

Stefan A. Robila, Ph.D.
Professor of Computer Science

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EDUCATION

Ph.D.	Syracuse University	Computer Information Science	2002
M.S.	Syracuse University	Computer Science	2000
B.S.	University of Iasi	Computer Science	1997

PROFESSIONAL EXPERIENCE

Professor, Montclair State University (MSU), School of Computing 09/2003 – present
(Assistant Professor 2003-2008, Associate Professor 2008-2012, Full 2012-present)

- Active researcher with \$6.2M (\$2.35M as PI) in funding from federal agencies (NSF), state agencies (New Jersey Council for Humanities), private foundations (PSEG Foundation), private companies (HP, Sun Microsystems), professional organizations (SPIE), and internal programs, over 90 publications and many more presentations in a diversity of venues.
- Successful management of projects (development, securing funding, managing budgets, developing and delivering activities, etc) including ones focused on student professional development (Research Experience for Undergraduates Sites and Supplements, Technology for Teaching) or on equipment acquisition and deployment (Major Research Instrumentation). Director of the Computational Sensing Laboratory.
- Mentored 60 graduate, 39 undergraduate, 5 high school students leading to co-authored publications, graduate thesis and projects, and independent studies. Member of doctoral committee at multiple universities. Doctoral Faculty in the Environmental Management Program at MSU.
- Faculty advisor to Computer Science and Information Technology students.
- Outreach in campus, local community, including high, middle and elementary schools.
- Chaired search committees, member of Departmental Personnel Action committee (tenure, reappointment, and promotion)
- External evaluator and reviewer for leading professional journals and conferences, funding agencies, tenure and promotion applications.
- Campus Representative for the Barry Goldwater Scholarship, the most prominent federal undergraduate merit program for science students. Coordinated the first ever award at MSU in 2023.

Program Director (PD)-IPA (Rotator), National Science Foundation, Directorate of Computer Information Science and Engineering (CISE), Office of Advanced Cyberinfrastructure (OAC) 01/2018 – 01/2021

- Developed and managed portfolio of awards that enable research cyberinfrastructure (CI) development and acquisition as well as Core research. Diverse portfolio in terms of type of CI (data / software / clusters / cloud) and award size, involved both independent and collaborative projects funded under standard, supplemental, or cooperative agreement funding. Portfolio snapshot: 200 awards totaling over \$150M (June 2020).
- Managed full proposal pipeline (from receipt to review and recommendation) independently or as part of a group of PDs. Met or exceeded performance targets for processing. Programs include OAC Core Research, Cyberinfrastructure for Sustained Scientific Innovation (CSSI), Major Research Instrumentation (MRI).
- Lead for CSSI program, the largest OAC led NSF cross-cutting program. Coordinated weekly NSF-wide WG meetings for CSSI. Coordinated weekly OAC WG meetings for CSSI. Coordinated proposal review, co-reviewed and recommended co-funding proposals with colleagues across NSF. Coordinated CSSI communication (including PI webinars, panelist webinars, common email, etc.) Led solicitation revisions, streamlined operations across the program.

- Significant coordinating role for the OAC COVID-19 RAPID response efforts (under NSF Dear Colleague Letter 20-055) including reviews, proposal recommendations and award management.
- Supported NSF's educational programs, such as management of review panels for the Graduate Research Fellowship Program (GRFP) applications.
- Continuous commitment to diversity and inclusion through various initiatives, including participation in the development of the Dear Colleague Letter: Fairness, Ethics, Accountability, and Transparency: Enabling Breakthrough Research to Expand Inclusivity in Computer and Information Science and Engineering Research (NSF 19-016). Active member and OAC representative in the working group that generated and is managing the Computer and Information Science and Engineering Minority-Serving Institutions Research Expansion Program (CISE-MSI) (NSF 21-533).
- Contributor to outreach activities (including participating and presenting at two NSF Grants Conference, EPSCoR PI Meeting, CISE Career Workshop, CISE Minority Serving Institutions Convening, volunteering at the USA Science & Engineering Festival, member of the NSF Speakers Bureau).
- Engaged the PIs and the broader professional CI community through PI meetings and professional conferences, and workshops (including PEARC, CASC Fall and Spring meetings, SC) and campus visits.
- Active participant in NSF and CISE working groups and committees on improving program management efficiency, panel, and reviewer diversity, cloud migration, NSF internal awards and holiday planning,
- Inter-agency expertise: Co-chair of Middleware and Grid Interagency Coordination (MAGIC) team within the Large-Scale Networking (LSN) Interagency Working Group of the Subcommittee on Networking and Information Technology Research and Development (NITRD), a federal cross-agency initiative. Attended inter-agency meetings and workshops (including NITRD BigData, NIST Federal Engagement in Artificial Intelligence Standards Workshop, NIH/NSF collaboration for AI related initiatives).
- Held security clearance.

Assistant Professor, University of New Orleans, Department of Computer Science 09/2002 – 08/2003

- Active researcher with projects funded by university sources resulting in publications and presentations in a diversity of venues. Mentored graduate students in independent research studies.
- Developed / revised / taught graduate courses in Computer and Data Security and Pattern Recognition.
- Outreach in campus and local community.

Visiting Academic

University of Cambridge, Department of Applied Mathematics and Theoretical Physics 05/2018 – 06/2018 / *University of Geneva, Medical Image Processing Group* 08/2017 - 09/2017 / *University of Oxford, Engineering Sciences Department* 01/2011 – 03/2011 / *Uppsala University, Center for Image Analysis* 09/2010 – 12/2010

Graduate Assistant

Syracuse University, Electrical Engineering and Computer Science Department – Research Assistant 05/2000-08/2002, *Teaching Assistant* 08/1998-08/2000 / *University of Iowa, Department of Computer Science – Teaching Assistant* 08/1997-07/1998

