

# Henry Medeiros

Marquette University  
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## EDUCATION

- 2010 **Ph.D. Electrical and Computer Engineering**  
Purdue University, West Lafayette, Indiana
- 2005 **Master of Sciences in Electrical Engineering**  
Federal University of Technology of Paraná, Brazil
- 2003 **Bachelor Degree in Electrical Engineering**  
Federal University of Technology of Paraná, Brazil

## PROFESSIONAL AFFILIATIONS

- 2014 – present **Assistant Professor**  
Department of Electrical and Computer Engineering, Marquette University
- 2012 – 14 **Research Scientist**  
School of Electrical and Computer Engineering, Purdue University
- 2010 – 14 **Chief Technology Officer**  
Spensa Technologies Inc., West Lafayette, Indiana
- 2011 – 12 **Assistant Professor**  
Department of Electrical Engineering, Federal University of Technology of Paraná, Brazil

## RESEARCH GRANTS AND CONTRACTS

- 2019 National Science Foundation (co-PI, PI: Leigh Ann Mrotek, Marquette University), \$298,915, “IRES Track 1: Physical State Estimation for Control Coordination and Behavior Monitoring”
- 2019 Northeastern University ALERT Department of Homeland Security Center of Excellence, (co-PI, PI: Michael Silevitch, Northeastern University), \$325,000, “Correlation of Luggage and Specific Passengers (CLASP) Algorithm Maturation & Deployment”
- 2019 Marquette University Opus College of Engineering William and Nancy Stemper Award (PI), \$20,000, “A Monte Carlo Framework for Vision-based Segmentation and Tracking”
- 2019 Marquette University Opus College of Engineering Undergraduate Research Grant (PI), \$5,000, “Multi-target Tracking in Airport Security Camera Networks”
- 2018 National Institute of Standards and Technology (PI), \$299,930, “Performance Measurement of Mobile Manipulators using Coarse-to-Fine Deep Learning Methods”
- 2018 National Institute of Food and Agriculture (co-PI, PI: Amy Tabb, USDA), \$474,621 (MU budget \$242,000) “Quantifying Invasive Insect Movement Within and Across Landscapes Using Laser Detection Technology and Unmanned Aerial Systems”
- 2018 State Horticultural Association of Pennsylvania Research Committee (PI), \$20,200, “Bloom Intensity Estimation using your Smartphone: Machine Learning Algorithms for Species-independent Visual Recognition of Flowers”
- 2018 Water Equipment & Policy National Science Foundation Industry/University Cooperative Research Center (co-PI, PI: Chung Hoon Lee, Marquette University), \$50,000, “Continuous Heavy Metal Contaminant Measurement System in Drinking Water”

