undergraduate Research with Focus on Hyperspectral / Multispectral Imagery", *ASEE Mid-Atlantic Conference*, 11 pgs. on CD, 2005
59. S. A. Robila, "An Investigation of Spectral Metrics in Hyperspectral Image Preprocessing for Classification", *Proceedings ASPRS Annual Conference*, 9 pgs., 2005

60. S. A. Robila, "Subpixel target detection in hyperspectral data using higher order statistics source separation algorithms," in *Proceedings SPIE Computational Imaging III*, vol. 5674, pp. 424-431, 2005
61. S. A. Robila, "An Analysis of Spectral Metrics for Hyperspectral Image Processing", *IEEE Geoscience and Remote Sensing Symposium, IGARSS*, vol. 5, 3233-3236, 2004
62. S. A. Robila, "Distributed Processing of Hyperspectral Images", *Proceedings ASPRS Annual Conference*, Denver, CO, 4 pgs. on CD, 2004
63. S. A. Robila, "Distributed source separation algorithms for hyperspectral image processing," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery X*, vol. 5425, pp. 628-635, 2004
64. S. A. Robila, "Higher Order Statistics Based Feature Extraction for Hyperspectral Images", *Proceedings ASPRS Annual Conference*, 1 pg. on CD, 2003
65. S. A. Robila, "Investigation of Spectral Screening Techniques for Hyperspectral Image Processing", *Proceedings ASPRS Annual Conference*, 1 pg. on CD, 2003
66. S. A. Robila, "Investigation of spectral screening techniques for independent-component-analysis-based hyperspectral image processing," in *Proceedings SPIE Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery IX*, vol. 5093, pp. 241-252, 2003
67. S. A. Robila and P. K. Varshney, "Further results in the use of independent component analysis for target detection in hyperspectral images," in *Proceedings SPIE Automatic Target Recognition XIII*, vol. 5094, pp. 186-195, 2003
68. C. A. Shah, M. K. Arora, S. A. Robila, P. K. Varshney, "ICA Mixture Model based Unsupervised Classification of Hyper-Spectral Imagery", *IEEE Applied Imagery Pattern Recognition Workshop*, Washington D.C., pp. 29-35, 2002
69. S. A. Robila, P. K. Varshney, "A Fast Source Separation Algorithm for Hyperspectral Imagery", *IEEE Geoscience and Remote Sensing Symposium, IGARSS*, vol. 6, pp. 3516–3518, 2002
70. S. A. Robila and P. K. Varshney, "Target detection in hyperspectral images based on independent component analysis," in *Proceedings SPIE Automatic Target Recognition XII*, vol. 4726, pp. 173-182, 2002
71. S. A. Robila, T. Achalakul, P. Halaand, and S. Taylor, "Exploring Independent Component Analysis for Remote Sensing", *Workshop on Multi/Hyper-spectral sensor, Measure, Modeling, and Simulation*, 8 pgs. on CD, 2000
72. S. Taylor, T. Achalakul, J. Lee, K. Lhee, S. A. Robila, "Resilient Remote Sensing", *National Symposium on Sensor and Data Fusion*, 7 pgs., 2000

Book Chapters

1. S. A. Robila, "Spectral Screened Orthogonal Subspace Projection for Target Detection in Hyperspectral Imagery", in R. Hammoud editor, *Augmented Vision Perception in Infrared Algorithms and Applied Systems*, Springer, 2008, pp. 173-196.
2. J. W. Ragucci*, S. A. Robila, "Designing Antiphishing Education", in M. Gupta and R. Sharman (Eds.), *Handbook of Research on Social and Organizational Liabilities in Information Securities*, peer reviewed chapter, IGI Global, 2008, pp. 257-278.
3. S. A. Robila, "A Maximum Spectral Screening (MSS) Algorithm for Target Detection", in C-. I., Chang editor, *Advances in Hyperspectral Imagery*, Research Signpost, 2006, pp. 297-326.
4. S. A. Robila, "Independent Component Analysis (ICA)", in P.K. Varshney, M.K. Arora editors. *Advanced Image Processing Techniques for Remotely Sensed Hyperspectral Data*, Springer, New York, 2004, pp. 109 - 132.

5. S. A. Robila, P. K. Varshney, “Extracting Features from Hyperspectral Data Using ICA”, in P.K. Varshney, M.K. Arora editors. *Advanced Image Processing Techniques for Remotely Sensed Hyperspectral Data*, Springer, New York, 2004, pp. 199 - 216.

Invited Publications

1. S. A. Robila, “Future of Imaging: What Comes Next?” – invited contributor, *Advanced Imaging Magazine*, vol. 20, No. 1, 2005, pp. 34-36.
2. F. Rivera*, D. Schemly*, I. Yussim*, S. A. Robila, “Spyware Study”, Technical Report, Montclair State University / Anti-Keylogger.org, http://anti-keylogger.org/articles.cgi?in=Spyware_Study&id=15, anti-keylogger.org, posted by invitation.

Professional Peer Reviewed Presentations/Abstracts

1. M. Butler, S. A. Robila, “Building Big Data Skills through Practice – Extraction, Querying and Data Mining of the IMDb Dataset”. *New Jersey Big Data Alliance Symposium*, Montclair, NJ, March 2016
2. S. A. Robila, “Feature extraction for remote sensing data using massive parallel processors”. *World Weather Open Science Conference*, Montreal, QC, August 2014
3. S. A. Robila, “Computational Sensing Laboratory: Research and Education in Large Data Sets”. *New Jersey Big Data Alliance Symposium*, Piscataway, NJ, April 2014
4. S. A. Robila, “Analysis of Industrial Visits as Component of Undergraduate Research Activities”, *Council on Undergraduate Research Annual Conference*, Ewing, NJ, June 2012
5. K. Herbert, J. Fails, E. Hill, M. Oudshoorn, S. A. Robila, “Research Transcending Historic Disciplinary Boundaries”, *Council on Undergraduate Research Annual Conference*, Ewing, NJ, June 2012
6. S. A. Robila, “Linear Sparse Feature Extraction Transforms for Remote Sensing Images”, *ASPRS Annual Conference*, Portland, OR, May 2008
7. S. A. Robila, M. D. Islam*, “HYPDB - A Query System for Remote Sensing Data“, *ASPRS Annual Conference*, Portland, OR, May 2008
8. M. Robila, S. A. Robila, “Developing an Interdisciplinary Partnership in Using Technology in Teaching”, *Teaching in Higher Education Forum (THE 2003)*, Baton Rouge, LA, April 2003
9. S. A. Robila, P. K. Varshney, S. Taylor, “Feature Extraction for Hyperspectral Images Using Independent Component Analysis”, *Fifth International Airborne Remote Sensing Conference and Exhibition*, Miami, FL, May 2002

White Paper

1. A. Varde, S. A. Robila, M. Weinstein, “Green Data Centers for Sustainability”, *National Institute of Standards (NIST) Technical Innovation Program Energy White Paper*, 10 pgs online, 2010

Review Publications (editor reviewed)

ACM Computing Reviews (www.reviews.com)

1. S. A. Robila, Book review of *Compressed sensing for distributed systems*, Coluccia G., Ravazzi C., Magli E., Springer, 2015, in press
2. S. A. Robila, Article review of “Unsupervised methods for the classification of hyperspectral images with low spatial resolution”, Villa A., Chanussot J., Benediktsson J., Jutten C., Dambreville R., *Pattern Recognition* 46 (6): 1556-1568, 2013.g, Jan 2015.