HONORS AND AWARDS

- Fulbright Visiting Specialist Roster Candidate (2016-2023)
- Featured Reviewer, ACM Computer Reviews, May 2015
- Annual Best Review Nominee (1 out of 20) ACM Computer Reviews, 2015
- Phi Kappa Phi, Apr 2011
- Association for Computing Machinery (ACM) Senior Member, Jan 2010
- Institute for Electrical and Electronics Engineers (IEEE) Senior Member, Nov 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), Oct 2005
- Faculty Scholarship Program, Montclair State University 2004 - present
- Wilbur LePage Scholarship for Outstanding Doctoral Candidate in Engineering, Syracuse University, Syracuse, NY, Aug 2002
- Syracuse University Graduate Summer Fellowship, Syracuse, NY, Jun 2000 – Jul 2000
- The Soros Foundation for an Open Society Travel Award, Iasi, Romania, Aug 1997
- Romanian Ministry of Education National Scholarship and Fellowship, Iasi, Romania, 1992 – 1997

GRANTS

External Funding

1. 2024-2027 “MRI: Track 1 Acquisition of an Extended Reality Based Driving Simulator for User Centered Interdisciplinary Research and Education at MSU”, Co-PI, *National Science Foundation*, \$533,798
2. 2024-2026, “CC* Regional Networking: Connectivity through Regional Infrastructure for Scientific Partnerships, Innovation, and Education”, Co-PI, *National Science Foundation*, Co-PI, \$851,076
3. 2024 “Deployment of Virtual Machines for Operating Systems Course”, PI, *Google Cloud Teaching Credits Program*, cloud credits equivalent, \$4,350
4. 2022-2025 “Collaborative Research: RET Site: Data Sciences and Data Fluency in Scientific Data Sets (DATA3)”, Co-PI, *National Science Foundation*, CNS-2206885, \$560,110
5. 2022-2024. “Montclair State University CS Education Hub (MSU CS Hub)”, senior personnel, *NJ CS for All: Expanding Professional Learning Competitive*, \$333,335.
6. 2022-2024. “Montclair State University CS for Everyone Everywhere (MSU CSEE) Program”, senior personnel, *NJ CS for All: Implementing the 2020 CS Student Learning Standards Competitive*, \$330,330.
7. 2018-2021. “Intergovernmental Personnel Act (IPA) Assignment, CISE / OAC”, PI, *National Science Foundation*, \$701,202
8. 2017-2018. “Roboto-san: The contrasting visions of Artificial Intelligence and Robotics in Japanese and Western culture”, Co-PI, *New Jersey Council for Humanities*, \$20,000
9. 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
10. 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
11. 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
12. 2011-2014. “Decision Support System (DSS) for IT Management”, PI, *PSE&G (Public Service Enterprise Group) Technology Demonstration Grant Program*, PI, \$218,000
13. 2010-2014. “Montclair REU Site in Imaging and Computer Vision (iMagine)”, PI, *National Science Foundation*, IIS-1004447, \$287,760
14. 2010-2013. “MRI-R2: CSAM Acquisition of Scientific Computing Capacity”, senior personnel, *National Science Foundation*, DMS-0959461, \$129,000
15. 2009-2013. “MRI: Acquisition of a High-Performance Computer Cluster Supporting Computational Science Research and Learning”, PI, *National Science Foundation*, CNS-0922644, \$190,010
16. 2007-2010. “Montclair REU Site in Imaging and Computer Vision (iMagine)”, PI, *National Science Foundation*, IIS-0648814, \$260,000
17. 2006-2007. “Mobility - Using Tablet PCs in the IT”, PI, *Hewlett-Packard Tech. Grant - U06TFH0014*, \$70,000
18. 2006-2007. “A New Course in Pattern Discovery”, PI, *The International Society for Optical Engineering (SPIE) Educational Grants* - \$2,500

19. 2005-2006. "Efficient Hyperspectral Image Processing", PI, *Sun Microsystems Academic Excellence Grant Program T-US-697950-C* - \$35,755
20. 2005-2006. "Promoting Optics and Imaging Through Outreach Activities", PI, *The International Society for Optical Engineering (SPIE) Educational Grants* - \$2,000
21. 2005. "Participation to the SPIE's Imaging Science Symposium", PI, *The International Society for Optical Engineering (SPIE) Technical Programs Committee* - \$465
22. 2004. "Participation to the SPIE's Defense and Security Symposium", PI, *The International Society for Optical Engineering (SPIE) Technical Programs Committee* - \$415
23. 2004-2005. "Center for Optics and Imaging Education", PI, *The International Society for Optical Engineering (SPIE) Educational Grants* - \$3,000
24. 2002. *Society for Optical Engineering (SPIE) Student Travel Grant* - \$490

Internal Funding

1. 2023-2024. "Security and Privacy for Autonomous and Connected Vehicles", Co-PI, *Montclair State University, Faculty research Mentoring Program* - \$8,000
2. 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
3. 2014-2015. "Social Network Data Integration for Cybersecurity", PI, *Montclair State University, Separately Budgeted Research Program* - \$4,000
4. 2014-2015. "CUDA GPU and Efficient Processing of Remote Sensing Data", PI, *Montclair State University, CSAM Sokol Faculty / Student Research Program* - \$2,000
5. 2012. "Participation in the IEEE ICALT 2012", PI, *Montclair State University – Global Ed. Grants* - \$800
6. 2009-2010. "Hyperspectral Image Acquisition System", PI, *Montclair State University – Grant Proposal Development Program* - \$2000
7. 2009. "Participation in the IEEE IGARSS 2009", PI, *Montclair State University – Global Ed. Grants* - \$800
8. 2007. "Participation in the IEEE IGARSS 2007", PI, *Montclair State University – Global Ed. Grants* - \$800
9. 2006-2007. "Efficient Use of RFID Technology for Equipment Tracking", PI, *Montclair State University – Student Faculty Research Projects* - \$1,500
10. 2006. "Participation in the ACM ITiCSE 2006", PI, *Montclair State University – Global Ed. Grants* - \$800
11. 2006-2007. "A Query System for Remote Sensing Data", PI, *Montclair State University, CSAM Sokol Faculty / Student Research Program* - \$2,000
12. 2005. "Participation in the IEEE ISSCS 2005", PI, *Montclair State University – Global Ed. Grants* - \$800
13. 2005-2006. "Real Time Feature Extraction for Remote Sensing", PI, *Montclair State University – Separately Budgeted Research* - \$2,000
14. 2004-2005. "Hyperspectral Image Acquisition", PI, *Montclair State University – Student Faculty Research Projects* - \$2,000
15. 2004-2005. "Remote Sensing Data Processing in a Distributed Environment", PI, *Montclair State University – Separately Budgeted Research* - \$2,000
16. 2002-2003. "Employment of Multimedia and Internet in Teaching Computer Science", PI, *University of New Orleans – Faculty Initiative for Technology in Teaching* - \$3,250
17. 2001. *Syracuse University Travel Grant* - \$500

