



Curriculum Vitae

Mohamed AbdElSalam Ali ElSheikh

Assistant Professor (Computational Physics), Department of Basic Science, Faculty of Education
for early Childhood, Cairo University

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EDUCATION

Ph.D., Computer Science Department, Cairo University, Egypt.

Period: from 04/2007 to 12/2010.

Thesis: Natural language system for understanding the Arabic children stories.

M.A, Computer Science Department, Helwan University, Egypt.

Period: from 09/2001 to 03/2004.

Thesis: Data mining for rough logic control.

B.A., Physics and Computer Science Department, Ain Shams University, Egypt.

Period: from 09/1992 to 06/1996.

Grade: very good with honours.

RESEARCH PAPERS

M. AbdElSalam. Data mining for rough logic control. Master thesis, Faculty of Computer and information, Helwan University Egypt, 2004.

M. AbdElSalam. Natural language system for understanding the Arabic children stories. Ph.D thesis, Faculty of Computer and Artificial Intelligent, Cairo University, 2011.

<http://erepository.cu.edu.eg/index.php/cutheses/thesis/view/5635>

M. AbdElSalam, A. K. Hussein, and A. A. Fahmy. "UNDERSTANDING A SIMPLE ARABIC STORIES USING EVENT CALCULUS." American Journal of Applied Sciences 10, no. 10 (2013): 1298.

<https://doi.org/10.3844/ajassp.2013.1298.1306>

Omar, Yasser, Mohamed Abd-ElSalam ElSheikh, and Rania Hodhod. "GLAUDIA: A predicative system for glaucoma diagnosis in mass scanning." Health Informatics Journal 27, no. 2 (2021): 14604582211009276.

<https://doi.org/10.1177/14604582211009276>

Abbas, Safia, Rania Hodhod, and Mohamed El-Sheikh. "Retrieval of behavior trees using map-and-reduce technique." Egyptian Informatics Journal (2021 in press)

<https://doi.org/10.1016/j.eij.2021.05.005>

Ismail, Tamer M., Khaled Ramzy, Basem E. Elnaghi, M. N. Abelwhab, and M. Abd El-Salam. "Using MATLAB to model and simulate a photovoltaic system to produce hydrogen." Energy Conversion and Management 185 (2019): 101-129.

Lu, Ding, Kunio Yoshikawa, Tamer M. Ismail, and M. Abd El-Salam. "Computational fluid dynamics model on updraft gasifier using carbonized woody briquette as fuel." *Energy Procedia* 142 (2017): 166-171.

Mousa, Ahmed Amin, Tamer M. Ismail, and M. Abd El Salam. "A robotic cube to preschool children for acquiring the mathematical and colours concepts." *children* 5 (2017): 7.

<https://www.semanticscholar.org/paper/A-Robotic-Cube-to-Preschool-Children-for-Acquiring-Mousa-Ismail/82018e42e928474828c84eebd6408dbae550bdfe>

RESEARCH EXPERIENCES

I graduated from department of Physics and Computer Science. I studied both physics and computer science. I trained to develop computer systems for solving physical problems. After graduation, I focused on the field of computer science.

My master thesis focused on data mining and rough logic

M. AbdElSalam. Data mining for rough logic control. Master thesis, Faculty of Computer and information, Helwan University Egypt, 2004.

My PhD focused on building an Arabic natural language system using Microsoft C#

M. AbdElSalam. Natural language system for understanding the Arabic children stories. Ph.D thesis, Faculty of Computer and Artificial Intelligent, Cairo University Egypt, 2011.

<http://erepository.cu.edu.eg/index.php/cutheses/thesis/view/5635>

The system receive Arabic stories and recognise the sentences of the story then it uses its own library to detect the images suitable and at last it converts the story into animated scene.

<https://www.youtube.com/watch?v=MXPMgWHYo4M>

I published a paper from the thesis explaining the design of the core of the system

M. AbdElSalam, A. K. Hussein, and A. A. Fahmy. "UNDERSTANDING A SIMPLE ARABIC STORIES USING EVENT CALCULUS." *American Journal of Applied Sciences* 10, no. 10 (2013): 1298.

<https://doi.org/10.3844/ajassp.2013.1298.1306>

After the PhD, I worked on building systems in the field of computational fluid mechanics. I made researches with different groups from different countries. My main role is to develop the computer system including creating algorithms and developing the mathematical model.