3. S. A. Robila, Article review of “WISEngineering: Supporting precollege engineering design and mathematical understanding” Chiu J., Malcolm P., Hecht D., Dejaegher C., Pan E., Bradley M., Burghardt M. *Computers & Education* 67: 142-155, 2013, Sep 2014
4. S. A. Robila, Article review of “Learning group-based dictionaries for discriminative image representation” Lei H., Mei K., Zheng N., Dong P., Zhou N., Fan J. *Pattern Recognition* 47(2): 899-913, 2014, Aug 2014
5. S. A. Robila, Book review of *Computer Security*, Gollmann D., Wiley, 2011, Oct 2012
6. S. A. Robila, Book review of *Beginning digital image processing: Using Free Tools for Photographers*, Montabone S., Appres, 2010, Jun 2012.
7. S. A. Robila, Article review of “Visual enhancement of old documents with hyperspectral imaging” Joo Kim S., Deng F., Brown M. *Pattern Recognition* 44 (7): 1461-1469, 2011, Apr 2012.
8. S. A. Robila, Article review of “Impacts and preferences study for e-HO as a holistic learning environment complementary to e-learning” Lee C., Der Pan P., Liao C. *Computers & Education* 56 (3): 747-759, 2011, Nov 2011.
9. S. A. Robila, Book review of *Murach’s Javascript and Dom Scripting*, Harris R. Mike Murach & Associates, 2009., May 2011
10. S. A. Robila, Book review of *Computable Models*, Turner R., Springer 2009, Oct 2010
11. S. A. Robila, Book review of *Modeling with data: Tools and Techniques for Scientific Computing*, Klemens B., Princeton University Press, May 2010.
12. S. A. Robila, Book review of *Advances in computational algorithms and data analysis*, Ao S., Rieger B., Chen S., Springer, 2008, Dec 2009.
13. S. A. Robila, Book review of *The Burrows-Wheeler Transform: Data Compression, Suffix Arrays, and Pattern Matching*, Adjero D., Bell T., Mukherjee A., Springer 2008, Oct 2009.
14. S. A. Robila, Article review of “Adaptive course generation through learning styles representation” Sangineto E., Capuano N., Gaeta M., Micarelli A. *Universal Access in the Information Society*, vol. 7, no. 1, 1-23, 2008, Jun 2009.
15. S. A. Robila, Article review of “Beyond media stickiness and cognitive imprinting: Rethinking creativity in cooperative work and earning with ICTs”, Greer R., Barnes A., *Education and Information Technologies*, vol. 3, no. 12, 123-136, 2007, Nov 2008
16. S. A. Robila, Book review of *Eye Tracking Methodology, Theory and Practice*, 2nd Edition, Duchowski A. T., Springer, 2007, Oct 2008
17. S. A. Robila, Book review of *Data Compression, The Complete Reference*, Salomon D, Springer, 2007, Sep 2008
18. S. A. Robila, Book review of *Foundations of Fuzzy Control*, Jantzen J, John Wiley and Sons, 2007, Aug 2008
19. S. A. Robila, Article review of “Unsupervised band removal leading to improved classification accuracy of hyperspectral images”, Faulconbridge R., Pickering M., Ryan M., *Proceedings Australian Computers Science Conference 2006*, Hobart, Australia, Jan 16-19, 43-48, 2006, Feb 2007
20. S. A. Robila, Book review of *Handbook of Multibiometrics*, Ross A., Nandakumar K., Jain A. Springer-Verlag New York, 2006, Dec 2007 (*Review Highlighted by Editor*)
21. S. A. Robila, Book review of *Human Identification Based on Gait*, Nixon M., Tan T., Chellappa R. Springer-Verlag New York, 2006, Nov 2007
22. S. A. Robila, Article review of “Benefit of the angular texture signature for the separation of parking lots and roads on high resolution multi-spectral imagery”, Zhang Q., Couloigner I. *Pattern Recognition Letters* 27(9): 937-946, 2006, Sep 2007

23. S. A. Robila, Book review of *Advances in Cryptology Proceedings Asiacrypt 2005*, Lecture Notes in Computer Science, Roy B. (Ed.), Springer-Verlag New York, 2005, Aug 2007
24. S. A. Robila, Book review of *Computer Network Security*, Kizza J., Springer-Verlag New York, 2005, Aug 2007
25. S. A. Robila, Article review of “Deploying interactive e-labs for a course on operating systems”, Pardo A., Kloos C., *Proceedings ACM SIGITE 2006*, pp. 71-78, Mar 2007

Other / Non Peer-Reviewed Publications

1. S. A. Robila, ”True Colors”, *CSAM Insights*, Fall 2012, pp. 7
2. S. A. Robila, ”Elementary My Dear Watson”, *CSAM Newsletter*, Fall 2011, pp. 9
3. S. A. Robila, ”Three years of NSF REU at Montclair”, *CSAM Newsletter*, Spring 2010, pp. 8
4. S. A. Robila, ”2008 NSF iImagine REU”, *CSAM Newsletter*, Spring 2009, pp. 9
5. S. A. Robila, S. Brown, ”IGARSS08 seeks to connect current and future GOLD members”, *IEEE GoldRush*, March 2008, p. 16
6. S. A. Robila, ”Mobility – One Year Later”, *CSAM Newsletter*, Spring 2008, pp. 9
7. S. A. Robila, ”2007 NSF iImagine REU Update”, *CSAM Newsletter*, Fall 2007, pp. 6
8. S. A. Robila, ” SUN Microsystems Grant’s Impact on Computer Science Students”, *CSAM Newsletter*, Fall 2007, pp. 7
9. S. A. Robila, ”iImagine – NSF REU Grant Received”, *CSAM Newsletter*, Spring 2007, pp. 3
10. S. A. Robila, J. Jenq, and D. Deremer, ”MobilITy – Using Tablet PCs in the IT”, *CSAM Newsletter*, Fall 2006, pp. 8
11. S. A. Robila, ”SPIE Grant Awarded to Montclair State University”, *CSAM Newsletter*, Fall 2006, pp. 8
12. S. A. Robila, ”Sun Microsystems Academic Excellence Grant Awarded to Montclair State University”, *CSAM Newsletter*, Spring 2006, pp. 6
13. S. A. Robila, R. Zaritski, ”Parallel and Distributed Computing: a Powerful Tool in Modern Computer Science”, *CSAM Newsletter*, Fall 2005, pp. 3
14. S. A. Robila, G. Antoniou, A. Gutierrez, ”Workshop: Research and Optics: Imaging and Education”, *CSAM Newsletter*, Spring 2005, pp. 5
15. S. A. Robila, ”SPIE Grant Awarded to the Department of Computer Science”, *CSAM Newsletter*, Fall 2004, pp. 8

