

Areeg S. Abdalla

Curriculum Vitae

Basic Information

Name : Areeg Said Mohamed Abdalla
Date of Birth : 21/03/1977
Present position : Assistant Professor, Cairo University
Specialization : Computer Science
Address : Department of Mathematics, Faculty of Science, Cairo University, Giza, Egypt
Website : <https://scholar.cu.edu.eg/?q=areegsaid/>
E- mail : areeg@sci.cu.edu.eg , s_areeg@hotmail.com

Scientific Degrees

- 2007 PhD in Applied Mathematics, School of Natural Science and Mathematics, University of Alabama at Birmingham, USA.
Dissertation title: Monte Carlo Studies with Random Fuzzy Numbers
Advisor: James J. Buckley
- 2003 Msc. Mathematics, University of Alabama at Birmingham, USA.
Thesis title: Fuzzy Expert Systems: Applications to Assigning Final Grades
Advisor: James J. Buckley
- 2000 Pre-master on Computer Science (Very Good)
Department of Mathematics, Faculty of Science, Cairo University.
- 1998 Bsc. Computer science, Faculty of science, Cairo University. (Very Good with distinction)

Employment Record

- 2019-present Associate Professor, Department of mathematics, Faculty of science, Cairo University
- 2009-2019 Assistant Professor, Department of mathematics, Faculty of science, Cairo University
- Duties
- Supervising Doctoral, and Master students
 - Teaching Graduate and Undergraduate courses
 - Examiner of the Graduation projects
 - Member of the *Graduate Studies Committee* (2009- 2016)
 - Member of the *Special Computer Science Program Review and Development Committee*
 - Participating in upgrading the protocol of the Credit Hour System for both graduate and undergraduate degrees
 - Writing the Quality Specification and Reports for Computer Science
 - Participating in the Third/Fourth Years Examination Control (2009-2019)
 - Coordinator of the Computer Science Laboratories Committee

- 2001-2007 Teaching Assistant, Department of mathematics, School of Natural science and Mathematics, University of Alabama at Birmingham, USA
- Duties Teaching the following courses for undergraduate students:
- Calculus
 - Pre Calculus
 - Pre Algebra
 - Introduction to statistics
 - Preliminary mathematics
- 1998-2001 Teaching Assistant, Department of mathematics, Faculty of science, Cairo University, Egypt
- Duties
- Teaching programming languages like C++, C, Visual Basic, Pascal, Fortran, HTML, Lisp and Prolog
 - Teaching data base software: Access
 - Grader for courses: Algorithms and Data Structure, Boolean Algebra

Conference Participation

- 2018, July 8-11 The 22nd World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2018, At Orlando, Florida, USA
- 2017, Dec. 25-27 The 52nd Annual Conference on Statistics, Computer Sciences and Operation Research. Cairo, Egypt
- 2016, Dec. 28-29 12th International Computer Engineering Conference. IEEE ICENCO: Cairo, Egypt.
- 2016, Sept. 12-22 SAI Intelligent Systems Conference. Springer. IntelliSys: London, UK.
- 2016, May 9-11 10th International Conference on Informatics and Systems. ACM. INFOS: Cairo, Egypt
- 2015, May 18-20 The Dynamical Systems, Ergodic Theory and Probability Conference Dedicated to the memory of Nikolai Chernov. Birmingham, Alabama, USA
- 2011, Nov. 21-2 12th International Symposium on Computational Intelligence and Informatics. IEEE. CINTI: Budapest, Hungary

Co-supervised PhD students

- Mohamed H. El Halaby, 2016- present
Thesis Title: “Fuzzy Satisfiability Problems and Applications”
- Saida S. Mahmoud , 2015- present
- Thesis Title: “On Different Extensions of Fuzzy Sets and Their Applications”
- Reham Adel Mohamed 2015-2019
Thesis Title: “Design and Performance Analysis of Enhanced Optical Packet Switches”
- Nabil M. El-Dakhly 2010-2019

Thesis Title: “Air Pollution Forecasting Model Based on Chance Theory and Intelligent Techniques”

- Sameh H. Basha, 2014-1018

Thesis Title: “Neutrosophic Hybridization System and Applications”

Co-supervised Master students

- Muhammad H. Hammad 2016- present
Thesis Title: “Combing Statistical and Lexical Features for Emerging Topics Detection, Tracking, and Polarity Identification from Arabic Social Media Streams”
- Munira A. Abd El-Maksoud 2016-2019
Thesis Title: “An Implementation and Improvement of The DPLL Satisfiability Algorithm”
- Saida S. Mahmoud , 2011-1013
Thesis Title: “Applications of similarity measures in type -2 fuzzy sets

