

CURRICULUM VITAE -

DAMON L. WOODARD, PH.D.

PERSONAL DATA

Director, Biometrics and Machine Learning Group
Associate Professor
Department of Electrical and Computer Engineering
University of Florida
226E Materials Engineering Building
Gainesville, FL 32611
(352) 273-2130

RESEARCH INTERESTS

Applied Machine Learning for Biometrics, Identity Science, and Cybersecurity, Deep Learning, Pattern Recognition, and Signal Analysis

EDUCATION

Ph.D., University of Notre Dame, 2005, Computer Science and Engineering
Dissertation: *Exploiting Finger Surface as a Biometric Identifier*
Advisor: Patrick J. Flynn
M.E., Penn State University, 1999, Computer Science and Engineering
B.S., Tulane University, 1997, Computer Science and Computer Information Systems

PROFESSIONAL EXPERIENCE

University of Florida, 2015 - Present, Associate Professor, Dept. of Electrical and Computer Engineering
University of Florida, 2015 - 2015, Associate Professor, Dept. of Computer & Information Science & Engineering
University of Notre Dame, 2014 - 2014, Visiting Associate Professor, Dept. of Computer Science and Engineering
Clemson University, 2012 - 2014, Associate Professor, School of Computing
Clemson University, 2012 - 2013, HCC Graduate Program Director, School of Computing
Clemson University, 2006 - 2012, Assistant Professor, School of Computing
University of Notre Dame, 2004 - 2006, Intelligence Community (IC) Post-Doctoral Fellow
University of Notre Dame, 2002 - 2004, Research Assistant
University of Notre Dame, 2001 - 2002, Teaching Assistant
Pennsylvania State University, 1997 - 1999, Teaching Assistant

PROFESSIONAL MEMBERSHIPS

Black Data Processing Associates	(2013 -)
American Society for Engineering Education	(2012 -)
IEEE Systems, Man, & Cybernetics Society	(2009 -)
Upsilon Pi Epsilon (UPE) Honor Society	(2004 -)
European Association for Signal, Speech and Image Processing (EURASIP)	(2004 -)

Institute of Electrical and Electronics Engineers (IEEE)	
Senior Member	(2000 -)
IEEE Computer Society	(2000 -)
National Society of Black Engineers (NSBE)	(1996 -)
Association of Computing Machinery (ACM)	
Senior Member	(1995 -)

PUBLICATIONS

Book Chapters (Reviewed)

- [BC5] D. L. Woodard, J. Lyle, R. N. Tobias, K. Sandararajan, *Chapter 19: Periocular-Based Soft Biometric Classification Using Local Appearance and Keypoint Features*, *Iris and Periocular Biometrics* (Christian Rathgeb and Christoph Busch Eds.), Institution of Engineering and Technology (IET) Publishing, 2016. (In Press)
- [BC4] T. Neal, D. L. Woodard, A. Striegel, *Chapter 2: Mobile Device Usage Data as Behavioral Biometrics*, *Mobile Biometrics* (Guodong Guo and Harry Weschler Eds.), Institution of Engineering and Technology (IET) Publishing, 2016. (In Press)
- [BC3] D. L. Woodard, *Periocular-Based Biometrics*, *Encyclopedia of Biometrics Second Ed.* (Stan Z. Li Ed.), Springer Publishing, 2015.
- [BC2] D. L. Woodard, K. Ricanek, *Iris Databases*, *Encyclopedia of Biometrics* (Stan Z. Li Ed.), Springer Publishing, 2009.
- [BC1] G. Dozier, M. Savvides, K. Bryant, T. Munemoto, K. Ricanek, and D. L. Woodard, *Developing Iris Templates via Bit Inconsistency and GRIT*, *Encyclopedia of Biometrics* (Stan Z. Li Ed.), Springer Publishing, 2009.