Other / Invited / Non Peer-Reviewed Presentations

Outside Home Institution

1. S. A. Robila, ”Research and Education Steps towards Green Computing”, Oral Presentation, Department of Electrical Engineering, Kasetsart University, Thailand, July 8, 2016
2. S. A. Robila, ”New Directions in Spectral Image Processing”, Oral Presentation, *Gildart Haase School of Computer Sciences and Engineering Seminar Series*, Fairleigh Dickinson University, Teaneck, NJ April 20, 2011
3. S. A. Robila, ”Pattern Recognition for Spectral Imaging”, Oral Presentation, *Pattern Analysis and Machine Learning Group*, Oxford University, Oxford, United Kingdom, January 17, 2011
4. S. A. Robila, ”Efficient Use of Hyperspectral Imagery”, Oral Presentation, *Center for Image Analysis Seminar Series*, Uppsala University, Uppsala, Sweden, October 25, 2010
5. S. A. Robila, ”Hyperspectral Image Processing: New Techniques, New Applications”, Oral Presentation, *Department of Mathematics and Computer Science Seminar Series*, Seton Hall University, South Orange, NJ March 26, 2010

6. S. A. Robila, "Assessing REU programs – Common Application", panelist, *National Science Foundation REU PI meeting*, Charlotte, NC, March 2010
7. S. A. Robila, "2009 iMagine – REU in Imaging and Computer Vision", Poster, *National Science Foundation REU PI meeting*, Charlotte, NC, March 2010
8. S. A. Robila, "2008 iMagine – REU in Imaging and Computer Vision", Poster, *National Science Foundation REU PI meeting*, Arlington, VA, March 2009
9. S. A. Robila, "Hyperspectral Image Processing", Oral Presentation, *Department of Computer Science Colloquium Series, Rowan University*, Glassborough, NJ, December 10, 2008
10. S. A. Robila, "Efficient Hyperspectral Data Feature Extraction", Oral Presentation, *Armament Research, Development and Engineering Center (ARDEC)*, Picatinny, NJ, November 10, 2008
11. S. A. Robila, A. LaChance*, S. Ruff*, "Spectral Imaging and Face Recognition", *New Jersey Technology Council Mid Atlantic Imaging Symposium*, Poster, Princeton University, Princeton, NJ, November 2008
12. S. A. Robila, "Recruitment Strategies for REU Sites: Report of the Working Group", *NSF REU PI Meeting*, Poster, Austin, TX, February 29, 2008.
13. S.A. Robila, J. Jenq, D. Deremer, "Mobility – Using Tablet PCs in the IT", *HP Technology for Teaching International Conference*, Poster, Monterrey Bay, CA, February 2007.
14. S. A. Robila, "Recent Development in Multispectral / Hyperspectral Image Processing", *Math. And Comp. Sci. Colloquia Series*, Oral Presentation, North Carolina Central University, NC, April 2005
15. S. A. Robila, "Interdisciplinary Research in Computer Science – the Case for Hyperspectral Imagery", Center for Imaging and Optics, *Workshop - Imaging and Optics: Research and Education*, Oral Presentation, Montclair, NJ, November 2004
16. M. Chopping, S. A. Robila, "Remote Sensing at Montclair State University", *New Jersey Technology Council*, Oral Presentation, Montclair State University, Montclair, NJ, April 2004
17. S. A. Robila, "Employment of Independent Component Analysis for Hyperspectral Image Processing", *Seminar of the Information and Systems Laboratory*, Oral Presentation, Electrical Engineering Department, University of New Orleans, LA, February 2003
18. S. A. Robila, "Digital Image Processing – Spatial Operations", *Comp. Sci. Dept. Colloquia Series*, Oral Presentation, University of Nebraska at Kearney, NE, February 2002
19. S. A. Robila, "Source Separation for Multispectral / Hyperspectral Imagery", *Comp. Sci. Dept. Colloquia Series*, Oral Presentation, University of New Orleans, LA, January 2002

At Home Institution

20. S. A. Robila, "Computational Sensing and Applications", LSAMP Student Meeting, Oral Presentation, Montclair State University, Mar 27, 2014
21. S. A. Robila, "Computational Sensing and Applications", Computer Club, Oral Presentation, Montclair State University, Apr 2, 2014
22. S. A. Robila, "Hyperspectral Imagery and Applications", Physics Club, Oral Presentation, Montclair State University, Apr 14, 2010
23. S. A. Robila, J. Peng, G. Antoniou, A. Gutierrez, A. Varde, S. Wahi, C. Moran*, D. Chromeck*, J. Ginsberg*, C. Myrie*, "Undergraduate Computer Science Research at Montclair: iMagine – REU in Imaging and Computer Vision", *Homecoming, College of Science and Mathematics Reception*, Poster, Montclair State University, October 3, 2009.
24. S. A. Robila, "Seeing the Unseen: Spectral Imaging Reveals Secrets", *GK-12 Math and Science Day*, Oral Presentation, Montclair State University, June 9, 2009
25. S. A. Robila, "Seeing the Unseen: Spectral Imaging", Oral Presentation, Weston Scholars Open House, Montclair State University, May 2009

26. S. A. Robila, "Processing Beyond the Visible Imagery", *College of Sciences and Mathematics Graduate Showcase*, Oral Presentation, Montclair State University, Montclair, NJ, April 10, 2007.
27. S. A. Robila, "Lessons Learned in the Grant Application Process", *MSU Grant Success Stories Workshop*, Oral Presentation, Montclair State University, March 28, 2007
28. S. A. Robila, "Seeing the Unseen – Hyperspectral Image Processing and Computers Science", *College of Sciences and Mathematics Open House*, Oral Presentation, Montclair State University, Montclair, NJ, February 2004
29. S. A. Robila, "Hyperspectral Image Processing", *College of Sciences and Mathematics Meeting*, Oral Presentation, Montclair State University, Montclair, NJ, October 2003
30. S. A. Robila, C. Shah, T. Achalakul, P. Varshney, "Hyperspectral/Multispectral Imagery Applications", *Kodak Technology Meeting*, Oral Presentation, Syracuse University, Syracuse, NY, November 2001
31. S. A. Robila, "Real Time Multispectral Image Processing Technologies", *Kodak Technology Meeting*, Oral Presentation, Syracuse University, Syracuse, NY, November 2001
32. S. A. Robila, J. Lee, "Hyperspectral Image Processing", *Syracuse University Open House*, Oral Presentation, Syracuse, NY, April 2001
33. S. Taylor, S. A. Robila, "Real Time Multispectral Image Processing", *Office for Government Relations*, Oral Presentation, Syracuse University, Syracuse, NY, November 2000

