

Sameh A. Salem

Personal Details

Name: Sameh Abdel-Rahaman Ahmed Mohamed Salem
Date of Birth: 27 December 1974
Address: Department of Electronics, Communications, and Computer Engineering, Faculty of Engineering, Helwan University, Helwan, Egypt
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Current position: - **Lecturer** at Department of Electronics, Communications, and Computer Engineering, Faculty of Engineering, Helwan University.
- **Coordinator** and **Academic Advisor** at Department of Communication and Information Technology, Uninettuno University (Italy) in corporation with Faculty of Engineering, Helwan University.

Higher Education

Feb. 2004 – **The University of Liverpool, Department of Electrical Engineering and Electronics, Ph.D. Data Clustering and Partial Supervision with Parallel Developments.**
Dec. 2007

Supervisor: Professor Asoke K. Nandi

Research into the area of data clustering which is a common and irreplaceable tool for data analysis. This research includes parallel algorithms for clustering to reduce the execution time which results in a flexible and interactive data exploration, and the use of clustering with partial supervision in Computer-Aided Diagnosis (CAD) which has become one of the major research subjects in medical imaging and diagnostic radiology. In this context, medical images, and microarray datasets have been analyzed.

Sept. 2000 – **MSc Helwan University, Department of Communications and Electronics Engineering**
Sept. 2003

Supervisors: Professor Hatem ElBolok, Professor Reda A. Ammar

Research into the problem of automatic parallelization of C programs.

Sept. 1998 – **Department of Communications and Electronics Engineering, Faculty of Engineering, Helwan University, Preparation courses for the MSc degree.**
July 2000

Sept. 1993- **BSc Communications and Electronics Engineering.**
May 1998 **Very Good (Second with Honor degree)**

Final Year Project (Excellent): Digital Electronics Training System. Award from the Arab Organization for Industrialization (AOI) for best graduation projects 1998.

Work Experience

2008/2010 **Department of Electronics, Communications, and Computers,
Faculty of Engineering, Helwan University - Lecturer**

- Teaching the following courses:
 - Microprocessors & Microcontrollers
 - Computer Interfacing
 - Parallel and Distributed Systems
 - Algorithms and Data Structure
 - Database Systems
 - Object Oriented Programming
 - C/C++ Programming Languages
- Supervising final year project groups.
- Supervising MSc and PhD students.

**Department of Communication and Information Technology
Faculty of Engineering, Helwan University (Egypt) in corporation
with International Telematic University UNINETTUNO (Italy) –
Coordinator & Academic Advisor**

**Department of Electrical Communication & Electronics Systems
Engineering, October University for Modern Sciences and Arts (MSA)
– Assistant Professor (Part Time)**

- Teaching the following courses:
 - Digital Logic Design I
 - Digital Logic Design II
 - Microprocessors
 - Digital System Interfacing
 - Electronics I

**Department of Electronics & Communication Engineering, Miser
International University (MIU) – Assistant Professor (Part Time)**

- Teaching the following courses:
 - Computer Programming I
 - Computer Programming II
 - Microprocessors & Microcontrollers

**Department of Electrical and Electronic Engineering, Canadian
International College (CIC) – Assistant Professor (Part Time)**

- Teaching the following courses:
 - Embedded Operating Systems
 - Advanced Programming
 - Computer Applications C++
 - Algorithms and Data Structure
 - Operating Systems
 - Computer Architecture
- Supervising final year project groups.

Department of Communication Engineering, High Institute of Engineering & Technology (TEI) Giza, Egypt – (Part Time)

- Teaching the following courses:
 - Introduction to Electronics
 - Introduction to Computer Programming
 - Digital Logic Design
 - Analog Electronics
 - Microprocessors & Microcontrollers.

Feb. 2004 – **The University of Liverpool, Department of Electrical Engineering and Electronics,**
Dec. 2007

- **Teaching Assistant** in tutorial and laboratory sessions, including report marking.
- **Research developer** in joint projects between University of Liverpool and Royal Hospital in Liverpool, UK.
- **System administrator** at the department of Electrical and Electronics, The University of Liverpool.