Supervised Graduation Projects (selected)

- Spring 2018: Deep Insight Social Media (Machine Learning)
- Spring 2015: Augmented reality (Image Processing), Virtual Chemical Lab (Graphics), Job Hunter, and First Aid Kit (Expert Systems)
- Fall 2015: Internet Book Shopping Agent
- Spring 2014: Mining Big Data, Restaurant Ordering System (Software Engineering)
- Fall 2014: Android Bus Finder (Software Engineering)
- Fall 2013: Fuzzy Android Calculator, Phone Ticket Sender

Teaching Courses:

Graduate Level:

- Artificial Intelligence Basics
- Advanced topics in artificial intelligence.
- Selected Topics in Optimization.
- Fuzzy probability and statistics.
- Machine Learning
- Deep Learning

Undergraduate Level:

- Principals of Artificial intelligence
- Simulation and Modeling
- Computer Graphics
- Software Development
- Systems analysis and programming
- Computer Networks
- Object- Oriented Programming
- Selected Topics (Introduction to fuzzy logic and its applications)

- Programming languages (Java, C++,Prolog)
- Introduction to Computer Science
- Mathematical Statistics

Training Courses:

1. Course on: *Research Ethics*, Faculty & Leadership Development Center (FLDC), 13-14 March 2019. Cairo University, Egypt.
2. Course on: *Examination & Student Evaluation Techniques*, Faculty & Leadership Development Center (FLDC), 24-25 December 2018. Cairo University, Egypt.
3. Course on: *Competitive Research Projects*, Faculty & Leadership Development Center (FLDC), 3-4 Feb. 2016, Cairo University, Egypt.
4. Course on: *Meeting & Managing Time*, Faculty & Leadership Development Center (FLDC), 15-16 June. 2015, Cairo University, Egypt.
5. Course on: *Managing Research Teams*, Faculty & Leadership Development Center (FLDC), 28-29 Jan. 2015, Cairo University, Egypt.
6. Course on: *Financial and Legal Affairs of Universities Book*, Faculty & Leadership Development Center (FLDC), 17-18 Nov. 2014, Cairo University, Egypt.
7. Course on: *Organizing Scientific Conferences*, Faculty & Leadership Development Center (FLDC),30-31 Aug. 2014, Cairo University, Egypt.
8. Course on: *Use of Technology in Teaching*, Faculty & Leadership Development Center (FLDC), 29-30 January 2014.
9. Course on: *The Credit Hours Systems*, Faculty & Leadership Development Center (FLDC), 25-27 March 2013.
10. Course on: *International Publishing of Research*, Faculty & Leadership Development Center (FLDC), 20-22 February 2012.

Language Proficiency

	Speaking	Reading	Writing
Arabic		Mother Tongue	
English	Very good	Very good	Very good
French	Good	Good	Fair

Research Interests:

- Machine Learning
- Soft Computing
- Uncertainty theories
- Fuzzy sets and logic, Similarity measures between fuzzy sets,
- Neutrosophic Logic and its applications
- Reasoning and clustering in Type-2 fuzzy sets
- Statistical tests of fuzzy samples

List of Publications:

2019

- 1- Saida S. Mohamed, Areeg Abdalla and Robert I. John (2019) *New Entropy-Based Similarity Measure between Interval-Valued Intuitionistic Fuzzy Sets*. Axioms. Volume 8, issue 2 Pages: 1-11
DOI: <https://doi.org/10.3390/axioms8020073>
- 2- Munira A. El-Maksoud; Areeg Abdalla (2019) *A Novel SAT-solver for the Van der Waerden Numbers*. Journal of the Egyptian Mathematical Society. Volume 27
DOI: 10.1186/s42787-019-0021-1.
- 3- Hany Alashwal, Mohamed El Halaby, Jacob J. Crouse, Areeg Abdalla and Ahmed A. Moustafa, (2019) *The Application of Unsupervised Clustering Methods to Alzheimer's Disease*. Frontiers in Computational Neuroscience. Volume 13, Article 31 May 2019
DOI: <https://doi.org/10.3389/fncom.2019.00031>
- 4- Sameh H. Basha; Alaa Tharwat; Areeg Abdalla; Aboul Ella Hassanien, (2019) *“Neutrosophic Rule-based Prediction System for Toxicity Effects Assessment of Biotransformed Hepatic Drugs*. Expert Systems with Applications”. Volume 121, 1 May 2019, Pages 142-157
<https://doi.org/10.1016/j.eswa.2018.12.014>