Course Guest Lectures

34. S. A. Robila, "Hyperspectral Imaging Technologies", EAES (M. Chopping, instructor), Oct 24, 2012, Oct 3, 2011, Nov 23, 2009, Mar 28, 2007, Apr 15, 2005

Workshops / Tutorials

- S. A. Robila, "Multidimensional Image Processing", SMUG Faculty Training Workshop, Montclair State University, Montclair, NJ, April 2004

Outreach Talks

1. S. A. Robila, "Computer Security", *PS 144 Jeromus Remsen Elementary School*, Forest Hills, NY, Feb 7, 2017
2. S. A. Robila, "Computational Sensing - Combining the Power of Computers with Robots and Sensors", *Thomas Jefferson Middle School*, Teaneck, NJ, December 13, 2016
3. S. A. Robila, "Robots and Programming", *PS 144 Jeromus Remsen Elementary School*, Forest Hills, NY, December 3, 2015
4. S. A. Robila, "Spectral Imaging (changing the way we look at the world)", *Montclair High School*, Montclair, NJ, November 19, 2015
5. S. A. Robila, "Computer Scientist – Career Day", *PS 144 Jeromus Remsen Elementary School*, Forest Hills, NY, May 15, 2015

TEACHING EXPERIENCE

Montclair State University

(graduate courses are numbered 500 and above)

Intro to Computer Applications	CMPT 109	Fall 2004 - 2006, 2009, 2012, 2013
Fluency with IT		Spring 2006, 2007, Summer 2009
Computational Concepts	CSIT 104	Fall 2014, 2015, Spring 2016, 2017
Computer Concepts for IT	CSIT 110	Spring 2010, Fall 2011
Computer Science I	CMPT 183	Fall 2003, 2006-2008, Spring 2004, 2005, 2008
Computer Science II	CMPT 184	Spring 2009, Fall 2011
Discrete Mathematics	CMPT 285	Spring 2004
Operating Systems Concepts	CMPT 481	Spring 2005, 2006, 2008
	CMPT 583	Spring 2006, 2008
Foundations of Programming Languages	CMPT 484	Fall 2013
	CSIT 313	Fall 2014
Human Computer Interaction	CSIT 335	Fall 2016
	CSIT 535	Fall 2016
Computer and Data Security	CMPT 495	Fall 2004, 2005
	CMPT 585	Fall 2004, 2005
Internet and Intranet Security	CMPT 320	Spring 2007, 2009, 2010, 2012, 2013, 2014, Fall 2008
	CSIT 460	Spring 2015
Network Security	CSIT 520	Spring 2014, 2015
	CSIT 560	Spring 2016, 2017
Parallel Architectures and Algorithms	CMPT 495	Spring 2012
	CMPT 680	Spring 2012
Pattern Discovery in Large Data Sets	CMPT 495	Fall 2007
	CMPT 585	Fall 2007
Introduction to Robotics	CMPT 495	Spring 2013
	CSIT 431	Fall 2014, Fall 2016
	CSIT 531	Fall 2014, Fall 2016
	CMPT 585	Spring 2013
Computer Forensics	CSIT 495	Fall 2015
Computer Architecture	CMPT 580	Fall 2009, 2012, 2013
Cooperative Education in CS	CMPT 499	Fall 2011, Spring 2012

University of New Orleans

(graduate courses are numbered 6000 and above)

Data Encryption / Cryptography	CSCI 6130	Fall 2002
Pattern Recognition	CSCI 6990	Spring 2003

Syracuse University

(graduate courses are numbered 500 and above)

Introduction to C++	CIS 504	Spring 2000
Intro to programming with C	CIS 196	Spring 1999, Summer 1999

Intro to programming with Pascal	CIS 197	Fall 1998
Computer Architecture (TA)	CIS 655	Fall 1999

University of Iowa

Programming with C	22C010	Spring 1998
	22C110	Spring 1998
Programming with C++	22C012	Summer 1998
	22C112	Summer 1998
Data Structures/OO Programming	22C017	Fall 1997
(TA)	22C117	Fall 1997

STUDENT RESEARCH SUPERVISION

M.S. Theses / Projects

1. Maitr. Kantessaria Distributed Computing and Hyperspectral Data Processing in progress
2. Jinfeng Ning Interface for Querying and Data Processing For the Ratings and Data Processing Dataset Dec 2017
3. Kevin Handeli Departmental Repository for MS Projects Dec 2017
4. Adam Schwartz Implementation and Testing of a High Count Point Application on a Distributed System May 2017
5. Moinul Sikder Real Time Database Replication May 2017
6. Senth. Rajendran Secured Data Encryption Application for Various File Formats Using Public Images Feb 2017
7. Greg Giannuario Internet of Things and Smart Home Security - Security Analysis and Exploitation Feb 2017
8. Krishna Gurum Big Data Analytics on Stocks Prediction Dec 2016
9. Samip Shah "Noter" A Live Feed Web Application Built Using Mean Stack Dec 2016
10. Bryan Passione Digital Piracy, Technology and the Legal System Dec 2016
11. Laura Morales Data Mining for Education Assessment Dec 2016
12. Benjamin Colsey Nutritional Data for Meal Selection May 2016
13. Enis Bilgin Road Sing Recognition using Rasberry Pi Dec 2015
14. Martin Butler Interface for Querying Data from the IMDb Dataset May 2015
15. Nirajan Thapa Android App for Scribbler Robot May 2015
16. Kale Evans Effective Visualization of Hyperspectral Images on a Mobile RGB Display May 2015
17. Pritesh Parekh Face Recognition With Android Device May 2015
18. Daniel Ricart A HPC Approach to Nonnegative Matrix Factorization for Hyperspectral Data Dec 2012
19. Gerald Busardo Benhmarking clusters and Parallel Applications for Hyperspectral Data Dec 2010
20. Shubhra Mittal Scientific Repository System May 2010
21. George Senger G3Crypt – A Personal Encryption Tool May 2009