After that, I shared a paper in machine learning

Omar, Yasser, Mohamed Abd-ElSalam ElSheikh, and Rania Hodhod. "GLAUDIA: A predicative system for glaucoma diagnosis in mass scanning." *Health Informatics Journal* 27, no. 2 (2021): 14604582211009276.

<https://doi.org/10.1177/14604582211009276>

Then, I returned back to natural language processing, during this work, I we developed a cognitive scripts system which provides a representation for the cognitive scripts.

<https://www.youtube.com/watch?v=zPrIm1jDtVw>

The system displays the cognitive scripts in diagrams. Moreover, it finds the degree of similarity between scripts. It also can blend two or more cognitive scripts together to generate a new one.

Abbas, Safia, Rania Hodhod, and Mohamed El-Sheikh. "Retrieval of behavior trees using map-and-reduce technique." Egyptian Informatics Journal (2021 in press)

<https://doi.org/10.1016/j.eij.2021.05.005>

Then, we have improved the system to be able to cluster a set of cognitive scripts based on calculating the similarities among them, and the paper is about to be sent.

Currently I am working in research for Arabic natural language processing using Java. I am trying to use the morphological disambiguation of (CAMEL tools) to develop a system for analysing Arabic sentences. The system aims to analyze Arabic text to extract information including the various components present in the sentence such as subject, verb, object, beginning, predicate, adjective...etc. Also, the system performs coreference resolution over the text, and it infers the references of the dropped subjects and attached pronouns. It can deduce them from previous sentences. Moreover, the system uses this information to generate the operation of I'raab of the paragraph. In addition, the system generates a conceptual graph for the whole text.

I have a good experience in building large computer systems, from scratch, and applying complex algorithms beside my background in computer science.

Google scholar: <https://scholar.google.com/citations?sortby=pubdate>

PROGRAMMING EXPERIENCES

I worked in a couple of companies in different programming areas such as web and business applications. I used different programming language, for example C#.NET, Java, C++ and Python.

During the period from 2003 to 2012, I work in different IT companies besides my work at the university. I sometimes worked as a part-time developer and other times I worked as a freelance developer. Since 2013, I have been devoting myself to the development of scientific computer systems. I shared various groups of researchers in publishing several scientific papers. My role was not limited in developing the computer applications only, but also I shared experiences including problem-solving approaches. I attached recommendation letters from the leaders of my groups.

Period from 2003 to 2006: I worked as a programming languages instructor.

Period from 2006 to 2012: I worked as a developer in different IT companies. I shared in developing desktop and web applications and SQL-Server database.

Period from 2013 until now: I have worked in building scientific computer system for the fields of natural language processing and computational physics. During this period, I mastered the programming and problem-solving skills as I carried out the responsibility of developing the systems.

Currently I am working to develop an Arabic Sentiment Analysis System using Java and Python.

Microsoft Certificate:

Microsoft Certified Professional (MCP) in Developing and Implementing Windows-based Application with Microsoft C#

PATENTS

Animation System for Arabic stories (ASAS)

Description The system understands simple Arabic stories and converts it to animated stories.

Registered at Information Technology Industry Development Agency (ITEDA)

Code 001266 Date Feb, 18, 2010

COMMENT Code

Description The system makes a physical simulation for the process of fuel burning using CFD technology.

Registered at Information Technology Industry Development Agency (ITEDA)

Code 001240 Date Jan, 21, 2010

Some of my projects:

- **Arabic sentence understanding:** the system aims to analyze Arabic text to extract information including the various components present in the sentence such as subject, verb, object, beginning, predicate, adjective...etc. Also, the system performs coreference resolution and generate the operation of l'raab of the paragraph. In addition, the system generates a conceptual graph for the whole text.
- **Arabic story animation system:** the system understands simple Arabic stories and converts it to animated stories.
- **Cognitive Scripts system:** The system provides a representation for the cognitive scripts and displays them in diagrams. Moreover, it finds the similar scripts and bends them together to generate a new one. Also the system can cluster a set of scripts.
- **COMMENT code:** the system makes a physical simulation for the process of fuel burning using CFD technology.
- **Arabic optical character recognition (OCR) :** an optical character recognition system for Arabic characters of a fixed font.
- **Arabic database engine:** the system is a database engine. It uses Arabic SQL statements.
- **Image steganography:** The program aims to hide up to an images in another image.
- **Student affairs system:** student affairs system for Akhbar El-Yoom academy, Egypt.
- **Detecting valid objects (for recycling process in factories):** The system get data from a camera connected to the computer and check the valid and invalid object running in front of the camera.
- **Chess game (two players):** chess game (two players).
- **Music note program:** a program to write, save and play a music note.