Refereed Journals

- [J10] T. Neal, D. L. Woodard, *Surveying Biometric Authentication for Mobile Device Security*, *Journal of Pattern Recognition Research*, Vol 11, No 1 (2016)
- [J9] S. Banerjee, D. L. Woodard, *Biometric Authentication and Identification Using Keystroke Dynamics: A Survey*, *Journal of Pattern Recognition Research* 7 (2012): pg. 116-139, 2012.
- [J8] K. P. Hollingsworth, S. S. Darnell, P. E. Miller, D. L. Woodard, K. W. Bowyer, and P. J. Flynn, *Human and Machine Performance on Periocular Biometrics Under Near-Infrared Light and Visible Light*, *IEEE Transactions on Forensics and Information Security* 7(2):pg. 588-601, 2012.
- [J7] J. Lyle, P. Miller, S. Pundlik, D. L. Woodard, *Soft Biometric Classification using Local Appearance Ocular Region Features*, *Pattern Recognition* 45(11): pg. 3877-3885, 2012.
- [J6] A. Alford, K. Bryant, T. Abegaz, G. Dozier, J. Kelly, J. Shelton, L. Small, J. Williams, and D. L. Woodard, *Genetic and Evolutionary Methods for Biometric Feature Reduction*, *International Journal of Biometrics, Special Issue on Computational Intelligence in Biometrics: Theory, Methods, and Applications*, Volume 4, Number 3, 2012.
- [J5] D. L. Woodard, S. Pundlik, P. Miller, J. Lyle, *Appearance Based Periocular Features in the Context of Face and Non-Ideal Iris Recognition*, H. Proença, E. Y. Du, and J. Scharcanski (Eds.); Springer Signal

Image and Video Processing, Special Issue On Unconstrained Biometrics: Advances and Trends, Volume 5, Number 3, September, 2011.

- [J4] S. Pundlik, D. L. Woodard, and S. Birchfield, *Iris Segmentation in Non-Ideal Images*, Image and Vision Computing, Vol. 28, No. 12, pg. 1671-1681, December 2010.
- [J3] M. Savvides, K. Ricanek, D. L. Woodard, and G. Dozier, *Unconstrained Biometric Identification: Emerging Technologies*, IEEE Computer Special Issue on Biometrics, Vol. 43, No. 2, pg. 56-62, February 2010.
- [J2] K. L. Rice, T. M. Taha, A. M. Chowdhury, A. A. S. Awwal, and D. L. Woodard, *Design and Acceleration of Phase-Only Filter Based Optical Pattern Recognition for Fingerprint Identification*, Optical Engineering, 48:11), November 2009.
- [J1] D. L. Woodard, P. J. Flynn, *Finger Surface as a Biometric Identifier*, Journal of Computer Vision and Image Understanding (CVIU) 100 (3): pg. 357-384, December 2005. (Listed as #20 on CVIU's Top 25 Hottest Articles during 2005 4th quarter)

Refereed Conferences/Workshops

- [C33] N. Karimian, M. Tehranipoor, D. Woodard, D. Forte, *Biometrics for Authentication in Resource-Constrained Systems*, International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 2016.
- [C32] T. Neal, D. L. Woodard, A. Striegel, *Mobile Device Application, Bluetooth, and Wi-Fi Usage Data as Behavioral Biometric Traits*, 2015 IEEE 7th International Conference on Biometrics Theory, Applications and Systems (BTAS 2015), Arlington, VA, pg. 1-6, Sept. 8-11, 2015.
- [C31] K. Sundararajan, D. L. Woodard, *Head Pose Estimation in the Wild Using Approximate View Manifolds*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), Boston, MA, pg. 50 - 58, June 7-12, 2015.
- [C30] S. B. Daily, C. Gardner-Mccune, J. Gilbert, P. W. Hall, K. McMullen, S. Remy, and D. L. Woodard, *Alternate Pathways to Careers in Computing: Recruiting and Retaining Women Students*, Proceedings of the 2013 ASEE Annual Conference, Atlanta, GA, June 2013.
- [C29] Y. Dong, D. L. Woodard, *Eyebrow Shape-Based Features for Biometric Recognition and Gender Classification: A Feasibility Study*, 2011 IAPR/IEEE International Joint Conference on Biometrics (IJCB), Washington, D.C., October 11 - 13, 2011.
- [C28] J. Shelton, G. Dozier, K. Bryant, L. Small, J. Adams, K. Popplewell, T. Abegaz, D.L. Woodard, and K. Ricanek, *Genetic and Evolutionary Feature Extraction via X-TOOLSS*, Proceedings of the 2011 International Conference on Genetic and Evolutionary Methods, (GEM 2011), Las Vegas, NV, July 18 - 21, 2011.
- [C27] T. Abegaz, G. Dozier, K. Bryant, J. Adams, V. McLean, J. Shelton, A. Alford, K. Ricanek, and D. L. Woodard, *Applying GEC in Feature Selection and Weighting for LBP, oLBP, and Eigenface*, Proceedings of the 2011 International Conference on Genetic and Evolutionary Methods, (GEM 2011), Las Vegas, NV, July 18 - 21, 2011.