22. Bhargavi Kaipa	Machine Learning in Steganalysis	May 2009
23. Kalpana Pal	Real Time Face Recognition Using Eigenfaces	Dec 2008
24. Juan Sandoval	DAS – Daycare Administration System	May 2008
25. Nick Senedzuk	Harvesting the Power of Grid Computing	May 2007
26. Lukasz Maciak	Nonlinear Matrix Factorization and Hyperspectral Imagery	May 2007
27. Shilpa Venugopal	Interactive Survey Development Kit (ISDK) (<i>Outstanding Computer Science Graduate 2006</i>)	Apr 2006

Graduate Thesis Committees

Ph.D. Committee

Faith Justus	An integrated approach to assessing spread of commercial horticulture and related environmental impacts on Watershed: Cases in Central highlands of Kenya, Dept of Earth and Environmental Sciences, (D. Yu advisor)	April 2015
Giovanni Vincenti	Fuzzy Mediation as an Improved Method Towards Machine Learning and Information Fusion, Department of Computer & Information Sciences, Towson University, MD (G. Trajkovski advisor)	May 2007

Ph.D. Thesis Examiner

Deepti Yadav	Approaches for detection and identification of targets using remote sensing data Department of Civil Engineering, IIT Roorkee, India (M. Arora advisor)	March 2017
N. Prabhu	Study of some information extraction techniques for hyperspectral imaging Department of Civil Engineering, IIT Roorkee, India (M. Arora advisor)	Jan 2015

M.S. Committees

Nishok Narasimha	Distr. Network Resource Manager – NetUNIX (C. Coutras advisor)	Dec 2016
Gabriell Redgate	HIPERLAN Simulation for Research and Ed. (C. Coutras advisor)	Dec 2015
Salman Siddiqui	Sparse Representations for Hyperspectral Data (J. Peng advisor)	May 2008
Marinos Michael	Multiorde Multidimensional Systems Comp. of the Transfer Function Using the DFT (G. Antoniou advisor)	May 2006

Graduate Independent Studies

1. Enis Bilgin	Cluster Computing for Computer Security	Dec 2014
2. Rocio Duquesne	Programming Numerical Methods	Dec 2011

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|----|----------------|-----------------------|----------|
| 3. | Shubhra Mittal | RFID Applications | May 2009 |
| 4. | Martin Butler | Hyperspectral Imaging | Dec 2008 |
| 5. | Joseph Schicci | RFID Security | May 2006 |

Undergraduate Independent Studies and Projects

Research Experience for Undergraduates (NSF REU) Projects

Spencer Kordecki	Cluster Based HSI Image Processing	May 2013
Stephen Gallo	Cluster Based HSI Image Processing	May 2013
Cynthia Alvarez	HSI Image Fusion for Visualization	July 2012
Laci Sears	HSI Image Fusion for Visualization	July 2012
Terrance Hall	Spatial Complexity Based NMF for HSI	July 2011
Kimberly Pirate	Spatial Complexity Based ICA for HSI	July 2011
Marco Chang Reyna	Fusion Techniques for Face Recognition in HSI	July 2010
Nisha D'Amico	Fusion Techniques for Face Recognition in HSI	July 2010
Andrew Wimberly	OSP based Face Recognition in HSI	July 2009
Tansy Peplau	OSP based Face Recognition in HSI	July 2009
Shawna Ruff	PCA based Face Recognition in HSI	Aug 2008
Andrew LaChance	ICA based Face Recognition in HSI	Aug 2008
Katherine Rice	HYPFACE Hyperspectral Face Database	July 2007

Selected Independent Studies / Student Projects

Victoria Johnson	Robotics Design Using Arduino	May 2015
Michael Estwanick	Hyperspectral Data Processing on GPU	May 2015
Kenneth Abad	Applications of Hyperspectral Image Processing	May 2014
Cynthia Alvarez	Script Based Data Processing for Green Computing	Dec 2013
Christopher Fleischl	Web based Visualization of Environmental Param.	Dec 2013
Genesis Serviano	Heat map Visualization of Data	Dec 2013
Mark Celli	CUDA GPU Applications for Computer Security	Dec 2013
Arti Sojitra	Decision Systems for Green Computing	May 2013
Kaushal Kathwadia	Decision Systems for Green Computing	May 2013
Faris Naffaa	Robotics Design Using Arduino	May 2012
Margaret Kim	Decision Systems for Green Computing	May 2012
John Chang	Using RFID for Equipment Tracking	May 2007
M.D. Islam	A Query System for Remote Sensing Data	Dec 2006
Premyslav Kafara	Incident Response Analysis for University Data	May 2006
James Ragucci	Phishing – Research and Education	May 2006
	<i>(Outstanding Computer Science Undergraduate 2006)</i>	
Andrew Gershman	Automated Hyperspectral Data and Capture	Dec 2004

Weston Scholars (Montclair High School)

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|----|---------------|---|-----------|
| 1. | Nyah Campbell | Vegetation Discrimination in Hyperspectral Data | July 2011 |
| 2. | Shannon Hardy | Vegetation Discrimination in Hyperspectral Data | July 2011 |
| 3. | Mete Erdi | Fruit Quality Analysis with Hyperspectral Data | July 2011 |
| 4. | Ryan Lin | Light Emission and Calibration for Spectral Imaging | July 2011 |
| 5. | Dominik Halas | Spectral Similarity Detection | July 2009 |