Recommendation Letters

Prof. Dr. Rania Hodhod

Assistant Chair,
TSYS School of Computer Science, Columbus
State University, USA.

Prof. Dr. Aly Aly Fahmy

Professor at Computer Science department
and the former dean of Faculty of Computers
and Artificial Intelligence, Cairo University,
Egypt.

Prof. Dr. Tamer M Ismail

Professor of Mechanical Engineering, Suez
Canal University, Egypt



March 30, 2020

To Whom It May Concern,

It gives me great pleasure to write this letter of endorsement for Dr. Mohamed AbdElSalam Ali ElSheikh. I know Dr. Mohamed for 2 years during which we worked on several research projects together. I have seen how knowledgeable, dedicated and hard worker he is. He has also proved to be an excellent software engineer and a problem solver. Dr. Mohamed kindly mentored a couple of my undergraduate students for their research projects where his knowledge in natural language processing and familiarity with a number of programming languages, such as C++, VB.Net, C#.Net, and Java played a big role.

Based on Dr. Mohamed's interaction with my students, he proved to be a great mentor who seeks to provide maximum support to his students and willingness to teach them everything they need to help them complete their projects successfully.

Dr. Mohamed has two registered patents at the Information Technology Industry Development Agency (ITEDA) for his software titled Animation System for Arabic Stories (ASAS) and COMMENT Code. His background in Physics has contributed to his computer science studies as it provided strong mathematical foundations for him. Moreover, his business experience at a number of companies allowed him to have the business perspective and applications for this work.

On the personal side, Dr. Mohamed is a friendly person and a good colleague who can work effectively in a team. By all means, I recommend Dr. Mohamed to join your team. He will definitely be an asset to your institution.

Sincerely,

Rania Hodhod
Assistant Chair, TSYS School of Computer Science
Phone: 7065078181
hodhod_rania@columbusstate.edu

TEL: (706) 507-8170 • FAX: (706) 565-3529

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University System of Georgia

To Someone It May Concern

I wish to recommend Mohamed AbdElSalam Ali ELSheikh. I have supervised Mohamed over three years during his PhD stage at Department of Computer Science, Cairo university from 2007 to 2010. I am sure that his skills and hard work will be of significant advantage.

In this thesis, we worked in the field of natural language processing and we succeed to establish a small system for understanding simple Arabic stories that converts the written stories into animation scenes. At the end of this stage, we registered our work as a patent at Information Technology Industry Development Agency, Egypt (ITEDA) in Feb, 2010.

I am glad to recommend Mohamed and I am convinced that he will deliver as per your expectations and even better.

Please contact me if you have any concerns about him.

Name: Prof. Dr. Aly Fahmy

Signature: *A.A. Fahmy*

Date : March 19, 2020

Position: Professor at Computer Science department and the former dean of Faculty of Computers and Artificial Intelligence, Cairo University.

Mobile: +201223420162

Email: aly.fahmy@cu.edu.eg

Website: https://www.researchgate.net/profile/Aly_Fahmy2
<https://scholar.google.com.eg/citations?user=GlbhQTcAAAAJ&hl=en>

To Someone It May Concern

It is with great pleasure that I would like to recommend Dr. Mohamed AbdElSalam Ali ELSheikh, Associate Professor Cairo University. Dr. Mohamed came to us after significant experience in his background of numerical combustion of solid fuel. He has proven to be an excellent research and a wonderful asset to our faculty.

He joined our department as expert research in January, 2013. He immediately began a large research responsibility, including supervising many fellows for the energy program and teaching several seminars.

I was impressed from his effort and performance as a team leader for all the students in different fields which results in more than 10 international papers with a high quality and high impact factor, moreover, an international book in combustion of waste.