- 2017 Marquette University Opus College of Engineering Legacy Initiative Seed Grant (co-PI, PI: Walter McDonald, Marquette University), \$75,000, “Aerial Imaging River System (AIRS): Measuring Flood Peaks using Drones”
- 2017 Marquette University Opus College of Engineering Undergraduate Research Grant (PI), \$4,990, “Tracking Passengers and their Luggage in Airport Checkpoints”
- 2016 Marquette University Opus College of Engineering Legacy Initiative Seed Grant (PI), \$74,054, “Insect detection and tracking”
- 2016 Northeastern University ALERT Department of Homeland Security Center of Excellence, (co-PI, PI: Michael Silevitch, Northeastern University), \$100,000, “Correlating luggage and specific passengers (CLASP)”
- 2016 Marquette University Regular Research Grant/Summer Faculty Fellowship (PI), \$8,740, “Estimation of Flower and Fruitlet Load in Apple Orchards with Computer Vision”
- 2016 Marquette University Opus College of Engineering Legacy Initiative Global Innovation Grant (co-PI), \$65,400, “Fostering a Durable International Partnership Between Marquette University (MU) and the University of Genoa, Italy (UNIGE)”
- 2016 National Institute of Standards and Technology (PI), \$260,459, “Dynamic Performance Measurement of Mobile Manipulators”
- 2016 Astronautics Corporation of America (PI), \$42,778, “On-ground Collision Alerting System”
- 2016 Marquette University Opus College of Engineering Summer Undergraduate Research Grant (PI), \$4,990, “Feature Extraction and Pose Estimation for Complex Three-dimensional Objects”
- 2015 United States Department of Agriculture (PI), \$75,875, “Computer Vision and Machine Learning for Plant Sensing”
- 2014 Marquette University Regular Research Grant/Summer Faculty Fellowship (PI), \$8,200, “Distributed Multi-target Tracking using Wireless Camera Networks”
- 2014 College of Engineering Student Centered Learning Projects (PI), \$3,740, “Simulation-Based Signal Processing using Embedded Platforms”
- 2013 National Science Foundation Small Business Innovation Research (SBIR) Phase I and Phase II Grants (Senior Personnel, PI: Johnny Park, Spensa Technologies Inc.), \$1,277,246.00 , “A Multimodal Sensor Platform for Automated Detection and Classification of Pest Insects”
- 2013 United States Department of Agriculture Small Business Innovation Research (SBIR) Phase I Grant (Senior Personnel, PI: Johnny Park, Spensa Technologies Inc.), \$100,000, “Electronic Trap for Automated Monitoring of Insect Populations”
- 2011 Brazilian Council for Scientific and Technological Development (CNPq) Grant (PI), \$8,422, “Efficient Data Collection on Wireless Sensor Networks”, Federal University of Technology of Paraná

#### **AWARDS AND FELLOWSHIPS**

- 2019 Marquette University Way Klingler Young Scholar Award
- 2019 Department of Electrical and Computer Engineering Distinguished Research Award
- 2018 Marquette University Forward Thinking Poster Session Award with Philippe Dias “Region Growing Refinement of Semantic Segmentation Masks”
- 2018 Marquette University Forward Thinking Poster Session Award with Reza Jalil Mozhdehi “Visual Tracking: Deep Convolutional Iterative Particle Filter with Multiple Correlation Models”

- 2017 Marquette University Forward Thinking Poster Session Award with Miguel Hernandez Virto, Brian Stumph and Weihua Liu “Quantification of Dispersal Patterns of Invasive Insects with Unmanned Aerial Systems”
- 2012 Brazilian Council for Scientific and Technological Development (CNPq) research productivity fellowship
- 2008 Second International Conference on Distributed Smart Cameras Service Award
- 2005 Fulbright commission fellowship for Ph.D. studies in the United States of America

## **TEACHING EXPERIENCE**

### **MARQUETTE UNIVERSITY**

- 2019 Computer Vision
- 2019 - 2016 Introduction to Algorithms
- 2018 - 2015 Linear Systems Analysis
- 2016 - 2015 Bayesian Signal Processing
- 2015 - 2014 Digital Image Processing

### **FEDERAL UNIVERSITY OF TECHNOLOGY OF PARANÁ, BRAZIL**

- 2012 - 2011 Introduction to Control
- 2012 - 2011 Electronic Devices
- 2011 Electronic Circuits Analysis

## **PROFESSIONAL SERVICE**

### **TECHNICAL PROGRAM COMMITTEE MEMBER**

- 2016 - 19 Panelist: National Science Foundation
- 2017 - 19 Associate Editor: IEEE International Conference on Robotics and Automation Conference (ICRA) Editorial Board
- 2018 Associate Editor: IEEE/RSJ International Conference on Intelligent Robots (IROS) Conference Editorial Board
- 2018 Organizer (with Francesca Odone): British Machine Vision Association Technical Meeting Computer Vision for smart environments and assisted living
- 2018 Technical Program Committee Member: 15th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC)
- 2017 Technical Lead: ASTM Working Group WK54684 on New Test Method for Measuring System Latency Performance of Optical Tracking Systems that Measure Six Degrees of Freedom (6DOF) Pose
- 2016 - 17 Member: ASTM Committee E57 on 3D Imaging Systems
- 2009 Publications Chair: 3<sup>rd</sup> IEEE/ACM International Conference on Distributed Smart Cameras