Student Presentations

1. M. Estwanick (S.A. Robila – advisor), “Optimal Band Selection in Hyperspectral Data Using GPU”, Student poster, Student poster, *Consortium of Computing Sciences in Colleges Northeastern Region (CCSCNE)*, Holy Cross College, Worcester, MA, April 2015
2. M. Estwanick (S.A. Robila – advisor), “Optimal Band Selection in Hyperspectral Data”, *SCI5 BE Poster Workshop*, Lawrence Berkeley National Laboratory, Berkeley, CA, April 2015
3. M. Estwanick (S.A. Robila – advisor), “Using Graphical Processing Units for Computing Optimal Band Selection in Hyperspectral Data”, Student presentation, *Undergraduate Research Symposium*, Montclair State University, Montclair, NJ, April 2015
4. C. Fleischl, (S.A. Robila – advisor), “The GreenIT Project”, Student Poster, *Undergraduate Research Symposium – Techlaunch*, Montclair State University, Montclair, NJ, April 2014
5. C. Fleischl, C. Alvarez, G. Serviano (S.A. Robila – advisor), “The GreenIT Project”, Student presentation, *Undergraduate Research Symposium*, Montclair State University, Montclair, NJ, April 2014
6. S. Kordecki, S. Gallo, (S.A. Robila – advisor), “Optimizing approaches for distributed computing based best band selection algorithms for hyperspectral image processing”, Student poster, *Undergraduate Research Symposium*, Montclair State University, Montclair, NJ, April 2013
7. S. Gallo, S. Kordecki, (S.A. Robila – advisor), “Optimal Distributed Computing Based Best Band Selection Algorithms for Hyperspectral Image Processing”, Student poster, *Consortium of Computing Sciences in Colleges Northeastern Region (CCSCNE)*, Siena College, Loudonville, NY, April 2013
8. C. Alvarez, T. Sears, (S.A. Robila – advisor), “Fusion Techniques for Hyperspectral Image Visualization”, Student poster, *Consortium of Computing Sciences in Colleges Northeastern Region (CCSCNE)*, Siena College, Loudonville, NY, April 2013
9. T. Hall*, K. Pirate (S.A. Robila – advisor), “Spatial Complexity Based Preprocessing for Hyperspectral Imagery”, Student poster, *Consortium of Computing Sciences in Colleges Northeastern Region (CCSCNE)*, Quinnipiac University, Hamden, CT, April 2012
10. M. Erdi* (S.A. Robila – advisor), “Detection of Ripeness in Bananas using Hyper-spectral Images”, *New Jersey Academy of Science Annual Meeting*, April 2012
11. M. Chang-Reyna* (S.A. Robila – advisor), “Investigating Face Recognition using Hyperspectral Images and Principal Components”, Student poster, *Consortium of Computing Sciences in Colleges Southeastern Region (CCSCSE)*, Spellman College, Atlanta, GA, November 2010
12. D. Jackowitz* (A. Varde, S.A. Robila – advisors), “Non-metric Distances in Nanoscale Image Mining”, Student poster, *Consortium of Computing Sciences in Colleges Eastern Region (CCSCE)*, Juniata College, Huntingdon, PA, October 2010
13. N. Damico* (S.A. Robila – advisor), “Unsupervised Face Recognition using Hyperspectral Images and Spectral Angle”, Student poster, *Consortium of Computing Sciences in Colleges Eastern Region (CCSCE)*, Juniata College, Huntingdon, PA, October 2010
14. D. Halas* (S.A. Robila – advisor), “Best Facial Expressions to Use for Increased Facial Recognition by Hyperspectral Imaging”, *New Jersey Academy of Science Annual Meeting*, April 2010
15. G. Roughton*, L. McKee* (A. Varde, S.A. Robila – advisors), “Comparing Feature Based and Wavelet Based Approaches to Image Processing”, Student poster, *Consortium of Computing Sciences in Colleges Northeastern Region (CCSCNE)*, University of Hartford, West Hartford, CT, April 2010
16. K. Rice* (S. A. Robila – advisor), “Hyperspectral Face Recognition”, *National Science Foundation REU PI meeting*, Austin, TX, February 2008

17. J. W. Ragucci* (S. A. Robila - advisor), “Getting Off the Hook (Learn to Catch the Phish: A Tool for User Education)”, Sigma Xi, Montclair, NJ, May 2006
18. P. Kafara* (S. A. Robila - advisor) “Security Data Loss Incidents: Policies and Reaction in Academic Institutions” , Sigma Xi, Montclair, NJ, May 2006
19. J. Schicchi+ (S. A. Robila - advisor) “RFID: Security, Privacy, and Effective Application” , Sigma Xi, Montclair, NJ, May 2006
20. D. McCarron* (S. A. Robila - advisor) “Security of Wireless Access Points” , Sigma Xi, Montclair, NJ, May 2006
21. L. G. Maciak+, M. Alexis Ponniah+, R. Sharma+ (S. A. Robila - advisor) “Applying Steganography to Music Captioning - Embedding Lyrics in MP3 Files” , Sigma Xi, Montclair, NJ, May 2006
22. S. Venugopal+ (S.A. Robila – advisor), “Interactive Survey Development Kit”, Sigma Xi, Montclair, NJ, May 2006
23. R. Perriero*, S. Jui*, (S. A. Robila - advisor), “Clustering and Computing: A Look at Inexpensive Design Ideas”, Sigma Xi, Montclair, NJ, May 2005
24. A. Mohiuddin+, R. Burus+, (S. A. Robila - advisor), “Generating Large Prime Numbers for Cryptographic Algorithms using Distributed Computing”, Sigma Xi, Montclair, NJ, May 2005

PROFESSIONAL SERVICE AND DEVELOPMENT

University-based

Montclair State University

University level

Institute for Sustainability Studies, Faculty	Jan 2010	-	present
Steering Committee	Jan 2010	-	present
Science Informatics Program, Faculty	Sep 2003	-	present
Passaic River Institute, Faculty	Jan 2004	-	present
Patent Review Committee	Jan 2013	-	present
Lab. Rob. Interest Group, Org Comm. Mem.	April 2015		
Reviewer, Student Research Symposium	Feb 2014		
GreenIT Technical Action Comm., Chair	Aug 2009	-	May2010
Career Development Committee, Alternate	May 2015	-	May 2016
	May 2012	-	May 2013
	May 2011	-	May 2012
Member	Feb 2004	-	Sep 2005
Chair	Mar 2005	-	Mar 2006
Sabbatical Review Committee, member	May 2013	-	May 2015
alternate	May 2015	-	May 2016
	May 2011	-	May 2012
	May 2008	-	Sep 2009
University Research Committee, alternate	May 2012	-	May 2013
	May 2011	-	May 2012
Academic Computing Committee	Sep 2009	-	May 2010
Honorary Degree Committee	May 2007	-	May 2008
Distinguished Professor Comm., alternate	Sept 2008	-	May 2009

New Student Experience Learning
Community Program

Fall 2006, Fall 2007, Fall 2008, Fall 2009,
Fall 2011

College level

Honors Program Committee	June 2015	-	present
MRI Preproposal Committee	Nov 2014	-	Dec 2014
Science Quad Comm.	Jan 2014	-	May 2014
School of the Environment	Jan 2014	-	May 2014
Distinguished Teacher Comm.	Sept 2009	-	Aug 2010
Technical Support Specialist Search Committee (CORE)	July 2008	-	Aug 2008
Associate Dean Search Committee	Aug 2008	-	Dec 2008
	Aug 2007	-	Aug 2008
Annual Student Conference Committee	Oct 2007	-	May 2008
Computer Modeling Group, Faculty	Apr 2004	-	Aug 2007

Department level

Personnel Action Committee, member	Sep 2014	-	present
Curriculum Committee, member	Sep 2014	-	present
Advisor, undergraduate majors	Sep 2004	-	present
Graduate Committee, member	Sep 2012	-	June 2014
Chair Search Committee, member	Jan 2013	-	May 2013
	Sep 2012	-	Dec 2012
Faculty Search Committee, member	Sep 2011	-	May 2012
Chair	Sep 2009	-	May 2010
Steering Committee,	Dec 2006	-	June 2014
Chair	Dec 2006	-	July 2012
Chair	Dec 2014	-	May 2015
Chair	Dec 2015	-	May 2016
Doctoral Program Committee	Apr 2004	-	present
Relocation Committee	Apr 2004	-	Aug 2006
Brochure Committee, chair	Jan 2005	-	Aug 2005
Enrollment Committee	Sep 2003	-	Dec 2005
Logo Committee, chair	Apr 2004	-	Mar 2003
Subcommittee on CS 1	Mar 2004	-	May 2004
Hardware Courses Committee	Feb 2004	-	Mar 2004
Coordinator, CCSCE Conference student programming teams	Oct 2003		