PUBLICATIONS AND PRESENTATIONS

Peer Reviewed Publications

denotes * undergraduate student, +graduate student, ^K-12 teacher

1. S. Ehiri⁺, S. A. Robila, "Sustainability for Estimating Global Energy Efficiency of Data Centers", *Proc. IEEE Int. Conf. Electronics, Computers and Artificial Intelligence (ECAI 2024)*, pp. 1-6, doi: 10.1109/ECAI61503.2024.10607509.
2. K. G. Herbert, T. J. Marlowe, V. K. Anu, S. A. Robila, "K-12 Teachers and Data Science: Learning Interdisciplinary Science through Research Experiences", *Proceedings American Association of Engineering Education (ASEE)*, pp. 1-7, 2024.
3. T. Samaras[^], T. J. Marlowe, K. G. Herbert, V. K. Anu, S. Hagiwara, and S. A. Robila, "Interdisciplinary Synergy: Resources for Embedding Plugged and Unplugged Computer and Data Science Activities into the K-12 Curriculum", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 97-100, 2024.
4. A. Brantley[^], K. G. Herbert, V. K. Anu, S. Hagiwara, S. A. Robila, Jason T.L. Wang, "Understanding Space Weather Through Storytelling Data Visualization", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 220-223, 2024.
5. E. Douglass[^], A. Cannella[^], K. G. Herbert, V. Anu, S. Hagiwara, T. Marlowe, S. A. Robila, "Design and Implementation of a STEAM Robotics Lesson on the Spotted Lanternfly: Engineering a Computer Science Solution", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 367-370, 2024.
6. M. M. S. Menichella[^], Stefan A. Robila and Katherine G. Herbert, Thomas Marlowe. "Creating a Cross, Curricular Resource for Solar Weather History and Its Impact on Daily Life", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 402-405, 2024.
7. C. Drozdowski[^], T. J. Marlowe, K. G. Herbert, V. K. Anu, S. Hagiwara, S. A. Robila, "The APP Method: Self-Regulation Strategies Giving POWER to Computer Science Students", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 412-415, 2024..
8. S. Emeghara[^], S. Hagiwara, S. A. Robila, K. G. Herbert, T. Marlowe, V. K. Anu. "A Cyber-Physical Systems Approach to Teaching Solar Weather Topics in Middle School", *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, pp. 495-498, 2024.
9. I. Cumberbatch, J. Olatunji^{*}, S.A. Robila "Using Extended Reality Technology in Science Education", *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2023.
10. A. Moctezuma^{*}, S.A. Robila, "A Framework for Evaluating Parental Controls for Streaming Services", *Proc. IEEE Integrated STEM Education Conference (ISEC)*, pp. 199-203, 2023.
11. I. Cumberbatch, S. A. Robila, "An extended reality environment for urban area environmental data analysis", *Proc. SPIE Geospatial Informatics XIII*, vol. 12525, pp. 203-211, 2023
12. A. Saxena⁺, S.A. Robila "Automated machine learning for analysis and prediction of vehicle crashes", *International Journal of Informatics and Communication Technology*, vol 12, No. 1, pp. 46-53, 2023
13. J. Gallino⁺, S. A. Robila, "HyperGiX – A User Friendly Open-source Hyperspectral Imagery Application", *Proc. IEEE IGARSS*, pp. 4019-4022, 2022
14. E. Zharri⁺, S.A. Robila "Shiny Dashboard - NYC Trees Benefit Estimation", *Proc. IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-6, 2022
15. S. Vollmin⁺, S.A. Robila "A Machine Learning Utility for Detection of Potential Protected Health Information Images", *Proc. IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2022
16. R. DePascale⁺, S.A. Robila "A Semantic Text Processing System for Free-Write English Papers", *Proc. IEEE Integrated STEM Education Conference (ISEC)*, pp. 1-8, 2022
17. A. Saxena⁺, S.A. Robila "Analysis of the New York City's Vehicle Crash Open Data", *Proc. IEEE International Conference on Big Data (Big Data)*, pp. 1-3, 2021
18. O. Alkhalili⁺, S.A. Robila "Tracking the Impact of Fake News on US Election Cycles", *GoodIT '21: Proceedings of the Conference on Information Technology for Social Good*, pp 192–197, 2021.
19. S.A. Robila, D. Grant, C. DePrater, V. Sorell, T. Rogers, D. Martinez and S. Novotny "Cooling the Data Center: Design of a Mechanical Controls Owner Project Requirements (OPR) Template", *Proceedings IEEE Cluster 2021, EE HPC SOP 2021: Energy Efficient HPC State of the Practice Workshop*, pp. 1-6, 2021
20. M. Robila and S. A. Robila. "Applications of Artificial Intelligence Methodologies to Behavioral and Social Sciences." *Journal of Child and Family Studies*, vol. 29, no. 10, pp. 2954-2966, 2020.