## **EXTERNAL REVIEWER**

- 2019 Journal of Field Robotics
- 2019 IEEE Transactions on Emerging Topics in Computing

2018 IEEE Signal Processing Letters  
 2018 IEEE International Conference on Robotics and Automation (ICRA)  
 2017 - 18 IEEE Robotics and Automation Letters  
 2018 IEEE/RSJ International Conference on Intelligent Robots (IROS)  
 2017 Sensors Journal  
 2017 IEEE Sensors Journal  
 2016 - 17 IEEE Transactions on Circuits and Systems for Video Technology  
 2016 Robotics and Autonomous Systems Journal  
 2016 XXV Brazilian Congress on Biomedical Engineering (CBEB)  
 2015 - 16 Society of Hispanic Professional Engineers Research and Innovation in STEM (RISE) Symposia poster and presentations judge  
 2015 IEEE Transactions on Signal and Information Processing over Networks  
 2015 IEEE Transactions on Biomedical Engineering  
 2014 Book Computer Vision Metrics: Survey, Taxonomy, and Analysis by Scott Krig  
 2014 Brazilian Council for Scientific and Technological Development (CNPq)  
 2014 Information Fusion  
 2014 International Journal of Distributed Sensor Networks  
 2014 IEEE Transactions on Networking  
 2017 – 18 IEEE Transactions on Signal Processing  
 2013 – 15  
 2009  
 2013 - 14 EURASIP Journal on Wireless Communications and Networking  
 2012 IEEE Transactions on Image Processing  
 2012 ACM Transactions on Sensor Networks  
 2012 Telemedicine and e-Health  
 2012 Texas Instruments University Stellaris ARM Cortex-M Microcontroller (MCU) Teaching Tools  
 2011 Neurocomputing  
 2015 Computer Vision and Image Understanding  
 2009 - 10  
 2008 Book Multi-Camera Networks: Concepts and Applications, Eds. H. Aghajan and A. Cavallaro  
 2004 Texas Instruments “DSP Implementation using the TMS320C6711, C6713 & C6416” teaching materials

### **UNIVERSITY SERVICE**

2015 – 19 Society of Hispanic Professional Engineers (SHPE) Marquette Student Chapter faculty mentor  
 2014 – 19 Marquette University Department of Electrical and Computer Engineering undergraduate committee member  
 2017 – 18 Department of Electrical and Computer Engineering faculty search committee member

- 2017 – 19 Marquette University Intellectual Property Review Board member
- 2017 Department of Electrical and Computer Engineering Computer Engineering Curriculum Subcommittee member
- 2016 – 17 Marquette University Hispanic Serving Institution Curriculum subcommittee member
- 2016 Marquette University Leadership Academy faculty collaborator
- 2014 – 18 Marquette University College of Engineering manufacturing director search committee member
- 2012 Federal University of Technology of Paraná Assistant Professor of Electrical Engineering search faculty committee member
- 2011 – 12 Federal University of Technology of Paraná inter-campus committee for undergraduate research fellowships
- 2011 – 12 Federal University of Technology of Paraná graduate program in electrical engineering committee for English language proficiency evaluation

## **STUDENTS ADVISED**

### **Ph.D.**

- 2020\* Philippe Ambrozio Dias, Marquette University
- 2020\* Abubakar Siddique, Marquette University
- 2020\* Reza Mozhdehi, Marquette University

### **M.S.**

- 2021\* Jiyau Xie
- 2021\* Scott Stewart
- 2020\* Jamir Jyoti
- 2019 Brian Stumph
- 2018 Samuel Amoako-Frimpong, Marquette University
- 2018 Yevgeniy Reznichenko, Marquette University
- 2016 Anthony Hoak, Marquette University
- 2016 Andres Echeverri Guevara, Marquette University
- 2015 Daniel Schlifske, Marquette University

\*expected graduation years

## **PROFESSIONAL AFFILIATIONS**

Senior Member Institute of Electrical and Electronics Engineers (IEEE)

