

Ahmed Hamdy Ibrahim Abdel-Gawad

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Graduate student (F-1)

Department of Electrical Engineering

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Education

2007-present	MSc (1st year): Stanford University, Stanford, USA Department of Electrical Engineering <i>Autumn 2007 courses:</i> Machine Learning, Computer Systems Architecture and Operating Systems.
2003-2007	MSc: Cairo University, Cairo, Egypt Computer Engineering Department Preparatory courses: 87.8% - GPA 4 Thesis: <i>A New Automated Integer Based Technique for Solving Systems of Boolean Equations</i> (November 2006).
1998-2003	BSc: Cairo University, Cairo, Egypt Computer Engineering Department, Distinction (90.55%), Cumulative GPA: 3.99 Graduation Project: <i>A Full Hardware Implementation for an MP3 Decoder Chip using VHDL</i>
1995-1998	General Secondary School Certificate 101.6%

Research Experience

2007	A New Accurate Approximation for the Gaussian Process Classification Problem This research suggests a new method that gives very accurate approximation for the Gaussian Process classification problem that competes with the known Laplace Approximation method in terms of speed, accuracy, and simplicity of the algorithm. Submitted to IJCNN.
2006	Solution of Systems of Boolean Equations and Satisfiability Problems via the Integer Domain This research addresses a new technique for the solution of systems of simultaneous Boolean equations via the integer domain. It also addresses the conversion back and forth between the known satisfiability problems and the systems of Boolean equations. Systems of Boolean equations and satisfiability problems appear in many applications such as in VLSI and Cryptography. Submitted to Journal of Mathematics of Computation.
2006	A New Automated Integer Based Technique for Solving Systems of Boolean Equations M.Sc. thesis.
2003	A Full Hardware Implementation for an MP3 Decoder Chip using VHDL This research gives an approach for the design of whole blocks of MP3 decoder for a hardware implementation. Ranked 5th in the Student Contest of 46th IEEE International Midwest Symposium on Circuits and Systems

Teaching Experience

Sep 2004-present	Teaching Assistant, Cairo University, Computer Engineering Department Giving problem-solving sessions and labs, preparing lab material and assignments, marking assignments and mid-term exams
Spring 2007	Cairo University: teaching assistant for <i>Computer Security</i> and <i>VLSI</i> , lab instructor for <i>VHDL</i> and <i>C under Linux</i>
Fall 2006	Cairo University: teaching assistant for <i>Neural Networks</i> , <i>Pattern Classification</i> and <i>Calculus</i> , lab instructor for <i>Altera Max-PlusII</i> and <i>Keil</i>

Spring 2006	Cairo University: teaching assistant for <i>VLSI</i> , lab instructor for <i>VHDL</i>
Fall 2005	Cairo University: teaching assistant for <i>Neural Networks</i> , lab instructor for <i>Data Structures</i> and <i>Digital Logic Design</i>
Spring 2005	Cairo University: teaching assistant for <i>Digital Image Processing</i> and <i>Computer Interfacing</i> , lab instructor for <i>VHDL</i>
Fall 2004	Cairo University: teaching assistant for <i>Neural Networks</i> and <i>Optical Networks</i> , lab instructor for <i>Data Structures</i>

Professional Experience

Nov-Dec 2006	ICENCO'2006 – Organizing Committee member
Oct-Dec 2004	ICENCO'2004 – Organizing Committee member
Oct 2003-Sep 2004	Dataweb – Java Developer Building Java components of JSET™– Building applications based on JSET™
Jul 2002	IBM Egypt Worked on developing a research program on NLP translation matcher
Jul-Sep 2001	Lucent Technologies, Whippany, New Jersey, United States. Building a performance simulator for base stations.

Skills

Languages	C/C++, Java, C#, Assembly, Prolog, VHDL, SQL, C under Unix, Embedded C, UML, Lex/Yacc, HTML, XML, Perl, Python
Software Environments	Visual Studio.Net 8.0, VisualAge, Eclipse, Matlab, SQL Server, Microsoft Access, ModelSim, Xilinx Webpack, Altera Max-PlusII, ORCAD, Keil, Mathematica, Rational Rose, Microsoft Office
Operating Systems	Windows NT/Server, Linux

Standard Test Scores

31 st Oct 2006	GRE CBT General Test 800/800 Quantitative (94%), 350/800 Verbal (18%), 4.0/6 Analytical Writing (32%)
4 th Sep 2005	TOEFL CBT 277/300: 29/30 Listening, 28/30 Structure and Writing, 26/30 Reading, 5.5/6 Writing

Extracurricular Activities

- Member of *Resala Charitable Society*
- Sports: soccer, table tennis, chess

Nationality

Dual citizen of Egypt/France

Publications

- [1] Ahmed H. Abdel-Gawad and Amir F. Atiya, " A New Accurate Approximation for the Gaussian Process Classification Problem", submitted to IJCNN, 2007.
- [2] Ahmed H. Abdel-Gawad, Amir F. Atiya and Nevin M. Darwish, "Solution of Systems of Boolean Equations Via the Integer Domain", submitted to Journal of Mathematics of Computation, 2006.
- [3] Ahmed Abdel-Gawad. "A New Automated Integer Based Technique for Solving Systems of Boolean Equations", M.Sc. thesis, Faculty of Engineering, Cairo University, Egypt, 2006.
- [4] Ahmed H. Abdel-Gawad, Saad F. Abdel-Aziz, Ahmed M. Darwish and Ihab E. A. Talkhan, "A Full Hardware Implementation for an MP3 Decoder Chip using VHDL", Student Contest of 46th IEEE International Midwest Symposium on Circuits and Systems, 2003.