

Nancy Salem

Personal Details

Name: Nancy Mustafa Ahmed Salem
Date of Birth: 10 December 1975
Address: Department of Biomedical Engineering,
Faculty of Engineering, Helwan University,
Helwan, Egypt
Telephone: +2 (0) 2 2373 3172
Email : nancy.salem@liv.ac.uk
Current position: Lecturer Department of Biomedical Engineering, Faculty of
Engineering, Helwan University

Higher Education

- Oct. 2003 – **The University of Liverpool, Department of Electrical Engineering**
Nov. 2007 **and Electronics, Ph.D. Retinal Image Processing for Blood Vessel Segmentation.**
Supervisor: Professor Asoke K. Nandi
Research into the problem of blood vessel segmentation from colour fundus image for the ultimate purpose of early detection and diagnosis of many eye diseases. Submission date: *August 2007*
- Sept. 2000 – **MSc Helwan University, Department of Communications and**
Sept. 2003 **Electronics Engineering**
Supervisor: Professor Mohamed El Adawy.
Research into the problem of segmentation of the Foveal Avascular Zone (FAZ) from fluorescein angiograms.
- Sept. 1998 – **Department of Communications and Electronics Engineering, Faculty**
July 2000 **of Engineering, Helwan University, Preparation courses for the MSc degree.**
- Sept. 1993- **BSc Communications and Electronics Engineering.**
May 1998 **Excellent (First with Honor degree).**
Final Year Project: Digital Electronics Training System.
Award from the Arab Organization for best graduation projects 1998.

Work Experience

- Oct.2003 – **The University of Liverpool, Department of Electrical Engineering**
Dec. 2007 **and Electronics, Teaching Assistant**
Assistance in tutorial and laboratory sessions, including report marking.

Sept.1998 – **Department of Communications and Electronics Engineering, Faculty of Engineering, Helwan University, Demonstrator.** Courses are:
May 2003 Electronics, Digital communications, Digital Logic design, Measurements, Computer Interface, and Microprocessor.

Computing and Other Skills

Computing

Fully competent user of Windows and all popular word processing and spreadsheet packages (Word, Excel and LYX). Programming skills with C. Expert level on Matlab.

Languages

Fluent in Arabic (native) and English.

Selected Publications

N. M. Salem and A. K. Nandi, "Novel and adaptive contribution of the red channel in pre processing of colour fundus images," Journal of the Franklin Institute. Special Issue: Medical Applications of Signal Processing, Part I, vol 344, issues 3-4, pp. 243-256, May-July 2007.

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," Journal of Medical & Biological Engineering & Computing, vol 45, pp. 261-273, March 2007.

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.

N. M. Salem and A. K. Nandi, "Enhancement of colour fundus images using histogram matching," in Proceedings of the IASTED International Conference, BioMedical Engineering, February 16-18, 2005, Innsbruck, Austria.

N. M. Salem and A. K. Nandi, "Novel pre-processing of colour fundus images," in the IEE Proceedings of Medical Application of Signal Processing, November 3-4, 2005, London, UK.

N. M. Salem and A. K. Nandi, "Segmentation of retinal blood vessels using scale-space features and K-nearest neighbour classifier," in Proceedings of the 31st International Conference on Acoustics, Speech, and Signal Processing - ICASSP '06, vol 2, pp. 1001-1004, May 14-19, 2006, Toulouse, France.

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 '06, September 4-8, 2006, Florence, Italy.

N. M. Salem, S. A. Salem, and A. K. Nandi, "Segmentation of retinal blood vessels based on analysis of the Hessian matrix and clustering algorithm," in Proceedings of the 15th European Signal Processing Conference - EUSIPCO '07, September 3-7, 2007, Poznan, Poland.