21. Z. Aziz⁺, S.A. Robila “Interface for Querying and Data Mining for NYC Yellow and Green Taxi Trip Data”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2019
22. I. Gaidukova⁺, Priyanka Phapale⁺, S.A. Robila “Visualizing Weather Financial Impact on Industries and Weather Derivatives”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2019
23. B. Pasione⁺, S.A. Robila “Digital Piracy, Technology, the Legal System and Computing Education”, *Proceedings IEEE Integrated STEM Education Conference (ISEC)*, 2018, pp. 133-136, 2018
24. K. Handelli⁺, S.A. Robila “A Cybersecurity High School Curriculum Guide”, *Proceedings Society for Information Technology & Teacher Education International Conference (SITE)*, pp. 864-869, 2018
25. K. Handelli⁺, S.A. Robila “Design, development and testing an academic repository”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, 2018, pp. 1-7, 2018
Best Technology Track Paper
26. P. Persaud^{*}, A. Varde, S.A. Robila, “Enhancing Autonomous Vehicles with Commonsense: Smart Mobility in Smart Cities”, *Proceedings IEEE ICTAI*, 1-5, 2017
27. K. Miller⁺, S.A. Robila “LIDAR for Scribbler 2- Enhancing Sensing Capabilities in an Educational Robot”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, 1-5, 2017
28. E. Bilgin⁺, S.A. Robila “Road Sign Recognition System on Raspberry Pi”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, 1-5, 2016
29. M. Butler⁺, S.A. Robila “Interface for Querying and Data Mining for the IMDb Dataset”, *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, 1-5, 2016
30. M. Pawlish⁺, A. Varde, S.A. Robila, “The Greening of Data Centers with Cloud Technology”, *International Journal of Cloud Applications and Computing*, 5(4), 1-23, October-December 2015
31. 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
32. 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
33. 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
34. 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
35. 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
36. 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
37. S. A. Robila, “Introducing Green Computing to General Education” *Proceedings of Society for Information Technology & Teacher Education Int. Conference (SITE)*, pp. 78-83, 2013.
38. 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
39. 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
40. 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.
41. 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.
42. 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
43. 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
44. S. A. Robila, G. Busardo⁺, “Hyperspectral Data Processing in a High Performance Computing Environment” *in Proceedings IEEE PDSEC IPDPS*, 2011, pp. 1424-1431, 2011

45. 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
46. 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
47. S. A. Robila, "Considerations on Unsupervised Spectral Data Unmixing and Complexity Pursuit", *Proceedings IEEE IGARSS*, pp. 987 – 990, 2010
48. S. A. Robila, M. Butler⁺, "Parallel Unmixing of Hyperspectral Data Using Complexity Pursuit", *Proceedings IEEE IGARSS*, pp. 1035-1038, 2010
49. 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
50. 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
51. B. Kaipa⁺, S.A. Robila, "Statistical Steganalysis of Images Using Open-Source Software " *Proceedings IEEE LISAT 2010*, pp.1-5, 2010
52. S. A. Robila, "Band reduction for hyperspectral imagery processing," in *Proceedings SPIE Computational Imaging VIII*, vol. 7533, pp. 75330W-9, 2010
53. S. A. Robila, "Spectral Image Processing Using Sparse Linear Transforms", *Proceedings IEEE IGARSS*, pp. IV-534-7, 2009
54. S.A. Robila, "Quo vadis face recognition: Spectral considerations," *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp.1-5, 2009
55. 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
56. 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
57. 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
58. 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
59. 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
60. S. Siddiqui⁺, 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
61. S. A. Robila, "Toward hyperspectral face recognition," in *Proceedings SPIE Image Processing: Algorithms and Systems VI*, vol. 6812, pp. 68120X-9, 2008
62. S. A. Robila and N. A. Seneduk⁺, "Grid computing for hyperspectral data processing," in *Proceedings SPIE Next-Generation Spectroscopic Technologies*, vol. 6765, pp. 67650A-9, 2007
63. 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
64. J. Peng, S. A. Robila, "Weighted Additive Criteria for Linear Dimension Reduction", *Proceedings IEEE ICDM*, pp.619-624, 2007
65. S. A. Robila, "Information Disclosure Incidents and Computer Security Education", *Proceedings ASEE MidAtlantic Conference*, 7 pgs on CD, 2007
66. S. A. Robila, L. Maciak⁺, "Sequential and Parallel Feature Extraction using Nonnegative Matrix Factorization", *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2007
67. 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

68. 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
69. S. A. Robila, "A Class of Detection Filters for Targets and Anomalies in Multispectral / Hyperspectral Imagery", *Proceedings IEEE CVPR*, 132-140, 2006
70. S. A. Robila, "Use of Remote Sensing Applications and its Implications to the Society", *Proceedings IEEE ISTAS*, 1-6, 2006
71. J. Ragucci*, S. A. Robila, "Social Aspects of Phishing", *Proceedings IEEE ISTAS*, 1-5, DOI: 10.1109/ISTAS.2006.43758935, 2006
72. S. A. Robila, L. Maciak⁺, "Novel Approaches for Feature Extraction in Hyperspectral Images", *Proceedings IEEE Long Island Systems, Applications and Technology Conference (LISAT)*, pp. 1-7, 2006
73. S. A. Robila, J. Ragucci*, "Don't be a Phish: Steps in User Education", *Proceedings ITiCSE*, 237-241, 2006.
74. S. A. Robila, "Real Time Processing of Hyperspectral Images", *Proceedings ASPRS Annual Conference*, 5 pgs. on CD, 2006
75. 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
76. S. A. Robila, "Using Spectral Distances for Speedup in Hyperspectral Image Processing", *International Journal of Remote Sensing*, vol 26, no. 24, 5629-5650, 2005
77. 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
78. S. A. Robila, C. Bredlau, "Writing Requirements in Computer Security", in *Proceedings ACM SIGITE*, 385-386, 2005
79. S. A. Robila, "Distributed Computing and Computer Security Education", in *Proceedings ACM SIGITE*, 383-384, 2005
80. S. A. Robila, A. Gershman*, "Spectral Matching Accuracy in Processing Hyperspectral Data", in *Proceedings IEEE ISSCS*, 163-166, 2005
81. S. A. Robila, "Interdisciplinary Undergraduate Research with Focus on Hyperspectral / Multispectral Imagery", *ASEE Mid-Atlantic Conference*, 11 pgs. on CD, 2005
82. S. A. Robila, "An Investigation of Spectral Metrics in Hyperspectral Image Preprocessing for Classification", *Proceedings ASPRS Annual Conference*, 9 pgs., 2005
83. 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
84. S. A. Robila, "An Analysis of Spectral Metrics for Hyperspectral Image Processing", *IEEE Geoscience and Remote Sensing Symposium, IGARSS*, vol. 5, 3233-3236, 2004
85. S. A. Robila, "Distributed Processing of Hyperspectral Images", *Proceedings ASPRS Annual Conference*, Denver, CO, 4 pgs. on CD, 2004
86. 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
87. S. A. Robila, "Higher Order Statistics Based Feature Extraction for Hyperspectral Images", *Proceedings ASPRS Annual Conference*, 1 pg. on CD, 2003
88. S. A. Robila, "Investigation of Spectral Screening Techniques for Hyperspectral Image Processing", *Proceedings ASPRS Annual Conference*, 1 pg. on CD, 2003
89. 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
90. 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
91. 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

92. 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
93. 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
94. 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
95. 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-Kellogger.org, http://anti-keylogger.org/articles.cgi?in= Spyware_Study&id=15, anti-keylogger.org, posted by invitation.