Sept. 1998 – **Department of Communications and Electronics Engineering, Faculty of Engineering, Helwan University, Demonstrator – Assistant Lecturer**
Jan. 2004

Demonstrated several subject topics that included: Computer Architecture, Computer Software, Microprocessor, Digital Electronics, C/C++ Programming, Java Programming, Integrated Circuits, Information Theory and Coding, Computer Networks.

Computing and Other Skills

Computing

- Extensively the following programming languages are used: Assembly Language, C, Object Oriented Programming, Borland C++, Visual C++, JAVA, SQL, MPI Programming Language, and Matlab.
- Fully competent administrator/user of Windows, Unix/Linux operating systems and all popular word processing and spreadsheet packages (Word, Excel and LyX).

Languages

Fluent in Arabic (native) and English.

Selected Publications

S.A. Salem, N.M. Salem, and A.K. Nandi, "Augmentation of a nearest neighbour clustering algorithm with a partial supervision strategy for biomedical data classification," Special Issue on Advances in Medical Decision Support Systems of Expert Systems vol. 1, no. 26, pp. 8-21, Feb. 2009.

S.A. Salem, L.B. Jack, and A.K. Nandi, "Investigation of Self Organising Oscillator Networks for use in Clustering Microarray Data," *IEEE Transactions on NanoBioscience*, vol. 7, no. 1, pp. 65-79, March 2008.

S.A. Salem and A.K. Nandi, "Development of Assessment Criteria for Clustering Algorithms," *Pattern Analysis and Applications Jan 2008*.

S.A. Salem, N.M. Salem, and A.K. Nandi, "Segmentation of Retinal Blood Vessels using a Novel Clustering Algorithm (RACAL) with a Partial Supervision Strategy," *Medical & Biological Engineering and Computing*, vol. 45, pp. 261-273, March 2007.

S.A. Salem, L.B. Jack, and A.K. Nandi, "Improving the initialisation and reliability of the self organising oscillator network," in *Proceedings of the 13th European Signal Processing Conference (EUSIPCO 2005)*, (Antalya, Turkey), 04-08 September 2005.

S.A. Salem and A.K. Nandi, "New assessment criteria for clustering algorithms," in *IEEE international workshop in Machine Learning For Signal Processing (MLSP 2005)*, (Mystic, CT, USA), pp. 285-290, 28-30 September 2005.

S.A. Salem and A.K. Nandi, "Novel clustering algorithm (RACAL) and a partial supervision strategy for classification," in *IEEE international workshop in Machine Learning For Signal Processing (MLSP 2006)*, (Mynooth, Ireland), pp. 313-318, 06-08 September 2006.

S.A. Salem, N.M. Salem, and A.K. Nandi, "Segmentation of retinal blood vessels using a novel clustering algorithm," in *Proceedings of the 14th European Signal Processing Conference (EUSIPCO 2006)*, (Florence, Italy), 04-08 September 2006.

S.A. Salem and A.K. Nandi, "Parallel nearest neighbour clustering algorithm (PNNCA) for segmenting retinal blood vessels," in *the 25th IASTED conference on Parallel and Distributed Computing and Networks (PDCN 2007)*, (Innsbruck, Austria), pp. 263-268, 13-15 February 2007.

S.A. Salem and A.K. Nandi, "A new scalable and efficient parallel algorithm (PRACAL) for clustering large datasets," in *the 19th IASTED conference on Parallel and Distributed Computing and Systems (PDCS 2007)*, (Massachusetts, USA), 19-21 November 2007.

S.A. Salem, N.M. Salem, and A.K. Nandi, "Development of a partial supervision strategy to augment a nearest neighbour clustering algorithm for biomedical data classification," in *the international conference on Bio-inspired Systems and Signal Processing (BIOSIGNALS 2008)*.