

Sherin Fathy Aly, Ph.D.

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[Google Scholar] <https://scholar.google.com/citations?user=Ypqn5XMAAAAJ&hl=en>

Research Interest

- **Computer Vision**
 - **Machine Learning**
 - **Deep Learning**
 - **Biometrics**
 - **Kinect-based applications**
 - **ASD kids therapeutic aid systems**
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Education

- 2012 – 2016** **Virginia Tech** **Virginia, USA**
Ph.D. in Computer Engineering, The Bradley Department of Electrical and Computer Engineering, Virginia Tech
Thesis title: Techniques of Facial Expression Recognition using the Kinect
- 2007-2010** **Alexandria University** **Alexandria, Egypt**
M.Sc. in Information Technology Department, Institute of Graduate Studies and Research
Thesis: “Use of Computer Vision Technologies for Identification of Car License Plate Numbers: Investigation and Performance Evaluation Using Morphological Operation”
- 2006 – 2007** **Alexandria University** **Alexandria, Egypt**
Information Technology Diploma, Information Technology Department, Institute of Graduate Studies and Research
“Access Grid, a new tool for group to group video conferencing”
- 2000 - 2005** **Alexandria University** **Alexandria, Egypt**
B.Sc., Computer Science and Automatic Control Department, School of Engineering
Graduation Project: “Intrusion Detection via Data Mining”
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Work experience

- July 2017 - Present** **Lecturer, Alexandria University**
Department: Information Technology, Institute of Graduate Studies and Research
Responsibility: Teaching, Research, MSc. and Ph.D. thesis advising
- October 2016 - April 2016** **Research Fellow, Virginia Tech**
Project: Developing an Automated Emotion Training System Using the Kinect for ASD Kids
Project PIs: Dr. Lynn Abbott and Dr. Susan White
Grant organization: NIH
- Fall 2015 - Fall 2016** **Research Assistant, Bradley Department of Electrical and Computer Engineering, Virginia Tech, USA**
Project name: Developing an Automated Emotion Training System Using The Kinect For ASD Kids
Project PI: Dr. Lynn Abbott and Dr. Susan White

Grant organization: NIH

Spring 2015 **Teaching Assistant**, Bradley Department of Electrical and Computer Engineering, Virginia Tech, USA

Course name: ECE2524 Introduction to Unix for Engineers

Course instructor: Dr. Lynn Abbott

Fall 2014 **Teaching Assistant**, Bradley Department of Electrical and Computer Engineering, Virginia Tech, USA

Course name: ECE5554 Computer Vision

Course instructor: Dr. Lynn Abbott

Summer 2014 **Teaching Assistant**, Bradley Department of Electrical and Computer Engineering, Virginia Tech, USA

Course name: ECE2574 Data Structures with C++

Course instructor: Dr. Lynn Abbott

Spring 2013 **Teaching Assistant**, Bradley Department of Electrical and Computer Engineering, Virginia Tech, USA

Course name: ECE4984-5984 Introduction to Machine learning

Course instructor: Dr. Dhruv Batra

Spring 2011 **Visiting Scholar**, Electrical and Computer Engineering, College of Engineering, University of Miami, USA

Research topic: Modern computer vision techniques of 3D Ear Recognition.

2006 – 2010 **Teaching Assistant**, Information Technology Department Institute of Graduate Studies and Research, Alexandria University, Egypt

- Courses: Image Processing and Data Structure

Teaching

Alexandria University, Institute of Graduate Studies and Research

[Fall 2017] Pattern Recognition

[Fall 2018] Computer Vision

Publications

[Citation = 62, h-index = 4, and i10-index = 2]

Sherin Aly, Lynn Abbott, Andrea T. Wieckowski, Susan White, **Fast 3D Facial Expression Recognition using the Kinect**, to be submitted to IEEE Transactions on Affective Computing Journal.

Susan W. White, A. Lynn Abbott, Andrea Trubanova Wieckowski, Nicole N. Capriola, **Sherin Aly**, and Amira Youssef, **Feasibility of Automated Training for Facial Emotion Expression and Recognition in Autism**, Behavior Therapy, 2017, ISSN 0005-7894.

Sherin Aly, Lynn Abbott, Marwan Torki, “**A Multi-modal Feature Fusion Framework for Kinect-based Facial Expression Recognition using Dual Kernel Discriminate Analysis (DKDA)**”, IEEE Winter Conference on Applications of Computer Vision (WACV), 2016.

Sherin Aly, Andrea Trubanova, Lynn Abbott, Susan White, Amira Youssef, “**VT-KFER: A Kinect-based RGBD+Time Dataset for Spontaneous and Non-Spontaneous Facial Expression Recognition**”, International Conference of Biometrics (ICB), 2015.