Professional Peer Reviewed Presentations / Abstracts

1. T. Samaras, T. J. Marlowe, K. G. Herbert, V. K. Anu, S. Hagiwara; S. A. Robila, "Interdisciplinary Synergy: Resources for Embedding Plugged and Unplugged Computer and Data Science Activities into the K-12 Curriculum". *Int. Society for Technology in Education (ISTE) EdTech Conference*, Denver CO, Jun 2024.
2. M. Robila, S.A. Robila, "Artificial Intelligence Methodologies in Examining Human Development and Family Functioning". *American Psychological Association Convention*, virtual, August 2020.
3. M. Robila, S.A. Robila, "Using Artificial Intelligence and Machine Learning in Supporting Families in an International Context". *Annual Conf. of the National Council on Family Relations*, Fort Worth, TX, Nov 2019.
4. S.A. Robila, "An Energy Efficiency Focused Analysis of Cloud, Edge and Fog Computing Environments", *IEEE International Conference on Edge Computing and Scalable Cloud*, Paris, France, Jun 2019
5. 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, Mar 2016
6. S. A. Robila, "Feature extraction for remote sensing data using massive parallel processors". *World Weather Open Science Conference*, Montreal, QC, Aug 2014
7. S. A. Robila, "Computational Sensing Laboratory: Research and Education in Large Data Sets". *New Jersey Big Data Alliance Symposium*, Piscataway, NJ, Apr 2014
8. S. A. Robila, "Analysis of Industrial Visits as Component of Undergraduate Research Activities", *Council on Undergraduate Research Annual Conference*, Ewing, NJ, Jun 2012
9. K. Herbert, J. Fails, E. Hill, M. Oudshoorn, S. A. Robila, "Research Transcending Historic Disciplinary Boundaries", *Council on Undergraduate Research Annual Conference*, Ewing, NJ, Jun 2012

10. S. A. Robila, "Linear Sparse Feature Extraction Transforms for Remote Sensing Images", *ASPRS Annual Conference*, Portland, OR, May 2008
11. S. A. Robila, M. D. Islam*, "HYPDB - A Query System for Remote Sensing Data", *ASPRS Annual Conference*, Portland, OR, May 2008
12. M. Robila, S. A. Robila, "Developing an Interdisciplinary Partnership in Using Technology in Teaching", *Teaching in Higher Education Forum (THE 2003)*, Baton Rouge, LA, Apr 2003
13. S. A. Robila, P. K. Varshney, S. Taylor, "Feature Extraction for Hyperspectral Images Using Independent Component Analysis", *Fifth Int. Airborne Remote Sensing Conf. 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, Sep 2015
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 Asiacypt 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. “Uniting Organizations to Expand Computing Research Opportunities” –featured interview, *EdgeDiscovery – Winter/Spring*, pp. 24-27, 2022.
2. S. A. Robila, “Insights from the NSF” –featured interview, *Windows of Opportunity – Newsletter of the Office of Sponsored Programs at Montclair State University – Summer*, pp. 1-2, 2021.
3. “Snapshots A conversation with Computer Science Professor Stefan Robila”, *Montclair, the Magazine of Montclair State University – Spring / Summer 2021*, pp. 12-13, 2021.
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, “MobillTy – 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 Dept. of Computer Science”, *CSAM Newsletter*, Fall 2004, pp. 8

Invited Presentations

Outside Home Institution

1. S. A. Robila, “Data and Software Drivers in Computational Sensing”, *Guest Speaker, Data, Innovation and Community Engagement Distinguished Lecture Series, Institute for Data. Research and Innovation Science (IDRIS), Rutgers University Newark*, Newark, NJ, Feb 2025
2. S. A. Robila, “Building Pathways with Computational Sensing and Integrated Scientific Workflows” *THOTH Seminar Series, INRIA Grenoble, France, Sep 2024, LISTIC Lab, University of Savoie Mont Blanc, Annecy*,

France, Sep 2024, *University of Udine*, Udine, Italy, Sep 2024, *Orange 5G Lab*, *Technical University of Iasi*, Iasi, Romania, Sep 2024