Member American Society for Testing and Materials (ASTM) International

Member Society of Hispanic Professional Engineers (SHPE)

## INVITED TALKS

- Northeastern University Advanced Development for Security Applications (ADSA) Workshop 21 “Machine Learning for Video Tracking of Passengers and Divested Objects at the Checkpoint,” Boston, November 2019
- Oak Ridge National Laboratory, “Monte Carlo Methods and Convolutional Neural Networks - Applications to Semantic Segmentation and Object Tracking,” Oak Ridge, March 2019
- Universidad de Concepción, “Semantic Segmentation Refinement Applied to Field Robotics and Camera Networks,” Concepción, Chile, March 2019
- Northeastern University Advanced Development for Security Applications (ADSA) Workshop 19 “Video Tracking of Passengers and Divested Objects at a Checkpoint,” Boston, October 2018
- University of Barcelona Computer Vision Center “Applications of Semantic Image Segmentation in Agricultural and Assisted Living Environments,” Barcelona, Spain, May 2018
- Winter Conference on Applications of Computer Vision Workshop on Computer Vision for Active and Assisted Living Keynote Address “Incorporating Domain Knowledge in the Design of Vision-based Assisted Living Systems,” Lake Tahoe, Nevada, March 2018
- National Institute of Standards and Technology Intelligent Systems Division Seminar “Dynamic Performance Measurement of Mobile Manipulators, Washington,” DC, July 2017
- University of Genoa “Vision-based Target Tracking using Recursive Bayesian Estimation and Deep Learning, Genoa,” Italy, June 2017
- Society of Hispanic Professional Engineers “Engineering Science Symposium Talk,” Seattle, WA, November 2016
- Federal University of Technology of Paraná “Graduate Program in Electrical and Computer Engineering Seminar,” Curitiba, Brazil, June 2016
- Federal University of Santa Catarina “Department of Electrical Engineering Seminar,” Florianópolis, Brazil, June 2016
- United States Department of Agriculture Brown Marmorated Stink Bug IPM Working Group Meeting Engineering “Computer Vision Tools for Entomology Research,” Winchester, VA, December 2015
- National Institute of Standards and Technology Intelligent Systems Division Seminar “Target Tracking using Mobile Platforms,” Washington, DC, December 2015
- Northeastern University Advanced Development for Security Applications Workshop (ADSA14) “Tracking and Pose Estimation,” Boston, MA, October 2015

## CONFERENCE PRESENTATIONS

- Kevin Rice, Amy Tabb, Henry Medeiros, Miguel Hernandez Virto, Rob Morrison, John Tooker, Tracy C. Leskey. Tracking insects in the field using lasers and drones. *Mark-release-recapture revisited: Historical, state-of-the-art, and future developments for tracking insect movement in the field, a symposium at the meeting of Eastern branch of the Entomological Society of America*, March, 2017.
- Kevin Rice, Amy Tabb, Henry Medeiros, Miguel Hernandez Virto, Tracy C. Leskey. Tracking Insects in the Field Using lasers and Drones. *2017 Cumberland-Shenandoah Fruit Workers Conference*, November, 2017.

## PATENTS

### ISSUED PATENTS

- [3] PARK, J.; HOLGUIN, G; MEDEIROS, H. “Automatic Monitoring of Insect Populations.” *U.S. Patent No. 9,585,376*, Issued on February, 2017, *Chinese Patent No. CN103281896*, Issued on January, 2016, *South African Patent No. 2013/3528*, Issued on January 29, 2014, *Colombian Patent No. 78025*, Issued on December 18, 2014, *Australian Patent No. 2011317278*, Issued on February 12, 2015, *New Zealand Patent No. 608703*, Issued on March 23, 2015 and No. 623192, Issued on November 3, 2015, *Mexican Patent No. MX/a/2015/014076*, Issued on March 1, 2017, *Canadian Patent No. CA 2814940*, Issued on August 1, 2019.
- [2] MEDEIROS, H; PARK, J; KAK, A; IWAKI, H. “Clustering Protocol for Directional Sensor Networks,” *U.S. Patent No. 9086499*. Issued on June 21, 2015.
- [1] MEDEIROS, H; PARK, J; KAK, A; IWAKI, H. “Calibration of Large Cameras Networks,” *U.S. Patent No. 8,760,521*, Issued on June 24, 2014. *Japanese Patent No. 5973910*, Issued on August 23, 2016.

