

Abdel-Razzak Natsheh

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Date of Birth: 17 August, 1982.

Nationality: British

Education

2005 – 2011 PhD in Computer Engineering, Manchester Metropolitan University

Thesis Title: Automated Tool for Diagnosis of Paranasal Sinus Conditions

Supervisors: Dr. Prasad Ponnappalli, Dr. Atef El-kholy

Brief Synopsis of Research:

Reporting of CT scans of Paranasal Sinuses requires detailed examination by an expert to arrive at a diagnosis. The current project is aimed at developing a computer-based automated diagnostic tool for reporting CT scans of paranasal sinuses condition. One of the objectives of this project is to produce a reliable classification that is used in sinus diagnosis in terms of the scale used by the medical experts. The final aim would be to produce a computer-based system that can perform the task of analysing the CT images and producing a preliminary diagnosis.

The current Sinus Diagnostic System (SDS) is developed using techniques based on classical image processing techniques in conjunction with Artificial Neural Networks (ANN) techniques. Initial work involved identifying the Region of Interest (ROI) that represents the four sinus areas of interest, maxillary, ethmoid, sphenoid and frontal. The analysis of the sinus areas was performed using a technique based on a version of ANNs called Self-Organising Maps.

During my PhD I have also led seminars, supervised undergraduates in the laboratory and taken a course on "Effective Tutoring and Assessment".

Research Interests:

My current research centers on medical imaging, image processing and artificial intelligence (Neural Networks).

2000 - 2005 BSc Computer Engineering, an Najah National University.

Modules included: artificial Intelligence, Structured Programming, Software Engineering (Including Object Oriented Theory), Networks Communication Systems, electronics, microprocessor, microcontroller, and signal processing ...

Employment

(Aug-2011 – Present day) Assistant Professor, Dept. of Computer Information Systems, Information Technology School, An-Najah University, Nablus, Palestine.

(2009 – June-2011) full-time lecturer, Dept. of Engineering and Technology, Manchester Metropolitan University, Manchester, UK.

Subjects I have taught:

Operating Systems	Artificial Intelligent Systems
Computer Networks	Object Oriented.
Web page design	Multimedia Applications.
3-D design.	Java programming.
Engineering problem solving.	Advanced Computer systems.
Image Processing (MSc)	Advanced Programming (MSc)
Electronics 1	Advanced Electronics
Microprocessors 1	Artificial Intelligence

Supervised postgraduate and undergraduate students in their research projects.

(2006 – 2009) Teaching Assistant, Dept. of Engineering and Technology, Manchester Metropolitan University, Manchester, UK.

Led seminars and tutorial classes, supervised undergraduates in the laboratory and taken a course on "Effective Tutoring and Assessment".

Skills

General skills in research project management and data analysis. Specific expertise and interests in:

Teaching Skills:

- Taught different type of subjects to different level of students (from year 1 to MSc level)
- Supervise lab sessions for undergraduate and postgraduate students and have supervised the undergraduate and postgraduate research projects.

Time Management

- I met without fail, the many deadlines in my teaching and supervisory duties. I have extensive experience of juggling different tasks and bringing these to a successful conclusion.

Other skills

- Knowledge of research methodologies
- Statistical software: extensive experience with MATLAB.
- Data and information collection
- Writing and presenting reports
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Referees

[1] Dr. Prasad Ponnappalli – (Senior lecturer)
Manchester Metropolitan University
Department of Engineering and Technology,
Chester Street, Manchester M1 5GD
Email: p.v.s.ponnappalli@mmu.ac.uk
Tel: +44 (0) 161 247 1659

[2] Prof. Maher Natsheh
An-Najah National University
Vice President of academic affairs
Nablus, WestBank, Palestine
Email: natsheh@najah.edu
Tel: +972(0)92394979

Conferences, Presentations and Courses Attended

- **SGAI international conference, Cambridge, UK 2007.** Presented Paper
- **NCAF Meeting, Oxford, 2008,** presented poster.
- **BRS (British Rhinological Society) annual meeting, Cheltenham, UK, 2009.**
- **IEEE Conferences (CSNDSP (2 PAPERS), IST (PAPER)), 2010**

Publications/Conference Papers

- [1] Natsheh, P.V.S. Ponnappalli, N. Anani, A. Al-Kholy. Automated Tool for Diagnosis of Sinus Analysis CT Scans, Proceedings of AI 2007 the Twenty-Seventh SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence, 2007, Cambridge, UK.
- [2] Abdel-Razzak Natsheh, Atef El-Kholy, Prasad VS Ponnappalli, Peter Norburn, Nader Anani. AUTOMATED TOOL FOR REPORTING CT SCANS OF PARANASAL SINUSES, BRS (British Rhinological Society), 8th annual meeting, May 2009.
- [3] A.R. Natsheh, P. Ponnappalli, N. A. Anani, D. Benchebra and A.El-Kholy, "Neural networks-based tool for diagnosis of paranasal sinuses conditions," 7th IEEE, IET International symp. on comm. sys, networks and digital signal processing (CSNDSP 2010), Newcastle Upon Tyne, UK, 21-23 July 2010.
- [4] D. Benchebra, P. Ponnappalli, N. A. Anani and A. R. Natsheh, "A novel algorithm for completing fragmented boundaries in images," the 7th IEEE, IET International symp. on comm. sys, networks and digital signal processing (CSNDSP 2010), Newcastle Upon Tyne, UK, 21-23 July 2010.
- [5] A.R. Natsheh, P. Ponnappalli, N. A. Anani, D. Benchebra and A.El-Kholy, "Automated tool for diagnosis of paranasal sinuses conditions," submitted to the IEEE, Medical Imaging Journal. 2010 [under review].
- [6] N. Anani, D. Benchebra, P. Ponnappalli, and A.-R. Natsheh, "Prediction of Line Current Harmonics in an AC-DC Converter Using Neural Networks," in the proceedings of the 2010 International Symposium on Industrial Electronics and Applications, Penang Malaysia, 2010, pp. 66-69.

Professional Memberships

AMIET Institute of Engineering and Technology, 2006.

(NCAF). The Natural Computing Applications Forum, 2008.