3. S. A. Robila, "Computers and the Environment - From Energy Efficiency to Software Sustainability", *Keynote Lecture, IEEE Int. Conf. Electronics, Computers and Artificial Intelligence ECAI*, Iasi, Romania, Jun 2024
4. S. A. Robila, "Project Description and NSF Merit Review Criteria", *ASEE Capacity Building for Research at Minority-Serving Institutions: Proposal Development Workshop (CyBR-MSI: PDW)*, virtual, Dec 2, 2022
5. S. A. Robila, "Seeking Sustainability for Computing", *ADP Environmental Business Resource Group*, Roseland NJ / virtual, Apr 27, 2022
6. S.A. Robila, "Considerations of Computing Sustainability", *IEX Trading*, New York, NY / virtual, Dec 8 2021
7. S. A. Robila, "Project Description and NSF Merit Review Criteria", *ASEE Capacity Building for Research at Minority-Serving Institutions: Proposal Development Workshop (CyBR-MSI: PDW)*, virtual, Dec 3, 2021
8. S.A. Robila, "Pathway through Computational Science: Research, Service and Administration", *National Science Foundation*, Alexandria, VA, May 24, 2021
9. S.A. Robila, "Research and Education in Computational Sensing and High Performance Computing", *National Science Foundation*, Arlington, VA, May 18, 2017
10. S. A. Robila, "Research and Education Steps towards Green Computing", *Department of Electrical Engineering, Kasetsart University*, Thailand, July 8, 2016
11. S. A. Robila, "New Directions in Spectral Image Processing", *Gildart Haase School of Computer Sciences and Engineering Seminar Series, Fairleigh Dickinson University*, Teaneck, NJ April 20, 2011
12. S. A. Robila, "Pattern Recognition for Spectral Imaging", *Pattern Analysis and Machine Learning Group, Oxford University*, Oxford, United Kingdom, January 17, 2011
13. S. A. Robila, "Efficient Use of Hyperspectral Imagery", *Center for Image Analysis Seminar Series, Uppsala University*, Uppsala, Sweden, October 25, 2010
14. S. A. Robila, "Hyperspectral Image Processing: New Techniques, New Applications", *Department of Mathematics and Computer Science Seminar Series, Seton Hall University*, South Orange, NJ March 26, 2010
15. S. A. Robila, "Assessing REU programs – Common Application", panelist, *National Science Foundation REU PI meeting*, Charlotte, NC, March 2010
16. S. A. Robila, "2009 iImagine – REU in Imaging and Computer Vision", Poster, *National Science Foundation REU PI meeting*, Charlotte, NC, March 2010
17. S. A. Robila, "2008 iImagine – REU in Imaging and Computer Vision", Poster, *National Science Foundation REU PI meeting*, Arlington, VA, March 2009
18. S. A. Robila, "Hyperspectral Image Processing", *Department of Computer Science Colloquium Series, Rowan University*, Glassborough, NJ, December 10, 2008
19. S. A. Robila, "Efficient Hyperspectral Data Feature Extraction", *Armament Research, Development and Engineering Center (ARDEC)*, Picatinny, NJ, November 10, 2008
20. 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
21. S. A. Robila, "Recruitment Strategies for REU Sites: Report of the Working Group", *NSF REU PI Meeting*, Poster, Austin, TX, February 29, 2008.
22. 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.
23. S. A. Robila, "Recent Development in Multispectral / Hyperspectral Image Processing", *Math. And Comp. Sci. Colloquia Series*, North Carolina Central University, NC, April 2005
24. 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*, Montclair, NJ, November 2004
25. M. Chopping, S. A. Robila, "Remote Sensing at Montclair State University", *New Jersey Technology Council*, Oral Presentation, Montclair State University, Montclair, NJ, April 2004
26. S. A. Robila, "Employment of Independent Component Analysis for Hyperspectral Image Processing", *Seminar of the Information and Systems Laboratory*, Electrical Engineering Department, University of New Orleans, LA, February 2003
27. S. A. Robila, "Digital Image Processing – Spatial Operations", *Comp. Sci. Dept. Colloquia Series*, University of Nebraska at Kearney, NE, February 2002

28. S. A. Robila, “Source Separation for Multispectral / Hyperspectral Imagery”, *Comp. Sci. Dept. Colloquia Series*, University of New Orleans, LA, January 2002

NSF Presentations

1. S.A. Robila, “OAC: Cyberinfrastructure for all of S&E”, *CISE Program Director Presentation, AISES / TCU Computer Science Research Convening*, virtual, Dec 2, 2020
2. S.A. Robila, “OAC: Cyberinfrastructure for all of S&E”, *CISE Program Director Presentation, CISE MSI-HBCU Workshop*, virtual, Nov 30, 2020
3. S.A. Robila, “Proposal Preparation”, panel part of *NSF Virtual Fall Grants Conference*, virtual, Nov 16, 2020
4. S.A. Robila, “OAC: Cyberinfrastructure for all of S&E”, *CISE Program Director Presentation, HSI Mini-Ideas Workshop All-Hands Convening*, virtual, Nov 9, 2020
5. S.A. Robila, “Data and Software Cyberinfrastructure Research and Development”, *Dean’s Scholars Friday Lunch, University of Texas Austin*, Oct 30, 2020
6. S.A. Robila, “NSF Programs in Data and Software Cyberinfrastructure”, *CASE /EECS Colloquium Series, Syracuse University*, virtual, Oct 14, 2020
7. S.A. Robila, “Data and Software Cyberinfrastructure Research and Development”, *BLIS Retreat 2020, University of Texas Austin*, virtual, Oct 5, 2020
8. S.A. Robila, “Supporting Current and Future Researchers Through Data and Software Cyberinfrastructure”, *Computing in Engineering Forum 2020, University of Wisconsin, Madison*, virtual, Sept 29, 2020
9. S.A. Robila, A. Walton, K. Thompson, “The Importance of Investing in Cyberinfrastructure”, *2020 NSF EPSCoR PI Meeting*, virtual, May 21, 2020
10. S.A. Robila, “Future Steps of CSSI”, *NSF CSSI PI Meeting*, Seattle, WA, Feb 13, 2020
11. S.A. Robila, “Building a Diverse and Sustainable Scientific Cyberinfrastructure Ecosystem”, *Data Science Institute Darwin Computing Symposium*, Newark, DE, Feb 12, 2020
12. S.A. Robila, “Small Group Meetings with NSF CISE Program Directors”, *NSF Minority Serving Institutions-CISE Conference*, Arlington, VA, Feb 4, 2020
13. S.A. Robila, “NSF Support for Advanced Data and Software Research Cyberinfrastructure”, *NIST Interoperability of Web Computational Plugins for Large Microscopy Image Analyses*, Gaithersburg, MD, Dec 5, 2019
14. S.A. Robila, “Proposal Preparation”, panel part of *NSF Fall Grants Conference*, Boston, MA, Nov 18, 2019
15. S.A. Robila, “The Directorate of Computer, Information Science and Engineering (CISE)”, *NSF Fall Grants Conference*, Boston, MA, Nov 18, 2019
16. S.A. Robila, “Overview of the data-focused CI”, *NSF Workshop on Future Directions for the CSSI Program*, Austin, TX, Oct 29, 2019
17. S.A. Robila, “Sustainability and the Advanced Research Cyberinfrastructure”, part of Investment on Sustainability Panel, *International Green and Sustainable Computing Conference (IGSC)*, Alexandria, VA, Oct 23, 2019
18. S.A. Robila, “Supporting Advanced Research Data and Software Cyberinfrastructure”, invited talk, Columbia University, New York, NY, Oct 4, 2019
19. S.A. Robila, “Supporting Advanced Research Cyberinfrastructure”, Center for Network and Storage Enabled Collaborative Computation Symposium, University of Michigan, MI, Oct 15, 2018