- [C26] A. Alford, K. Popplewell, G. Dozier, K. Bryant, J. Kelly, J. Adams, T. Abegaz, J. Shelton, D.L. Woodard, and K. Ricanek, *Hybrid GEC-Based Techniques for Multi-Biometric Recognition via X-TOOLSS*, Proceedings of the 2011 International Conference on Genetic and Evolutionary Methods, (GEM 2011), Las Vegas, NV, July 18 – 21, 2011.
- [C25] T. Abegaz, G. Dozier, K. Bryant, J. Adams, J. Shelton, K. Ricanek, D. L. Woodard, *SSGA and EDA Based Feature Selection and Weighting for Face Recognition*, 2011 IEEE Congress on Evolutionary Computation (IEEE CEC 2011), New Orleans, LA, June 5 – 8, 2011.
- [C24] A. Alford, K. Popplewell, G. Dozier, K. Bryant, J. Kelly, J. Adams, T. Abegaz, Shelton, K. Ricanek, and D. L. Woodard, *A Comparison of GEC-Based Feature Selection and Weighting for Multimodal Biometric Recognition*, 2011 IEEE Congress on Evolutionary Computation (IEEE CEC 2011), New Orleans, LA, June 5 – 8, 2011.
- [C23] A. Alford, C. Hansen, G. Dozier, K. Bryant, J. Kelly, T. Abegaz, K. Ricanek, and D. L. Woodard, *GEC-Based Multi-Biometric Fusion*, 2011 IEEE Congress on Evolutionary Computation (IEEE CEC 2011), New Orleans, LA, June 5 – 8, 2011.
- [C22] J. Shelton, G. Dozier, K. Bryant, L. Smalls, J. Adams, K. Popplewell, T. Abegaz, D. L. Woodard, and K. Ricanek, *Comparison of Genetic-based Feature Extraction Methods for Facial Recognition*, 2011 Midwest Artificial Intelligence and Cognitive Science Conference (MAICS), Special Session on Artificial Intelligence in Biometrics and Identity Sciences, Cincinnati, OH, April 16 – 17, 2011.
- [C21] T. Abegaz, G. Dozier, K. Bryant, J. Adams, B. Baker, J. Shelton, K. Ricanek, and D. L. Woodard, *Genetic-Based Selection and Weighting for LBP, oLBP, and Eigenface Feature Extraction*, 2011 Midwest Artificial Intelligence and Cognitive Science Conference (MAICS), Special Session on Artificial Intelligence in Biometrics and Identity Sciences, Cincinnati, OH, April 16 – 17, 2011.
- [C20] G. Dozier, K. Purrington, K. Popplewell, J. Shelton, T. Abegaz, K. Bryant, J. Adams, D. L. Woodard, and P. Miller, *GEFeS: Genetic & Evolutionary Feature Selection for Periocular Biometric Recognition*, 2011 IEEE Workshop on Computational Intelligence in Biometrics and Identity Management, Paris, France, April 11- 15, 2011.
- [C19] T. Abegaz, G. Dozier, K. Bryant, J. Adams, K. Popplewell, J. Shelton, K. Ricanek, D. L. Woodard, *GEFeS: Hybrid Gas for Eigen-Based Facial Recognition*, 2011 IEEE Workshop on Computational Intelligence in Biometrics and Identity Management, Paris, France, April 11 – 15, 2011.
- [C18] J. Shelton, G. Dozier, K. Bryant, J. Adams, K. Popplewell, T. Abegaz, K. Purrington, D. L. Woodard, and K. Ricanek, *Genetic Based LBP Feature Extraction and Selection for Facial Recognition*, Proceedings of 2011 ACM Southeast Conference, Kennesaw, GA, March 24-26, 2011.
- [C17] S. Darnell, I. Alvarez, J. Ekendem, D. L. Woodard, and J. E. Gilbert, *MyDash: The Biometric Digital Dashboard*, In Proceedings of the 3rd Workshop on Multimodal Interfaces for Automotive Applications of the 2011 International Conference on Intelligent User Interfaces, Palo Alto, CA, pg. 53-56, February 13 – 16, 2011.
- [C16] P. Miller, J. Lyle, S. Pundlik, D. L. Woodard, *Performance Evaluation of Local Appearance Based Periocular Recognition*, IEEE 4th International Conference on Biometrics Theory, Applications, and Systems, Arlington, Virginia, Sept. 27 – Sept. 29, 2010.