Sherin Aly, Amira Youssef, Lynn Abbott, “Adaptive Feature Selection and Data Pruning for 3D Facial Expression Recognition Using The Kinect”, International Conference of Image Processing (ICIP), 2014.

Amira E. Youssef, **Sherin F. Aly**, Ahmed S. Ibrahim, and A. Lynn Abbott, "**Auto-Optimized Multimodal Expression Recognition Framework Using 3D Kinect Data for ASD Therapeutic Aid**," International Journal of Modeling and Optimization vol. 3, no. 2, pp. 112-115, 2013.

Steven Cadavid, **Sherin Fathy**, Jindan Zhou, Mohamed Abd-AlMottaleb, “**An Adaptive Resolution Voxelization Framework for 3D Ear Recognition**”, International Joint Conference on Biometrics (IJCB 2011) October 11-13, 2011, Washington DC, USA.

Sahar Bayoumi, **Sherin Fathy**, Ezzat Korany,” **License Plate Recognition System For Egyptian Car Plates**”, International Conference On Image and Video Processing and Computer Vision (IVPCV-10), 2010, Orlando, USA, pp. 139-146.

Sherin Fathy, **Use of Computer Vision Technologies for identification of Car License Plate Numbers: Investigation and performance evaluation using Morphological Operation**, LAP LAMBERT Academic Publishing (September 2, 2010), ISBN: 978-3838398822.

Awards received

- International Conference of Biometrics (ICB2015) Doctoral Consortium;
- Poster Presentation Bronze Award, 31st Annual Graduate Student Assembly (GSA) Research Symposium, Virginia Tech, March 2015
- Poster Competition Scholarship Award, Fifth Interdisciplinary Research Symposium, Virginia Tech University, USA, February 2015
- Partnership and Ownership Initiative Travel Grant 2009 to Miami, USA. From Jan 2011- June 2011.

Faculty Certificate of Honor, 2001-2005

Conferences, Forums, Symposiums, and Workshops

- “Winter Conference on Application of Computer Vision (WACV), March 2016
- “International Conference of Biometrics (ICB)”, Thailand, May 2015
- “GSA Research Symposium”, Virginia Tech University, USA, March 2015
- “Fifth Interdisciplinary Research Symposium”, Virginia Tech University, USA, February 2015
- “International Conference of Image Processing (ICIP)”, October, 2014
- “Building Autonomous Robots with Arduino”, Blacksburg, VA, USA, April 26, 2014
- “Mid-Atlantic Computer Vision workshop”, Virginia Tech, April 18, 2014
- “2-Day GPU Computing, Hands On Workshop”, 12-13 August 2013, Virginia Tech, VA, USA
- “16th International Conference on Information Fusion”, 9-12 July 2013, Askeri museum, Istanbul, Turkey
- “Research, Creativity, and Innovation Forum” (RCIF2011), University of Miami, FL, USA
- “First International Forum for MultiCore Technologies”, 24-25 November 2008
- “Proposal Writing Workshop”, Organized by German Academic Exchange Service (DAAD) 10-2010.

Technical skills

Desktop Development:

- Languages: Long experience with MATLAB and C#. Familiar with Python, Java, R, C++.

Code Versioning Tools:

- GitHub and Git Bash

Robotic Applications:

- Assembling Autonomous Line Following Robot
- Basic knowledge of Arduino-based Robots
- Basic electronics
- Ultrasonic distance detection
- Real time I/O programming

IT:

- Experience troubleshooting Windows, Mac, iPhone
- Experience with Microsoft products including Office and OneNote
- Data Security: TrueCrypt

Object Oriented Design:

- Object oriented analysis and design skills.
- UML in modeling.

Database Development:

- DBMS: Oracle with very good knowledge in Oracle forms and reports.
- SQL,PL/SQL
- MS SQL Server

Web development:

- Visual web development

Website creation: KompoZer

Languages

- **Arabic (Native: read, write, speak),**
- **English (Fluent: read, write, speak),**
- **Spanish (Intermediate: read, write, speak),**
- **French (2 years High School studies: read, write, speak)**

Hobbies

- Swimming, Tennis, Traveling, Music , Reading, and Cooking

References**Prof. A. Lynn Abbott**

Associate Professor

Bradley Department of Electrical and Computer Engineering, Virginia Tech

abbott@vt.edu

Prof. Mohamed Abdel-Mottaleb

Professor & Chairman,

Electrical and Computer Engineering, College of Engineering, University of Miami

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Dr. Marwan Torki

Assistant Professor

Department of Computer and Systems Engineering

Faculty of Engineering, Alexandria University

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