2018

- 5- Abdalla Areeg Feb. (2018). *“Different Methodologies in Treating Uncertainty”*. Journal of Systemics, Cybernetics and Informatics. Volume 16, No. 5, 14-19. ISSN:1690-4524
- 6- Eldakhly, Nabil ; Aboul-Ela, Magdy ; Abdalla, Areeg. (2018). *“A Novel Approach of Weighted Support Vector Machine with Applied Chance Theory for Forecasting Air Pollution Phenomenon in Egypt”*. International Journal of Computational Intelligence and Applications. Vol. 17, No. 1 (2018) 1850001 (29 pages)
DOI: 17.1850001.10.1142/S1469026818500013.
- 7- Abdalla Areeg July (2018). *“Different Methodologies in Treating Uncertainty”*. Conference: The 22nd World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2018, At Orlando, Florida, USA
- 8- Hassanien, Aboul Ella ; Basha, Sameh ; S. Abdalla, Areeg. (2018). *“Generalization of Fuzzy C-Means based on Neutrosophic Logic”*. Studies in Informatics and Control. 27 (1) 43-54, March 2018,
<https://doi.org/10.24846/v27i1y201805>
ISSN: 1220-1766

2017

- 9- Munira A. El-Maksoud; Areeg Abdalla, (2017). *“An Improvement and Implementation of the DPLL Satisfiability Algorithm”*, The 52nd Annual Conference on Statistics, Computer Sciences and Operation Research (25-27) Cairo, Egypt.
- 10- Nabil Eldakhly; Magdy Aboul-Ela; Areeg Abdalla (2017). *“Air Pollution Forecasting Model Based on Chance Theory and Intelligent*

Techniques". Int. J. Artificial Intelligence Tools , IJAIT Vol. 26, N12,
December 2017
DOI: 10.1142/S0218213017500245

2016

- 11- Sameh Basha; Areeg Abdalla; Aboul Ella. Hassanien (2016) "*NRCS: Neutrosophic Rule-Based Classification System*". In: Proceedins of SAI Intelligent Systems Conference (IntelliSys). Lecture Notes in Networks and Systems, vol 15. PP. 627-639. Springer ISSN: 2367-3370
DOI: 10.1007/978-3-319-56994-9 42
- 12- Mohamed El Halaby; Areeg Abdalla. (2016). "*Fuzzy Maximum Satisfiability*". In Proceedings of the 10th International Conference on Informatics and Systems (INFOS). ACM. Pages: 50-55. ISBN: 978-1-4503-4062-5. DOI 10.1145/2908446.2908476
- 13- Sameh Basha; Areeg Abdalla; Aboul Ella. Hassanien(2016) "*GNRCS: Hybrid Classification System based on Neutrosophic Logic and Genetic Algorithm*", Computer Engineering Conference (ICENCO), 2016 12th International: IEEE, pp. 53–58.

2011

- 14- Mohamed, S. S.; A. S. AbdAlla, (2011) "*Applying a new similarity measure between general type-2 fuzzy sets to clustering*", 12th International Symposium on Computational Intelligence and Informatics (CINTI), IEEE, pp. 283–286. Budapest, Hungary

2009

- 15- Areeg Abdalla; James J. Buckley (2009) "*Monte Carlo methods in fuzzy queuing theory*". Soft Computing, Vol.13, 1027-1033.

2008

- 16- Areeg Abdalla; James J. Buckley (2008) "*Monte Carlo methods in fuzzy linear regression II*". Soft Computing March 2008, Volume 12, Issue 5, pp 463-468
- 17- Areeg Abdalla; James J. Buckley (2008) "*Monte Carlo Methods in Non-Linear Fuzzy Regression*". New Mathematics and Natural Computation Volume 04, Issue 02, July 2008

2007

- 18- Areeg Abdalla; James J. Buckley (2007) "*Monte Carlo Methods in Fuzzy Linear Regression*". Soft Computing, Vol. 11, 991-996.
- 19- Areeg Abdalla; James J. Buckley (2007) "*Monte Carlo Methods in Fuzzy Game Theory*". New Mathematics and Natural Computation Journal. 03Issue 02 Pages: 259-269