- [C15] J. Lyle, P. Miller, S. Pundlik, D. L. Woodard, *Soft Biometric Classification Using Periocular Region Features*, IEEE 4th International Conference on Biometrics Theory, Applications, and Systems, Arlington, Virginia, Sept. 27 – Sept. 29, 2010.
- [C14] D. L. Woodard, S. Pundlik, P. Miller, R. Jillela, A. Ross, *On the Fusion of Periocular and Iris Biometrics in Non-ideal Imagery*, Proceedings of the IAPR 20th International Conference on Pattern Recognition (ICPR 2010), Istanbul, Turkey, August 23-26, 2010.
- [C13] J. Adams, D. L. Woodard, G. Dozier, K. Bryant, P. Miller, G. Glenn, *Genetic-Based Type II Feature Extraction for Periocular Biometric Recognition: Less is More*, Proceedings of the IAPR 20th International Conference on Pattern Recognition (ICPR 2010), Istanbul, Turkey, August 23-26, 2010.
- [C12] L. Simpson, G. Dozier, J. Adams, D. L. Woodard, P. Miller, G. Glenn, K. Bryant, *Genetic and Evolutionary Type II Feature Extraction for Periocular-Based Biometric Recognition*, Proceeding of 2010 IEEE Congress on Evolutionary Computation, Barcelona, Spain, July 18-23, 2010.
- [C11] G. Dozier, J. Adams, D. L. Woodard, K. Bryant, P. Miller, *A Comparison of Two Genetic and Evolutionary Feature Selection Strategies for Periocular-Based Biometric Recognition via X-TOOLSS*, International Conference of Genetic and Evolutionary Methods (GEM' 10), Las Vegas, Nevada, July 12-15, 2010.
- [C10] D. L. Woodard, S. Pundlik, J. Lyle, P. Miller, *Periocular Region Appearance Cues for Biometric Identification*, IEEE Conf. Computer Vision and Pattern Recognition 2010 IEEE Biometrics Council Workshop on Biometrics, San Francisco, CA, June 18, 2010.
- [C9] J. Adams, D.L. Woodard, G. Dozier, P. Miller, G. Glenn, K. Bryant, *GEFE: Genetic & Evolutionary Feature Extraction for Periocular-Based Biometric Recognition*, Proceedings of 2010 ACM Southeast Conference, Oxford, MS, April 15-17, 2010.
- [C8] P. Miller, A. Rawls, S. Pundlik, D. L. Woodard, *Personal Identification Using Periocular Skin Texture*, Proceedings of the 2010 ACM Symposium on Applied Computing, Session: Applied Biometrics Track, Sierre, Switzerland, pg. 1496 – 1500, March 22-24, 2010.
- [C7] W. Ryan, D. L. Woodard, A. Duchowski, and S. Birchfield, *Adapting Starburst for Elliptical Iris Segmentation*, IEEE 2nd International Conference on Biometrics Theory, Applications, and Systems, Arlington, Virginia, Sept. 29 – Oct. 1, 2008.
- [C6] S. Pundlik, D. L. Woodard, S. Birchfield, *Non-Ideal Iris Segmentation Using Graph Cuts*, IEEE Conf. Computer Vision and Pattern Recognition 2008 (CVPRW) Workshop on Biometrics, Anchorage, Alaska, June 23-30, 2008.
- [C5] D. L. Woodard, T. C. Faltemier, Ping Yan, P. J. Flynn, K. W. Bowyer, *A Comparison of 3D Biometric Modalities*, IEEE Conf. Computer Vision and Pattern Recognition 2006 (CVPRW) Workshop on Multi-modal Biometrics, New York, NY, pg. 57-62, June 17-22, 2006.
- [C4] D. L. Woodard, P. J. Flynn, *Personal Identification Utilizing Finger Surface Features*, Proc. IEEE Conf. Computer Vision and Pattern Recognition 2005 (CVPR), San Diego, CA, pg. II: 1030-1036, June 20-25, 2005.
- [C3] D. L. Woodard, P. J. Flynn, *Identity Verification Utilizing Finger Surface Features*, Audio- and Video-based Biometric Person Authentication 2005 (AVBPA),

Rye Town, NY, pg. 544-554, July 20-22, 2005.