University of New Orleans

University level

Leader, Support, First Bank and Trust Advertisement Clip	Apr 2003		
Louisiana Science Olympiad Regional "Compute This" – organizer	Mar 2003		

Department level

Hardware Committee,	Sep 2002	-	Aug 2003
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National / Discipline-based

Consultant

The Council of Advisors, GLG	Aug 2004	-	present
GLG Education	May 2007	-	present
Advanced Placement Computer Science Certified Reviewer, EPIC	May 2007		
Exam Reader, ETS	June 2007		
ACM Computing Reviews, Reviewer	Mar 2006	-	present
Student Poster Contest Judge, CCSCNE Conference, Providence, RI	April 2005		
Federal Trade Commission / Anti-Phishing Working Group Consumer Education Campaign Committee Member	Aug 2007	-	present
IEEE Explore Proceedings Editor			
IEEE LISAT 2006	Aug 2007		
IEEE LISAT 2007	Aug 2007		
IEEE Mentor Program, Mentor	Apr 2005	-	present

Conference Organizing Committees

Proceedings Chair

- IEEE 2010 Long Island Systems Applications and Technology Conference (LISAT 2010), Farmingdale, NY, May 2010
- IEEE 2009 Long Island Systems Applications and Technology Conference (LISAT 2009), Farmingdale, NY, May 2009
- IEEE 2008 Long Island Systems Applications and Technology Conference (LISAT 2008), Farmingdale, NY, May 2008

Student Activities Chair

- IEEE International Geosciences and Remote Sensing Symposium, IGARSS 10, Honolulu, HI, July 2010
- IEEE International Geosciences and Remote Sensing Symposium, IGARSS 08, Boston, MA, July 2008

Selection Committee

New Jersey Technology Council Mid Atlantic Imaging Symposium, 2009, 2010

Editor

Journal of Next Generation Information Technology (JNIT)

Program Committee Member (37 conferences)

1. SPIE High-Performance Computing in Remote Sensing (RS12), Remote Sensing Europe Symposium, 2012, Edinburgh, United Kingdom
2. SPIE High-Performance Computing in Remote Sensing (RS 11), Remote Sensing Europe Symposium, 2011, Prague, Czech Republic

3. IEEE Long Island Systems Applications and Technology Conference (LISAT 2011, 2012, 2013, 2014, 2015), Farmingdale, NY, USA
4. IASTED Imaging and Signal Processing in Healthcare and Technology (ISPHT 2011, 2012), Washington DC, USA
5. IASTED International Conference on Signal Processing, Pattern Recognition and Applications (SPPRA 2008, 2009, 2010, 2011, 2013), Innsbruck, Austria
6. IASTED International Conference on Parallel and Distributed Computing and Networks, (PDCN 2009, 2010, 2013, 2014, 2016), Innsbruck, Austria
7. ACIS International Conference on Software Engineering Research, Management and Applications (SERA2009), Haiku, China
8. International Conference on Signal Processing and Multimedia Applications (SIGMAP 2009), Milan, Italy
9. IASTED International Conference on Visualization, Imaging and Image Processing, (VIIP 2006, 2007, 2008), Palma de Mallorca, Spain
10. IASTED International Conference on Signal and Image Processing (SIP 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013), Honolulu, HI
11. IASTED International Conference on Graphics and Visualization in Engineering, (GVE), Clearwater, FL, January 2007
12. IEEE Geosciences and Remote Sensing Symposium, (IGARSS), 2006, 2008
13. First ACIS International Workshop on E-Learning Technologies: Experiences and Challenges (ELTEC 06), Las Vegas, NV, June 2006
14. World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2006, 2007), Orlando, FL
15. International Symposium on Optics, Informatics and Cyber-Technologies (OIC 2006), Orlando, FL, July 2006

Organizer

1. Panel Discussion, “Mobile instructional laboratory environments and their use in computing sciences”, Cons for Comp Sci in Colleges, Eastern Conference, New Rochelle, NY, Oct 2007
2. Panel Discussion, “Undergraduate Research – Students’ Rewards and Challenges”, Cons for Comp Sci in Colleges, Eastern Conference, New Rochelle, NY, Oct 2005
3. Panel Discussion, “Considerations on Undergraduate Computer Science Research”, Cons for Comp Sci in Colleges, Northeastern Conference, Providence, RI, Apr 2005
4. Special Session on Advances in Hyperspectral Imagery Processing, *ASPRS Annual Conference*, Baltimore, MD, Mar 2005
5. Chair, SPIE sponsored workshop, “Imaging and Optics: Research and Education”, Montclair, NJ, Nov 2004.

Moderator

1. Session in Hyperspectral Imagery II Applications and Neural Networks, *ASPRS Annual Conf*, Tampa, FL, May 2007
2. Session in Hyperspectral Imagery II Applications and Neural Networks, *ASPRS Annual Conf*, Reno, NV, May 2006
3. Session in Hyperspectral Imagery Applications, *ASPRS Annual Conf*, Denver, CO, May 2004
4. Session in Neural Networks, *ASPRS Annual Conf*, Denver, CO, May 2004
5. Session in Unsupervised Feature Extraction, *ASPRS Annual Conf*, Anchorage, AK, May 2003

Discussion Leader / Scribe

1. NSF REU PI Meeting, Recruitment Working Group Leader, Austin, TX, February 28-29, 2008
2. NSF CISE CPATH Townhall Meeting, Focus Group Scribe, New Jersey Institute of Technology, Newark, NJ, December 1, 2006
3. McGraw Hill Computer Science I, Leader, Cohoon Davidson Focus Group, Key West FL, January 2004

Professional Reviews

Grants

- National Science Foundation – 9 Panels – 2004, 2005, 2007, 2009, 2010, 2011, 2016, 2017 (including BigData, Cyber- Enabled Discovery, Career, MRI, REU and IGMS)
- NASA Postdoctoral Program (NPP) - 2012

Promotion and Tenure Reviewer

- US University – Fall 2012
- US University – Fall 2012

Journals (59 reviews)

