

Ahmad Al-Kabbany

alkabbany@ieee.org | +20100-600-5544
[LinkedIn](#) | [Google+](#) | [Webpage](#)

Education

- University of Ottawa Sept. 2010 - Present
Ph.D. - Electrical and Computer Engineering
Recipient of the International Admission Scholarship
- Arab Academy for Science, Technology and Maritime Transport, Egypt - aast.edu Sept. 2005 - Jan. 2008
M.Sc. Student - Electronics and Communications Engineering - Grade: Excellent
Recipient of the Graduate Studies Tuition Waiver
- Arab Academy for Science, Technology and Maritime Transport, Egypt - aast.edu Mar. 2000 - Mar. 2005
Honours B.Sc. - Electronics and Communications Engineering
Recipient of the Distinction Scholarship

Citizenship: Egyptian

Academic Research Experience

- Arab Academy for Science, Technology and Maritime Transport, Egypt - aast.edu Sept. 2016 - Present
Assistant Professor
- My research interests are in the areas of image analysis, image synthesis, image processing, and image communication, with current focus on stereo reconstruction, scene understanding, image/video matting and object/semantic segmentation.
- University of Ottawa - Prof. Robert Laganière May 2016 - Present
Postdoctoral Research Fellow
- Have been exploring the problem of color naming through inductive/transductive semi-supervised machine learning techniques.
- University of Ottawa - Prof. Eric Dubois Sept. 2010 - Apr. 2016
Ph.D. Student / Graduate Student Researcher
- Exploring graphical and machine learning methods for robust object segmentation (natural image matting) in images and video sequences.
- Developing techniques that are based on graph theory and mathematical optimization for the robust management of dis-occlusions in novel view synthesis.

University of Ulster - Prof.Sonya Coleman Jun. 2010 - Jul. 2010
Research Intern

- Worked on the development of robots that are capable of navigating autonomously in a-priori-known environments.
- Developed new techniques for image de-noising and image reconstruction for interest point detection on incomplete image data, produced by space-variant image sensors.

Arab Academy for Science, Technology and Maritime Transport, Egypt - aast.edu Sept. 2006 - Jan. 2008
M.Sc. Student / Graduate Student Researcher

- Explored the applications of fractal analysis in image coding, watermarking and steganography.
- Developed new techniques for fractal-based image compression and data hiding.

Honours and Awards

1. Placed first of the Electrical Engineering section at the uOttawa Faculty of Engineering's Graduate Research Poster Competition [[Poster](#)] Mar. 2015
2. Placed first of the Electrical Engineering section at the uOttawa Faculty of Engineering's Graduate Research Poster Competition [[Poster](#)] Mar. 2013
3. Recipient of the International Admission Scholarship, University of Ottawa Sept. 2010
4. Recipient of Recipient of the Graduate Studies Tuition Waiver, Arab Academy for Science, Technology and Maritime Transport Sept. 2005 - Sept. 2006
5. Recipient of the Distinction Scholarship, Arab Academy for Science, Technology and Maritime Transport Feb. 2000 - Feb. 2005

Scientific Publications and Seminars

A. Al-Kabbany and E. Dubois, "Matting with Sequential Pair Selection Using Graph Transduction," in Proc. International Symposium on Vision, Modeling, and Visualization, October 2016, Bayreuth, Germany.
Ranked 7th in the international matting benchmark on the 18th of June 2016. (alphamatting.com)

A. Al-Kabbany and E. Dubois, "Image Completion Using Image Skimming," in Proc. Visual Information Processing and Communication VI, Feb. 2015, San Francisco. [[webpage](#)]

A. Al-Kabbany and E. Dubois, "A Novel Framework for Automatic Trimap Generation Using the Gestalt Laws of Grouping," in Proc. Visual Information Processing and Communication VI, Feb. 2015, San Francisco. [[webpage](#)]

A. Al-Kabbany and E. Dubois, "Improved global-sampling matting using sequential pair selection strategy," in Proc. Visual Information Processing and Communication V, Feb. 2014, San Francisco, CA, SPIE vol. 9029. [[webpage](#)]

A. Al-Kabbany, "Recent Advances in Sampling-based Alpha Matting," Technical Seminar, VIVA Lab, School of Electrical Engineering and Computer Science, University of Ottawa, Jun. 18, 2013.