- [C2] K. Chang, D. L. Woodard, P. J. Flynn, and K. W. Bowyer, *Three-Dimensional Face and Finger Biometrics*, (**EUSIPCO**) 12th European Signal Processing Conference, Vienna, Austria, pg. 1225-1228, September 7-10, 2004.
- [C1] D. L. Woodard, P. J. Flynn, *3D Finger Biometrics*, The 8th European Conference on Computer Vision (**ECCV 2004**) Biometric Authentication Workshop (**BioAW**), Prague, Czech Republic, pg. 238-247, May 11-16, 2004.

Abstracts/Extended Abstracts (Peer Reviewed)

- [A3] D. L. Woodard, P. J. Flynn. *3D Finger Biometrics*, Richard Tapia Celebration of Diversity in Computing Conference 2005, Albuquerque, NM October 19-22, 2005.
- [A2] D. L. Woodard, P. J. Flynn. *Finger Surface as a Biometric Identifier*, Biometric Consortium Conference, Crystal City, VA Sept. 2004.
- [A1] D. L. Woodard, P. J. Flynn. *Hand Silhouette Curvature Measurements as a Biometric Identifier*, Biometric Consortium Conference, Crystal City, VA Sept. 2003.

PRESENTATIONS

- [P16] *Periocular-Based Biometrics: Methods, Capabilities, and Future Research Directions*, University of Notre Dame, Notre Dame, IN, November 2013.
- [P15] *Exploiting Periocular Features for Biometric and Forensic Applications*, Face Collaboration Meeting (IX) Sponsored by MITRE, McLean, VA, June 27, 2011.
- [P14] *Center of Advanced Studies in the Identity Sciences: A Model for Research, Education, and Outreach*, ORAU Council of Sponsoring Institutions Annual Meeting: Research and Education Partnerships Opportunities in Security and Intelligence, Oak Ridge, TN, March 8-9, 2011.
- [P13] *Periocular Based Recognition and Classification*, University of Notre Dame, Notre Dame, IN, November 2010.
- [P12] *Local Appearance Features for Periocular Based Biometrics*, Office of the Director of National Intelligence (ODNI) Intelligence Community Centers of Academic Excellence Executive Advisory Board Meeting, Lansdowne, VA, March 2010.
- [P11] *Exploiting Finger Surface as a Biometric Identifier*, University of North Carolina Wilmington, Wilmington, NC, November 2009.
- [P10] *Overview of Biometric Research/Periocular Based Biometrics*, Office of the Director of National Intelligence (ODNI) Intelligence Community Centers of Academic Excellence Executive Advisory Board Meeting, Lansdowne, VA, March 2009.
- [P9] *Ocular-Region Based Biometric Identification*, North Carolina A&T State University, Greensboro, NC, October 2008.
- [P8] *Biometrics: Identity Technologies* (Panel Chair), National Academy of Sciences Eighteenth Annual Kavli Frontiers of Science Symposium, Irvine, CA, November 2-4, 2006.

- [P7] *An Overview of Biometric Research at the University of Notre Dame*, Supercomputing 2005, Seattle, WA, November 12-17, 2005.
- [P6] *3D Finger Biometrics*, Richard Tapia Celebration of Diversity in Computing Conference 2005, Albuquerque, NM, October 19-22, 2005.
- [P5] *Exploiting Finger Surface as a Biometric Identifier*, Auburn University, Auburn, AL July 12, 2005.
- [P4] *An Introduction to Biometrics*, Albion College, Albion, MI, April 14, 2005.
- [P3] *Iris Recognition Utilizing High Resolution Images*, DCI Postdoctoral Research Fellowship Colloquium, Tyson's Corner, VA April 6, 2005.
- [P2] *Finger Surface as a Biometric Identifier*, Biometric Consortium Conference, Crystal City, VA, Sept. 2004.
- [P1] *Hand Silhouette Curvature Measurements as a Biometric Identifier*, Biometric Consortium Conference. Crystal City, VA Sept. 2003.