Additionally, Dr. Mohamed is playing a leadership role in developing increasing opportunities for the PhD student years. This is a relatively new endeavor, and we are pleased that he has taken this responsibility on, as he has brought much energy, ideas and oversight.

As you will see from his evaluations, he is an excellent mentor and supervisor. He is consistently one of the experts amongst the last few years and her development and reorganization of the department has led to much more educationally based outpatient experience for the students. Based upon his reputation from the last few years. Quite simple, he is excellent!

Name: Prof. Dr. Tamer M. Ismail

Signature:



Date : March 18, 2020

Position: Associate Professor of Mechanical Engineering, Suez Canal University.

Address: Faculty of Engineering, Suez Canal University, Ismailia, Egypt

Phone: +201022262477 +20122 474 5463

E-mail: temoil@aucegypt.edu

Website:

Google Scholar: <https://www.scopus.com/authid/detail.uri?authorId=56562652700>

Scopus page: <https://scholar.google.com/citations?user=3IOLZMQAAAAJ&hl=en>

Educational Certificates

2010 – Ph.D., Computer Science Department, Cairo University, Egypt.

Thesis: Natural language system for understanding the Arabic children stories.

2004 – M.A, Computer Science Department, Helwan University, Egypt.

Thesis: Data mining for rough logic control.

1996 - B.A., Physics and Computer Science Department, Ain Shams University, Egypt.

Grade: very good with honours.



CAIRO UNIVERSITY
FACULTY OF COMPUTERS
& INFORMATION
Post graduate studies



((Certificate))

This is to certify that Mr.: Mohamed Abd El Salam Ali EL Sheikh

Born in: 29/3/1975 – Cairo . Nationality: Egyptian .

Obtained the degree of (Ph.D).

Department of: Computer Science.

The Subject of his thesis was:

" Natural Language System for Understanding Arabic Children Stories"

Date of approval by the Faculty Council: 9/11/2010.

The university president approved on: 8/12/2010 by delegation.

This certificate is issued upon his own request.

Competent Employee

Magda

Revised By

Vahed

Registrar

Sayed

Dean

Reem Bahgat

Prof. Reem Bahgat

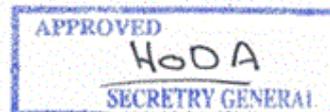


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Date: 19/3/2013

mohamed eliman

Vahed Rashed





Helwan University
Faculty of Computers and Information
Post Graduate Studies & Research Affairs (PGS&RA) Department



PROVISIONAL GRADUATING STATEMENT



The Faculty of Computers and Information at Helwan University certifies that:

Mr. [Mohamed Abd EL Salam Ali EL Sheikh]

Born in: Egypt

Birth Date: 29/3/1975

Nationality: Egyptian

Has completed the requirements of the Degree of M.Sc. in [Computer Science].

The Candidate has successfully defended his thesis entitled " Data Mining for Rough Logic Control " on [25/12/2003].

The Faculty Council approved the degree on [11/2/2004].

The University Board approved the degree on [8/3/2004].

This statement has been issued at the request of the graduate to be presented to whom it may concern, and without legal liability on behalf of the university or the faculty.

Head of PGS&RA Dept.

9/ Dalia Eid

Mrs. Nabawaia Mohamed

Vice Dean for PGS&RA

M. Haggag 4.7.2018

Prof. M. Haggag

Dean of the Faculty

3/7/2018

Prof. Alaa Toussif





AIN SHAMS UNIVERSITY

CERTIFICATE

054634

Faculty of Science

This is certify that , Mohamed Abd El Salam Ali El Sheikh //

Born in: Cairo National ID: 27503290100431 Nationality: Egyptian

has been awarded the degree of B.Sc. in Physics & Computer Science

Date of Graduation: June 1996 General Grade: Very Good With Honours

Cumulative Marks: 2356 Out Of 3000 Percentage: 78.53 %



Faculty Council Approval: 30/6/1996

University Council Approval: 10/8/1996

Authorized Staff

Nahar

Reviewer

Emam Tahit

Alumni Affair Director

Maddaha

The Dean



Date of issue 10/10/2016

The faculty was awarded the accreditation by the National Authority for Quality Assurance and Accreditation of education (NAQAA) by decree No 157 dated 15/8/2016.