1. IEEE Transactions on Geosciences and Remote Sensing (15) 2003-present
2. IEEE Geosciences and Remote Sensing Letters (6) 2003-present
3. IEEE Transactions on Biomedical Engineering (2) 2003-present
4. IEEE Journal of Sel. Top. in App. Earth Observations and Remote Sensing (1) 2010-present
5. IEEE Transactions on Neural Networks (1) 2003-present
6. IEEE Journal of Sel. Top. In Signal Processing (1) 2014-present
7. IEEE Signal Processing Magazine (1) 2010-present
8. Canadian Journal of Remote Sensing (3) 2003-present
9. International Journal of Remote Sensing (14) 2003-present
10. SPIE Optical Engineering (8) 2003-present
11. Photogrammetric Engineering and Remote Sensing (1) 2003-present
12. Journal of Real Time Image Processing (1) 2008-present
13. Journal of Information Fusion (2) 2008-present
14. Sensors (1) 2009 – present
15. Journal of Franklin Institute (1) 2010 – present
16. The Oxford Computer Journal (1) 2012-present
17. Information Systems Research (1) 2012-present
18. Journal of Next Generation Information Technology (1) 2014-present
19. SPIE Journal of Applied Remote Sensing 2007 – present
20. ACM Computer Reviews 2006 - present

Books

1. Jones and Bartlett Publishers, Intro to Computing Book Prospectus, 2015
2. W. Stallings, Computer Security Principle and Practice, 2/e, Pearson, 2013
3. H. Schildt, Java Programming, 1/e, (one chapter) McGraw Hill, 2012
4. T. O'Leary, Computing Essentials, 2014 Edition proposal, McGraw Hill, 2012
5. C. Pfleeger, S. L. Pfleeger, Security in Computing, 5Th Edition, proposal, Prentice Hall , 2011
6. C. Pfleeger, and S. Pfleeger, Security in Computing, 4Th Ed. (prospect), Prentice Hall, 2010

7. G. Steinberg; K. Sanghera, Introduction to Computer Information Systems, Kendall Hunt, 2008
8. A Silberschatz, P. Galvin, G. Gagne, Operating Systems Concepts, 5Th Edition, John Wiley and Sons, 2007
9. G. Steinberg, Introduction to Computer Science, Book Prospect, Kendall Hunt, 2007
10. H. Bidgoli (editor), The Handbook of Computer Networks, John Wiley and Sons, 2007
11. K. H. Rosen, Discrete Mathematics and Its Applications, 6Th Edition, McGraw Hill, 2006
12. C. Pfleeger, S. L. Pfleeger, Security in Computing, 4Th Edition, proposal, Prentice Hall , 2005
13. T. Wu, An introduction to Object-Oriented Programming With Java, 4Th Edition, McGraw Hill, 2005
14. T. Wu, An introduction to Object-Oriented Programming With Java, 3Rd Edition, McGraw Hill, 2004
15. J. P. Cohoon, J. W. Davidson, Java Program Design, 1St Edition, McGraw Hill, 2003
16. K. H. Rosen, Discrete Mathematics and Its Applications, 5Th Edition, McGraw Hill, 2003
17. H. Bidgoli (editor), The Handbook of Information Security, John Wiley and Sons, 2004

Conference

1. Eurographics Conference on Visualization, EuroVis 2013
2. The International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISAPP 2012
3. The 5th International Symposium on Bio- and Medical Informatics and Cybernetics: BMIC 2011, 2013
4. IEEE International Symposium on Signals, Circuits and Systems (ISSCS) 2007
5. ACM – Technical Symposium on Computer Science Education (SIGCSE) 2004-2016
6. ACM - Innovation and Technology in Computer Science Education (ITiCSE) 2005-2013
7. Frontiers in Education Conference (FIE) 2005, 2006
8. Consortium for Computing Sciences in Colleges, Eastern Conference (CCSCE) 2005
9. Consortium for Computing Sciences in Colleges, North Eastern Conference (CCSCNE) 2005, 2006
10. World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI) 2004, 2005, 2006
11. 4Th WSEAS International Conference on Soft Computing, Computing, Optimization, Simulation and Manufacturing (SOSM), 2004
12. International Conference on Computing, Communications and Control Technologies: (CCCT), 2004
13. International Conference on Cybernetics and Information Technologies, Systems and Applications: (CITSA), 2004

Associate Memberships

Association for Computing Machinery (ACM)	2002 – present
The International Society for Optical Engineering (SPIE)	2001 – present
Institute of Electrical and Electronics Engineers (IEEE)	2002 – present
IEEE Geoscience and Remote Sensing Society (IEEE – GRSS)	2002 – present
IBM Academic Initiative, Member	2005 – present
Educause, Basic Member	2006 – present
Antiphishing Working Group (APWG)	2006 – present
APWG Education Group	2006 – present
APWG Future Threats Model Group	2006 – present

Past Associate Memberships

IEEE Society for Social Implications of Technology (IEEE – SSIT)	2005 – 2006
IEEE Communications Society	2004 – 2005
IEEE Computer Society	2002 – 2004
American Society for Photogrammetry & Remote Sensing (ASPRS)	2000 – 2010
Consortium for Computing Sciences in Colleges (CCSC)	2003 – 2006, 2007 -09
McGraw Hill President’s Club	2004 – 2008
American Numismatic Association (ANA)	2005–2006,2007-2008

Professional Enhancement Workshop and Seminar Participation

- Introduction to Canvas – Online Workshop, MSU, June 2014
- Computing Research Association's Computing Community Consortium (CCC) Leadership in Science Policy Institute (LiSPI), April 2013
- NSF CS-REU Meeting, Philadelphia, PA, March 16-17, 2013
- Empowering Online Teaching and Learning – Faculty Course, Montclair State University, Spring 2013
- Summer Institute on Online Teaching and Learning, Montclair State University, June 20-22, 2011
- NSF CS-REU Meeting, Charlotte, NC, March 17-19, 2010
- NSF CS-REU Meeting, Arlington, VA, March 28-29, 2009
- NSF CS-REU Meeting, Austin, TX, February 28-29, 2008
- NIH Funding and Grants Administration Seminar, John Jay College, City University of New York, New York, October 19, 2007
- NSF CS-REU Meeting, San Jose, CA, April 26-28, 2007
- NSF CISE CPATH Townhall Meeting, New Jersey Institute of Technology, Newark, NJ, December 1, 2006
- NSF Lego Mindstorms in Computer Science Education, Villanova University, Villanova, PA, August 10-14, 2006
- CRA Academic Careers & Effective Teaching Workshop, Washington, DC, February 27-28, 2006
- Richard Tapia Celebration of Diversity in Computing, Albuquerque, NM, October 19-22, 2005
- David Bauer and Assoc., Grant Writing Workshop, Montclair State University, Montclair, NJ, March 1, 2005
- NSF Pyro Robotics Workshop, Bryn Mawr College, Bryn Mawr, PA, August 3-5, 2004
- NSF Regional Grants Conference – Columbia University, New York, NY, March 15-16, 2004
- SBIR / STTR Regional Tour, Louisiana Technology Transfer Office, Baton Rouge, March 2003