HONORS AND AWARDS

Elevated to ACM Senior Member	(2012)
Elevated to IEEE Senior Member	(2011)
Kavli Frontier Fellow, National Academy of Science	(2006)
Intelligence Community Postdoctoral Fellowship Recipient	(2004 - 2006)
Procter and Gamble Grant Recipient , Procter and Gamble Inc.	(2002 - 2003)
Minority Engineering Program Mentor, University of Notre Dame	(2001)
Technical Minority Scholarship, Xerox Inc.	(2000, 2001)
Ph.D. Fellowship Recipient, National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM)	(1999)
Masters Fellowship Recipient, National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM)	(1997)
Highest Senior GPA Award, National Soc. of Black Engineers (NSBE)	(1997)
Emerging Leaders Member, Tulane University	(1994)
Garvin Shands Saunder Scholarship, Tulane University	(1993)
Dean's List/Honor Roll, Tulane University	(1992 - 1995)

SPONSORED RESEARCH

(TOTAL AWARDS: \$4,064,343)

- [G3] *Author Cyber Analysis and Advise ment Tool (AUTHORCAAT) (As Part of DNI S&T Center of Academic Excellence: Center for Academic Studies in Identity Sciences (CASIS))*, US Dept. of Defense, Principal Investigator, \$600,000, (\$600,000), (2015 - 2018).
- [G8] *Algorithm and Decision Support for Multi-sensor Handheld Explosive Hazard Detection Systems*, Army Research Office, Co-Principal Investigator with J. Wilson, P. Gader, A. Banerjee, \$1,057,332, (\$223,386), (2014 - 2016).
- [G7] *Automatic Visual Inspector: Phase 1*, BMW Manufacturing Co. LLC, Principal Investigator with S. Birchfield, \$64,977, (\$32,488), (2012 - 2013).
- [G6] *On the Use of Periocular Based Features for Biometric Recognition*, Federal Bureau of Investigation, Principal Investigator, \$600,096, (\$600,096), (2012 - 2014).

- [G5] *Human-Centered Computing Scholars: Fostering a New Generation of Underrepresented and Financially Disadvantaged Researchers*, National Science Foundation, Co-Principal Investigator with J. Gilbert and L. Hodges, \$552,000, (\$184,000), (2011 – 2016).
- [G4] *Ear Feature Analysis, Extraction Tools, and Classification for Improved Recognition*, Intelligence Community Postdoctoral Research Fellowship Program, Central Intelligence Agency, Principal Investigator, \$355,373, (\$353,373), (2013 – 2015).
- [G3] *Ocular Region Biometrics (As Part of DNI S&T Center of Academic Excellence: Center for Academic Studies in Identity Sciences (CASIS))*, Army Research Office, Principal Investigator, \$2M, (\$2M), (2008-2014).
- [G2] *Eye Region Based Biometric Identification*, Department of Defense/Unisys, Principal Investigator, \$57,000, (\$57,000), (2008-2008).
- [G1] *An Experimental Supercomputer from Commodity Components*, University Research Fund, Co-Principal Investigator with J. Westall, R. Geist, B. Dean, R. Schalkoff, and P. Srimani , \$100,000, (\$14,000), (2007-2008).

GRADUATE STUDENT ADVISING

Current Graduate Advising

Neal, Tempestt (CISE, Ph.D.), *Identification via Mobile Device Usage Data*, (May 2017).
Sundararajan, Kalavani (CISE, Ph.D.), *Deep Learning Based Biometric Recognition*, (May 2017).

Post-Doctoral Research Advisees

Washington, Gloria, *Ear Feature Analysis, Extraction Tools, and Classification*, (2013 - 2014).
Pundlik, Shrinivas, *Periocular Based Biometric Recognition Systems*, (2009 - 2010).