A. Al-Kabbany, "Some Applications of Markov Random Fields for Image Processing and Computer Vision," Technical Seminar, College of Engineering and Technology, Arab Academy for Science and Technology, Jan. 8, 2013.

A. Al-Kabbany, "Quadratic Pseudo-Boolean Optimization: Theory and Applications At-a-Glance," Technical Seminar, VIVA Lab, School of Electrical Engineering and Computer Science, University of Ottawa, Jun. 12, 2012.

S. El-Khamy, M. Khedr, **A. Al-Kabbany**, "A hybrid fractal-wavelet data hiding technique," 25th National Radio Science Conference, Egypt, Mar. 2008.

S. El-Khamy, M. Khedr, **A. Al-Kabbany**, "Efficient fractal image coding using adaptive domain pool reduction technique", IEEE Pacific Rim Conference on Communications, Computers and Signal Processing, University of Victoria, Canada, Aug. 2007.

S. El-Khamy, M. Khedr, **A. Al-Kabbany**, "Punched image watermarking: A novel fast fractal coding-based technique," The Third International Conference on Intelligent Information Hiding and Multimedia Signal Processing, Taiwan, Nov. 2007.

Professional and Volunteering Activities

Apr. 2015 - Present

Founder and Moderator

Khoaja - khoaja.com

Khoaja is an educational blog that was launched for the goal of sowing a seed of a large initiative for the development of education in Egypt. It aims to create an online community of the Egyptians who are concerned about education advancement, and to convey and communicate the experiences of the developed countries, in this regard, to Egyptian students, parents, NGOs and policy makers.

Jul. 2009 - Mar. 2011

Graduate Advisor - IEEE Student Branch

Arab Academy for Science, Technology and Maritime Transport, Egypt - aast.edu

Lead the branch through one of its toughest periods since its inception. Starting with just two active members and a threat of closure, the branch had acquired, in nine months, a team of 20+ vibrant members, who kept the branch's message ongoing and paved the way to several international recognitions to date.

Dec. 2007 - Apr. 2009

Founder and Editor-in-chief

Eureka

Eureka was a magazine published by the Electronics and Communications Engineering (ECE) department at the Arab Academy for Science and Technology. Through its rich variety of sections, Eureka had provided a space for electrical and computer engineering students to highlight the recent advances in research and tech industry. This had stimulated students to stay up-to-date with the tech world and learn what is beyond the syllabus of their undergraduate courses.

Feb. 2015 - Mar. 2015

Translator and Freelance Writer

Sasa Post - sasapost.com

Sasa Post provides a space for intellectuals, thinkers and analysts from the Arab world to present and share their ideas on a variety of topics including science and technology, art and entertainment, politics and economics.

Narrator

Ketabna - ketabna.com

Ketabna is an educational initiative that was started by Egyptian youth in 2011. It aims at nurturing the Arabic intellectual audio and video online content, in addition to promoting reading in the Arab countries through transforming the content of influential books, from all over the world, into short documentaries.

Feb. 2013 - Dec. 2014

Teaching Experience

Instructor

Arab Academy for Science and Technology - Department of Electronics and Communications Engineering

Courses Taught: Analog CMOS IC Design - Media and Entertainment Engineering

Sept. 2016 - Present

Instructor

University of Ottawa - Summer Enrichment Mini-courses Program
The Wonderful World of Electronic Imaging [[Webpage](#)]

May 2014

Graduate Student Instructor (TA)

University of Ottawa - School of Electrical Engineering and Computer Science

Digital Image Processing (CEG4316) - Prof. Eric Dubois

Principles of Professional Engineering Practice (ELG2911) - Prof. Carlisle Adams

Fall 2011 - 2012
Winter 2011 - 2012
Fall 2013 - 2014

Graduate Student Instructor (TA)

Arab Academy for Science and Technology - Department of Electronics and Communications Engineering

Prepared and lead tutorials and lab sessions for several courses, in addition to proctoring exams, designing and marking quizzes and assignments, mentoring graduation projects and supervising technical extra-curricular activities.

Summer 2005 -
Winter 2010