At Home Institution

1. S.A. Robila, T. White, “The Barry Goldwater and Fulbright Scholarships - Merit Based Programs for Undergraduate Students”, *MSU Student Research Symposium*, invited presentation, MSU, Apr 26, 2024
2. S.A. Robila, K. Handelli, “AI in Computer Science Panel”, *Fridays with ITDS*, panelist, MSU, Feb 2024
3. S.A. Robila, “Information Session on the NSF Major Research Instrumentation Competition”, *PI panelist*, MSU, May 24, 2023
4. S. A. Robila, “The Arms Race in Cybersecurity”, *Webinar, Dept. of Computer Science REU Site*, MSU, June 8, 2022
5. S. A. Robila, “Bridging the Human Technology Divide through Computation and Sensing”, *Presentation, part of the Red Hawks and Robots: On the Cutting Edge of Technology Robotics Showcase*, April 20, 2022

6. S. A. Robila, "The Arms Race in Cybersecurity", Webinar, Dept. of Computer Science REU Site, MSU, June 9, 2021
7. O. Alkhalili, S. A. Robila, "Tracking the Impact of Fake News on US Election Cycles", Panel on Democracy Perspectives from Computer Science: Challenges and Opportunities, MSU, Apr 29, 2021
8. S. A. Robila, "NSF Process and Opportunities", Webinar, Dept. of Computer Science, MSU, Mar 31, 2021
9. S. A. Robila, "Computer Science", Major Madness: Exploring STEM Series, MSU, Mar 15, 2021
10. S. A. Robila, "Seeking Sustainability for Computing", Sustainability Seminar Series, MSU, Mar 15, 2021
11. C. Coutras, S.A. Robila, "Building an Online Graduate Degree - MSU's Masters of Science in Applied Information Technology", Montclair State University Summer Institute for Teaching, Learning & Technology, June 6, 2018
12. S. A. Robila, "Computational Sensing and Applications", LSAMP Student Meeting, MSU, Mar 27, 2014
13. S. A. Robila, "Computational Sensing and Applications", Computer Club, Oral Presentation, MSU, Apr 2, 2014
14. S. A. Robila, "Hyperspectral Imagery and Applications", Physics Club, Oral Presentation, MSU, Apr 14, 2010
15. 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, MSU, Oct 3, 2009.
16. S. A. Robila, "Seeing the Unseen: Spectral Imaging Reveals Secrets", *GK-12 Math and Science Day*, MSU, June 9, 2009
17. S. A. Robila, "Seeing the Unseen: Spectral Imaging", Weston Scholars Open House, MSU, May 2009
18. S. A. Robila, "Processing Beyond the Visible Imagery", *College of Sciences and Mathematics Graduate Showcase*, MSU, Apr 10, 2007.
19. S. A. Robila, "Lessons Learned in the Grant Application Process", *MSU Grant Success Stories Workshop*, MSU, Mar 28, 2007
20. S. A. Robila, "Seeing the Unseen – Hyperspectral Image Processing and Computers Science", *College of Sciences and Mathematics Open House*, MSU, Feb 2004
21. S. A. Robila, "Hyperspectral Image Processing", *College of Sciences and Mathematics Meeting*, MSU, Oct 2003
22. S. A. Robila, C. Shah, T. Achalakul, P. Varshney, "Hyperspectral/Multispectral Imagery Applications", *Kodak Technology Meeting*, Syracuse University, Nov 2001
23. S. A. Robila, "Real Time Multispectral Image Processing Technologies", *Kodak Technology Meeting*, Syracuse University, Nov 2001
24. S. A. Robila, J. Lee, "Hyperspectral Image Processing", *Syracuse University Open House*, Apr 2001
25. S. Taylor, S. A. Robila, "Real Time Multispectral Image Processing", *Office for Government Relations*, Syracuse University, Nov 2000

Course Guest Lectures

26. S. A. Robila, "Hyperspectral Imaging Technologies", EAES, 2012, 2011, 2009, 2007, 2005

Workshops / Tutorials

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

PROFESSIONAL DEVELOPMENT

- IEEE Geoscience and Remote Sensing *Image Analysis and Data Fusion School, Computer Vision for Earth Observation*, Oct 2022
- Harvard Institutes for Higher Education *Aligning Strategic Priorities with Financial Resources in Higher Education (SPFR)*, Jan 2022
- Franklin Covey *Leading at the Speed of Trust Course*, Dec 2020
- American Management Association *Comprehensive Project Management Course*, Sep 2020
- Montclair State University *Certificate for Teaching Online and Hybrid*, Jul 2014
- Computing Research Association *Leadership in Science Policy Institute (LiSPI)*, Apr 2013

TEACHING

Montclair State University

(graduate courses are numbered 500 and above)

Intro to Computer Applications	CMPT 109	Fall 2004, 2005, 2006, 2009, 2012, 2013
Fluency with IT		Spring 2006, 2007, Summer 2009
Computational Concepts	CSIT 104	Fall 2014, 2015, 2021, 2022, 2023, 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
	CSIT 345	Spring 2021, Fall 2021, Summer 2023, 2024
	CMPT 583	Spring 2006, 2008
	CSIT 547	Spring 2021, 2022, 2023, 2024, Fall 2023, Summer 2022, 2025
Foundations of Programming	CMPT 484	Fall 2013
Languages	CSIT 313	Fall 2014, 2022, 2023, 2025 Spring 2022, 2023, 2024
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	CMPT 495	Spring 2012
Algorithms	CMPT 680	Spring 2012
Pattern Disc. 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
	CSIT 491	Spring 2023, 2024

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 (TA)	22C017	Fall 1997

SERVICE

Conference Organizing Committees

Technical Program Committee Chair

IEEE 2022 Long Island Systems Applications and Technology Conference (LISAT 2023), Old Westbury, NY, May 2023

Technical Program Committee Vice Chair

IEEE 2022 Long Island Systems Applications and Technology Conference (LISAT 2022), Old Westbury, NY, May 2022

IEEE 2024 Long Island Systems Applications and Technology Conference (LISAT 2024), Old Westbury, NY, November 2024

Proceedings Chair

IEEE Long Island Systems Applications and Technology Conference (LISAT 2010), Farmingdale, NY, May 2006, 2007, 2008, 2009, 2010, 2024