Past Graduate Advising/Committees

Lyle, Jamie (SoC, Ph.D.)	(December 2014)	(Role: Advisor)
Lakko, Poornapragna (ECE, M.S.)	(July 2014)	(Role: Co-Advisor)
Ravindran, Satish (ECE, M.S.)	(May 2014)	(Role: Co-Advisor)
Martin, Aquessha (SoC, CS Ph.D.)	(May 2014)	(Role: Committee Member)
Pradhan, Ninad (ECE, Ph.D.)	(July 2013)	(Role: Committee Member)
Willimon, Robert (ECE, Ph.D.)	(May 2013)	(Role: Committee Member)
Huang, Xiaoxia (ECE, Ph.D.)	(May 2013)	(Role: Committee Member)
Tobias, Nicole (SoC, M.S.)	(December 2012)	(Role: Advisor)
Ramamurthy, Balu (SoC, M.S.)	(August 2012)	(Role: Advisor)
Rice, Kenneth (ECE, Ph.D.)	(December 2011)	(Role: Committee Member)
Gado, Harshad (ECE, M.S.)	(August 2011)	(Role: Committee Member)
Guntaka, Srinayani (SoC, M.S.)	(May 2011)	(Role: Advisor)
Chen, Zhichao (ECE, Ph.D.)	(July 2010)	(Role: Committee Member)
Apte, Akshay (ECE, M.S.)	(July 2010)	(Role: Committee Member)
Gidla, Vinay (ECE, M.S.)	(May 2010)	(Role: Committee Member)
Miller, Philip (SoC, M.S.)	(May 2010)	(Role: Advisor)
Lyle, Jamie (SoC, M.S.)	(December 2009)	(Role: Advisor)
Pundlik, Shrinivas (ECE, Ph.D.)	(August 2009)	(Role: Committee Member)

Steele, Jay (SoC, Ph.D.)	(May 2009)	(Role: Committee Member)
Zacharia, Ron (ECE, M.S.)	(May 2009)	(Role: Committee Member)
Tharkre, Uttara (ECE, M.S.)	(May 2009)	(Role: Committee Member)

UNDERGRADUATE STUDENT ADVISING

Past Honors Student Advising

Segars, Albert (SoC)	(Fall 2008 - Fall 2009)	Masters Student - UC Berkeley
Miller, Philip (SoC)	(Fall 2007 - Spring 2008)	Ph.D. Student - Clemson University
Dixon, Rob (SoC)	(Fall 2006 - Spring 2007)	Ph.D. Student - Carnegie Mellon University

TEACHING

Courses Taught (Beginning Fall 2006)

CpSc-101 Computer Science I	(S11, S12)
CpSc-102 Computer Science II	(S09)
CpSc-881 Introduction to Biometrics	(F07, F08, F09)
CpSc-881 Computer Vision	(S07)
CpSc-810 Introduction to Artificial Intelligence	(F06)
CpSc-8770 Fundamental of Biometric Systems	(F10, F11, F12, F13, F14)
CpSc-881 Applied Pattern Recognition	(S13)
CSE-60277 Applied Pattern Recognition (UND)	(S14)
EEL-6935/CIS-6930 Fundamental of Biometric Identification	(F15)
EEL-6935 Fundamentals of Biometric Identification	(S16, S17)
EEL-5840/EEL-4930 Elements of Machine Intelligence	(F16)

New Course Development

CpSc-877 Fundamentals of Biometric Systems
CpSc-881 Computer Vision
CpSc-881 Applied Pattern Recognition
EEL-6935 Fundamentals of Biometric Identification

UNIVERSITY SERVICE

University

Member, C. Tycho Howle Endowed Chair in Collaborative Computing Environments Search Committee (2012 - 2013) (Clemson University)

College

Member, Engineering Faculty Council, (2015 - Present)

Department/School

Graduate Recruitment and Admissions Committee (2015 - Present)
Cybersecurity Faculty Search Committee (2015)
CISE Department Chair Search Committee (2015)
Systems Facilities Committee (2015)
Graduate Admissions Committee (2015)

Personalized Learning Faculty Search Committee (2015)
School of Computing Director Search Committee (2013 - 2013)
HCC Tenure, Promotion, and Retention Committee (2013 - 2013)
HCC Tenure, Promotion, and Retention Committee Chair (2012 - 2013)
HCC Portfolio Review Committee Chair (2011- 2013)
Graduate Advisory Committee, (2011 - Present)
School Director Advisory Committee, (2010 - 2012)
Department Web Site Committee, (2010 - 2011)
Graduate Student Recruitment Committee Member, (2008 - 2010)
Faculty Co-Advisor, Upsilon Pi Epsilon (**UPE**) Honor Society, (2007-2008)
Faculty Co-Advisor, Association of Computing Machinery (**ACM**), (2007-2008)