### PATENT APPLICATIONS

- MEDEIROS, H.; GUEVARA, A.E.; BERNAL, J.T.; O’ROURKE, J. “Robotic Tracking Navigation with Data Fusion,” *PCT Pub. No. WO/2018/148195*, Published on August 16, 2018.
- PARK, J.; HOLGUIN, G; MEDEIROS, H. “Automatic Monitoring of Insect Populations.” *European Patent Publication No. EP 2627170 A1*, Published on August 21, 2013, *Brazilian Patent Publication No. BR112013009401A1*, Published on July, 26 2016.

## PUBLICATIONS

### JOURNAL PAPERS

- [13] DIAS, P.A.; TABB, A.; MEDEIROS H. “Multi-species fruit flower detection using a refined semantic segmentation network,” *IEEE Robotics and Automation Letters*, vol. 3, no. 4, 2018.
- [12] DIAS, P.A.; TABB, A.; MEDEIROS H. “Apple flower detection using deep convolutional networks,” *Computers in Industry*, vol. 99, 2018.
- [11] TABB, A.; MEDEIROS, H. “Automatic segmentation of trees in dynamic outdoor environments,” *Computers in Industry*, vol. 99, 2018.
- [10] KIM, D.; COMANDUR, B.; MEDEIROS, H.; ELFIKY, N.; KAK, A. “Multi-View Face Recognition from Single RGBD Models of the Faces,” *Computer Vision and Image Understanding*, vol. 160, 2017.
- [9] TAPIERO, J.E.; MEDEIROS, H.; BISHOP, B. “Predicting Multiple Target Tracking Performance for Applications on Video Sequences,” *Machine Vision and Applications*, vol. 28, no. 5, 2017.
- [8] HOAK, A; MEDEIROS, H.; POVINELLI, R.J. “Image-Based Multi-Target Tracking through Multi-Bernoulli Filtering with Interactive Likelihoods,” *Sensors*, vol. 17, no. 501, 2017.
- [7] MEDEIROS, H.; KIM, D.; SUN, J.; SESHADRI, H.; AKBAR, S.; ELFIKY, N.; PARK, J “Modeling Dormant Fruit Trees for Agricultural Automation,” *Journal of Field Robotics*, vol. 34, no. 7, 2017.
- [6] HONG, K.; MEDEIROS, H.; SHIN, P.; PARK, J. “Resource-Aware Distributed Particle Filtering for Cluster-Based Object Tracking in Wireless Camera Networks,” *International Journal of Sensor Networks*, vol. 21, no. 3, 2016.

- [5] MEDEIROS, H.; MACIEL, M.C.; SOUZA, R.D.; PELLEZZ, M.E. “Lightweight Data Compression in Wireless Sensor Networks using Huffman Coding,” *International Journal of Distributed Sensor Networks*, vol. 2014, Article ID 672921, 11 pages, 2014.
- [4] DE SCHATZ, C.V.; MEDEIROS, H.; SCHNEIDER, F.; ABATTI, P.J. “Wireless Medical Sensor Networks: Design Requirements and Enabling Technologies,” *Telemedicine and e-Health*, vol. 18, no. 5, 2012.
- [3] YODER, J.; MEDEIROS, H.; PARK, J.; KAK, A. “Cluster-Based Distributed Face Tracking in Camera Networks,” *IEEE Transactions on Image Processing*, vol. 19, no. 10, 2010.
- [2] MEDEIROS, H.; HOLGUIN, G.; SHIN, P.J.; PARK, J. “Parallel Histogram-based Particle Filter for Object Tracking on SIMD-based Smart Cameras,” *Computer Vision and Image Understanding*, vol. 114, no. 11 2010.
- [1] MEDEIROS, H.; PARK, J.; KAK, A. “Distributed Object Tracking Using a Cluster-Based Kalman Filter in Wireless Camera Networks,” *IEEE Journal of Selected Topics in Signal Processing*, vol. 2, no. 4, 2008.