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

Program Committee Member

1. Practice and Experience in Advanced Research Computing (PEARC) – 2022, 2023
2. ACM – Technical Symposium on Computer Science Education (SIGCSE) – Senior Member 2021, 2022, 2023
3. ACM - Innovation and Technology in Computer Science Education (ITiCSE) 2021, 2022, Senior Member 2023, 2024
4. International Conference on Sustainable Information Engineering and Technology (SIET) 2022
5. ACM - Consortium for Computing Sciences in Colleges — Northeastern Region 2019 (CCSNE) 2018, 2019, 2022
6. SPIE High-Performance Computing in Remote Sensing (RS12), Remote Sensing Europe Symposium, 2012, Edinburgh, United Kingdom
7. SPIE High-Performance Computing in Remote Sensing (RS 11), Remote Sensing Europe Symposium, 2011, Prague, Czech Republic
8. IEEE Long Island Systems Applications and Technology Conference (LISAT 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019), Farmingdale, NY, USA
9. IASTED Imaging and Signal Processing in Healthcare and Technology (ISPHT 2011, 2012), Washington DC, USA
10. IASTED International Conference on Signal Processing, Pattern Recognition and Applications (SPPRA 2008, 2009, 2010, 2011, 2013), Innsbruck, Austria
11. IASTED International Conference on Parallel and Distributed Computing and Networks, (PDCN 2009, 2010, 2013, 2014, 2016), Innsbruck, Austria
12. ACIS International Conference on Software Engineering Research, Management and Applications (SERA2009), Haiku, China
13. International Conference on Signal Processing and Multimedia Applications (SIGMAP 2009), Milan, Italy
14. IASTED International Conference on Visualization, Imaging and Image Processing, (VIIP 2006, 2007, 2008), Palma de Mallorca, Spain
15. IASTED International Conference on Signal and Image Processing (SIP 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013), Honolulu, HI
16. IASTED International Conference on Graphics and Visualization in Engineering, (GVE), Clearwater, FL, January 2007
17. IEEE Geosciences and Remote Sensing Symposium, (IGARSS), 2006, 2008

18. First ACIS International Workshop on E-Learning Technologies: Experiences and Challenges (ELTEC 06), Las Vegas, NV, June 2006
19. World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2006, 2007), Orlando, FL
20. International Symposium on Optics, Informatics and Cyber-Technologies (OIC 2006), Orlando, FL, July 2006

Professional Reviews

Grants

National Science Foundation – over 20 Panels – 2004, 2005, 2007, 2009, 2010, 2011, 2016, 2017, 2021, 2022, 2023, 2024, 2025 (including BigData, Career, CSSI, Cyber- Enabled Discovery, CyberTraining, IGMS, Midscale, MRI, RET, REU, SCH), site visits and ad hoc reviews
 Department of Energy Office of Advanced Scientific Computing Research (ASCR) 2021, 2022
 NASA Postdoctoral Program (NPP) - 2012

Promotion and Tenure Reviewer

US University – Fall 2012, US University – Fall 2012, US University – Fall 2023

Scholarships

Richard Tapia Celebration of Diversity in Computing Conference Scholarships 2021, 2022, 2024
 Barry Goldwater Scholarship

Journals

1. IEEE Transactions on Geosciences and Remote Sensing 2003-present
2. IEEE Geosciences and Remote Sensing Letters 2003-present
3. IEEE Transactions on Biomedical Engineering 2003-present
4. IEEE Journal of Sel. Top. in App. Earth Observations and Remote Sensing 2010-present
5. IEEE Transactions on Neural Networks 2003-present
6. IEEE Journal of Sel. Top. In Signal Processing 2014-present
7. IEEE Signal Processing Magazine 2010-present
8. IEEE Access 2022 - present
9. SPIE Optical Engineering 2003-present
10. SPIE Journal of Applied Remote Sensing 2007 – present
11. SPIE Journal of Medical Imaging 2021 – present
12. SPIE Journal of Electronic Imaging 2021 – present
13. Canadian Journal of Remote Sensing 2003-present
14. International Journal of Remote Sensing 2003-present
15. Photogrammetric Engineering and Remote Sensing 2003-present
16. Journal of Real Time Image Processing 2008-present
17. Journal of Information Fusion 2008-present
18. Sensors 2009 – present
19. Journal of Franklin Institute 2010 – present
20. The Oxford Computer Journal 2012-present
21. Information Systems Research 2012-present
22. Journal of Next Generation Information Technology 2014-present
23. International Journal of Electrical and Computer Engineering (IJECE) 2021-present
24. Journal of Child and Family Studies 2019-present
25. Journal of King Saud University - Computer and Information Sciences 2021- present
26. International Journal of Production Research 2021- present
27. Agronomy 2021-present
28. ACM Computer Reviews 2006 - present

Conference

1. International Conference on Computer, Electrical & Communication Engineering-ICCECE 2023
2. Eurographics Conference on Visualization, EuroVis 2013
3. The Int Joint Conf on Comp Vision, Imaging and Computer Graphics Theory and Applications, VISAPP 2012
4. The 5th International Symposium on Bio- and Medical Informatics and Cybernetics: BMIC 2011, 2013

5. IEEE International Symposium on Signals, Circuits and Systems (ISSCS) 2007
6. ACM – Technical Symposium on Computer Science Education (SIGCSE) 2004-2016
7. ACM - Innovation and Technology in Computer Science Education (ITiCSE) 2005-13
8. Frontiers in Education Conference (FIE) 2005, 2006
9. Consortium for Computing Sciences in Colleges, Eastern Conference (CCSCE) 2005
10. Consortium for Computing Sciences in Colleges, North Eastern Conference (CCSCNE) 2005, 2006
11. World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI) 2004, 2005, 2006
12. 4Th WSEAS Int Conf on Soft Computing, Computing, Opt, Simulation and Manufacturing (SOSM), 2004
13. International Conference on Computing, Communications and Control Technologies: (CCCT), 2004
14. Int Conference on Cybernetics and Information Technologies, Systems and Applications: (CITSA), 2004

Associate Memberships

Association for Computing Machinery (ACM)	2002 – present
Institute of Electrical and Electronics Engineers (IEEE)	2002 – present
IEEE Geoscience and Remote Sensing Society (IEEE – GRSS)	2002 – present
Educause, Basic Member	2006 – present