PROFESSIONAL SERVICE

Chair Positions

Doctoral Consortium Co-Chair of IEEE/IAPR International Joint Conference on Biometrics
(**IJCB 2017**)
Publication Co-Chair of IEEE Intl. Conference on Biometrics: Theory, Applications, and Systems
(**BTAS 2015**)
Publicity Co-Chair of IEEE Intl. Conference on Biometrics: Theory, Applications, and Systems
(**BTAS 2012**)
Special Session Chair: Artificial Intelligence in Biometrics and Identity Sciences (**AIBIS**),
The 22nd Midwest Artificial Intelligence and Cognitive Science Conference (**MAICS 2011**)
Publicity Co-Chair of 6th IEEE Biometrics Symposium 2008 (**BSYM**)
Biometrics Technology Panel Chair for National Academy of Sciences Frontier of Science
Conference (2006)

Program Committees

IEEE International Conference on Identity, Security, and Behavior Analysis (**ISBA 2015, ISBA 2016**)
IAPR Intl. Conference on Pattern Recognition (**ICPR 2014**)
IEEE Intl. Conference on Image Processing (**ICIP 2014, ICIP 2015, ICIP 2017**)
IEEE/IAPR International Joint Conference on Biometrics (**IJCB 2011, IJCB 2014**)
IEEE/IAPR International Conference on Biometrics (**ICB2012, ICB2013, ICB 2015**)
IEEE International Conference on Hand-Based Biometrics (**ICHB2011**)
IEEE 9th Conference on Automatic Face and Gesture Recognition (**FG 2011**)
The 22nd Midwest Artificial Intelligence and Cognitive Science Conference (**MAICS 2011**)
Biometric Technology for Human Identification V Conference, Part of the SPIE International
Defense and Security Symposium (**SPIE 2008, 2011**)
IEEE Intl. Conference on Biometrics: Theory, Applications, and Systems (**BTAS 2009 - 2014**)
IEEE/IAPR First Intl. Workshop on Emerging Techniques and Challenges for Hand-Based
Biometrics (**ETCH 2010**)
IEEE International Conference on Computer Vision (**ICCV 2007**)

Reviewer

IEEE Transactions on Evolutionary Computation (**TEVC**)
IEEE Intl. Conference on Image Processing (**ICIP 2010 - ICIP 2013, ICIP 2016**)
IAPR Intl. Conference on Pattern Recognition (**ICPR 2010, ICPR 2012**)

IEEE International Conference on Computer Vision (**ICCV 2009**)
IEEE Conf. of Computer Vision and Pattern Recognition (**CVPR 2007-2015**)
IEEE Transactions of Pattern Analysis and Machine Intelligence (**PAMI**)
Journal of Robotics and Computer-Integrated Manufacturing (**RCIM**)
Journal of Computer Vision and Image Understanding (**CVIU**)
Journal of Signal Processing Systems
Journal of Applied Sciences
IEEE Transactions on Systems, Man, and Cybernetics--Part A: Systems and Humans (**SMCA**)
IEEE Transactions on Systems, Man, and Cybernetics--Part B: Cybernetics (**SMCB**)
IAPR/IEEE International Conference on Biometrics 2007 (**ICB 2007**)
European Association for Signal, Speech and Image Processing Journal on Advances in Signal Processing (**EURASIP**)
IEEE Transactions on Human-Machine Systems
IEEE Transactions on Information Forensics & Security (**TIFS**)
Information Fusion
Pattern Recognition
Pattern Recognition Letters
IEEE Transactions on Image Processing (**TIP**)
IEEE Sensors
Image and Vision Computing
Computers and Security
Machine Vision and Applications
Digital Signal Processing
ACM Transactions on Computer-Human Interaction
ACM Transactions on Information and System Security (**TISSEC**)
ACM Transactions on Privacy and Security (**TOPS**)

Other

IEEE Biometrics Council Education Committee Member
National Institute of Justice OST/OIFS Sensor, Surveillance, and Biometrics Technologies for Criminal Justice Applications - Biometrics Review Panel Member
Contributor to IEEE Education Activities Board Professional Biometric Certification Program (Subject Matter Expert)
National Science Foundation Review Panel Member
Florida Institute for Cybersecurity (FICS) Research Diversity Co-Chair

MISCELLANEOUS

Press Coverage, Article, Signal Magazine, *Universities Develop New-School Biometrics* (2012)
Press Coverage, Online Article, Daily Finance, *Microsoft Kinect Heats Race Debate: Does Face-Recognition Software Discriminate?* (2010)
Press Coverage, Online Article, IEEE Engineering 360, *Biometric Security: Your Body as Your Password* (2017)