### PEER-REVIEWED CONFERENCE PAPERS

- [29] DIAS, P. A.; MALAFRONTI, D.; MEDEIROS, H; ODONE, F. “Gaze Estimation for Assisted Living Environments,” *Winter Conference on Applications of Computer Vision (WACV)*, 2020.
- [28] Y. REZNICHENKO, E. PRAMPOLINI, A. SIDDIQUE, H. MEDEIROS AND F. ODONE, “Visual Tracking with Autoencoder-Based Maximum A Posteriori Data Fusion,” *IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC)*, 2019.
- [27] STUMPH, B; HERNANDEZ VIRTO, M.; MEDEIROS, H; TABB, A.; WOLFORD, S.; RICE, K.; LESKEY, T. “Detecting Invasive Insects with Unmanned Aerial Vehicles,” *IEEE International Conference on Robotics and Automation (ICRA)*, 2019.
- [26] DIAS, P. A.; SHEN, Z.; TABB, A.; MEDEIROS, H. “FreeLabel: A Publicly Available Annotation Tool based on Freehand Traces,” *Winter Conference on Applications of Computer Vision (WACV)*, 2019.
- [25] REZNICHENKO, Y.; PRAMPOLINI, E.; SIDDIQUE, A.; MEDEIROS, H.; ODONE, F. “Visual Tracking with Autoencoder-Based Maximum a Posteriori Data Fusion,” *IEEE Annual International Computer Software and Applications Conference (COMPSAC)*, 2019.
- [24] DIAS, P.A.; MEDEIROS, H. “Semantic Segmentation Refinement by Monte Carlo Region Growing of High Confidence Detections,” *Asian Conference on Computer Vision (ACCV)*, 2018.
- [23] MOZHDEHI, R.J.; REZNICHENKO, Y.; SIDDIQUE, A.; MEDEIROS, H. “Deep Convolutional Particle Filter With Adaptive Correlation Maps for Visual Tracking,” *IEEE International Conference on Image Processing (ICIP)*, 2018.
- [22] TABB, A.; MEDEIROS, H. “Fast and robust curve skeletonization for real-world elongated objects,” *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2018.
- [21] AMOAKO-FRIMPONG, S.Y.; MESSINA, M.; MEDEIROS, H.; MARVEL, J.; BOSTELMAN, R. “Stochastic Search Methods for Mobile Manipulators,” *28th Flexible Automation and Intelligent Manufacturing (FAIM)*, 2018.
- [20] GUEVARA, A.E.; REZNICHENKO, Y.; MEDEIROS, H.; POVINELLI, R.J.; WALSH, R. “Real-time Hierarchical Bayesian Data Fusion for Vision-based Target Tracking with Unmanned Aerial Platforms,” *International Conference on Unmanned Aircraft Systems (ICUAS)*, 2018.
- [19] MOZHDEHI, R. J.; REZNICHENKO, Y.; SIDDIQUE, A.; MEDEIROS, H. “Convolutional Adaptive Particle Filter with Multiple Models for Visual Tracking,” *International Symposium on Visual Computing (ISVC)*, 2018.



- [18] CALVO, A. F.; HOLGUIN, G. A.; MEDEIROS, H. "Human activity recognition using multi-modal data fusion," *Ibero-American Congress on Pattern Recognition (CIARP)*, 2018.
- [17] REZNICHENKO, Y.; MEDEIROS, H. "Improving target tracking robustness with Bayesian data fusion," *British Machine Vision Conference (BMVC)*, 2017.
- [16] TABB, A.; MEDEIROS, H. "A robotic vision system to measure tree traits," *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2017.
- [15] MOZHDEHI, R.J.; MEDEIROS, H. "Deep convolutional particle filter for visual tracking," *International Conference on Image Processing (ICIP)*, 2017.
- [14] DIAS, P. A.; MEDEIROS, H.; ODONE, F. "Fine segmentation for Activity of Daily Living analysis in a wide-angle multi-camera set-up," *5th Activity Monitoring by Multiple Distributed Sensing Workshop (AMMDS) in conjunction with British Machine Vision Conference*, 2017.
- [13] CHATTOPADHYAY, S.; AKBAR, S.; ELFIKY, N.; MEDEIROS, H.; KAK, A. "Measuring and Modeling Apple Trees using Time-of-Flight Data for Automation of Dormant Pruning Applications," *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2016.
- [12] WALSH, R.; MEDEIROS, H. "Detecting Tracking Failures from Correlation Response Maps," *International Symposium on Visual Computing (ISVC)*, 2016.
- [11] GUEVARA, A. E.; BERNAL, J. T.; HOAK, A.; MEDEIROS, H. "Vision-based Self-contained Target Following Robot using Bayesian Data Fusion," *International Symposium on Visual Computing (ISVC)*, 2016.
- [10] PILLA, V.; BORBA, G.B.; MEDEIROS, H. "Facial Expression Classification Using Convolutional Neural Network and Support Vector Machine," *Brazilian Computer Vision Workshop (WCV)*, 2016.
- [9] SCHLIFSKE, D.; MEDEIROS, H. "A Fast GPU-Based Approach to Branchless Distance-Driven Projection and Back-Projection in Cone Beam CT," In *SPIE Medical Imaging Conference*, 2016.
- [8] RAO, S.; MEDEIROS, H.; KAK, A. "Comparing Incremental Latent Semantic Analysis Algorithms for Efficient Retrieval from Software Libraries for Bug Localization," In *Second International Workshop on Software Mining*, 2013.
- [7] RAO, S.; MEDEIROS, H.; KAK, A. "An Incremental Update Framework for Efficient Retrieval from Software Libraries for Bug Localization," *20th Working Conference on Reverse Engineering*, 2013.
- [6] SHIN, P.J.; MEDEIROS, H.; PARK, J.; KAK, A.C. "Predictive Duty Cycle Adaptation for Wireless Camera Networks," In *Fifth ACM/IEEE International Conference on Distributed Smart Cameras*, 2011.
- [5] DE SCHATZ, C.V.; MEDEIROS, H.; SCHNEIDER, F.K.; ABATTI, P.J. "Wireless Protocols for Ad-Hoc Medical Sensor Networks," In *IASTED Symposium on Imaging and Signal Processing in Healthcare and Technology*, 2011.
- [4] MEDEIROS, H.; GAO, X.; PARK, J.; KLEIHORST, R.; KAK, A. "A Parallel Implementation of the Color-Based Particle Filter for Object Tracking," In *ACM Sensys Workshop on Applications, Systems, and Algorithms for Image Sensing*, 2008.
- [3] MEDEIROS, H.; IWAKI, H.; PARK, J. "Online Distributed Calibration of a Large Network of Wireless Cameras Using Dynamic Clustering," In *Second ACM/IEEE International Conference on Distributed Smart Cameras*, 2008.
- [2] MEDEIROS, H.; PARK, J.; KAK, A. "A Parallel Color-based Particle Filter for Object Tracking," *Computer Vision and Pattern Recognition Workshops*, 2008.

- [1] MEDEIROS, H.; PARK, J.; KAK, A. "A Light-weight Event-driven Protocol for Sensor Clustering in Wireless Camera Networks," In *ACM/IEEE International Conference on Distributed Smart Cameras*, 2007.

**BOOK CHAPTERS**

- [1] MEDEIROS, H.; PARK, J. "Cluster-Based Object Tracking by Wireless Camera Networks," Book Chapter In: *Multi-Camera Networks: Concepts and Applications*, Elsevier, 2009.