Fadel Sukkar
University of Aleppo
Faculty of Informatic Engineering
Aleppo – Syria

Education

- Ph.D. in Artificial Intelligence, University of Wales (Cardiff), 1996, UK
- Thesis Topic: Intelligent Neural Networks for Systems Modelling and Control
- B.Sc. in Electrical and Electronics Engineering, University of Aleppo, 1986, Syria

Professional Experience

- Dean of Informatic Engineering (2001-present), University of Aleppo- Syria
- Vice Dean of Informatic Engineering (2000-2001), University of Aleppo- Syria
- Member of Board directors of Syrian Railways from (2000-2001), SYRIAN RAILWAYS- SYRIA
- Director of Informatic Directorate (2000-2001), SYRIAN RAILWAYS- SYRIA
- Consultant of Director General for IT (2001-present), SYRIAN RAILWAYS- SYRIA
- Lecturer Assistant (1986-1992), University of Aleppo, Syria
- Lecturer (1996-present), University of Aleppo, Syria

Courses Taught

Programming Languages (Turbo Pascal, Delphi, VC++, Java) Software Engineering, Database Systems, Computer Networks, Operating Systems, Expert Systems, Prolog, Neural Networks, Fuzzy Logic, Genetil Algorithm, algorithms, Artificial Intelligence, Natural Languages Processing, Computer Architecture, Automatic Control, Electronics and Digital Measurements, Industrial Control System, Industrial Electronics, Modern Control, Power Electronics, Programming Languages.

Supervised Undergraduate Project

- Natural Languages Processing using artificial intelligence
- Signature recognition using neural networks
- Neural networks for systems modelling
- Image recognition using neural networks
- Design of interface card for machine learning
- Control of a robot using intelligent neural network
- Control of a robot using genetic algorithm
- Control of a converter using artificial intelligence techniques
- A predictor based on neural networks

Current Memberships

- IEEE Industrial Electronics Society
- IEEE Computer Society
- IEEE Communications Society
- IEEE Control Systems Society
- IEEE Robotics & Automation Society
- Syrian Computer Society
- Syrian Engineering Syndicate
- The Institute of Electrical and Electronics Engineers (IEEE)
- Referee at International Conference on Information System Analysis and Synthesis
- Arabic Braille language committee for blind

Research Experience

- Thankful certificate from Boston University-USA about my implementation and results in Artificial Intelligence
- Thankful certificate from United Nation Children's Fund – UNICEF – about my exerted efforts towards children world
- Teacher at Mediterranean Network of University- MedNet'U- Europe- Rome
- Design and implementation of adaptive resonance theory (ART) neural network software
- Design and implementation of intelligent control systems
- Design and implementation of intelligent predictor software
- Design and implementation of intelligent software for pattern recognition
- Design and implementation of neural controller
- Control and implementation of robot using artificial intelligence techniques
- Image and speech processing using artificial intelligence techniques
- Modelling of a system using neural networks
- Design and implementation of Arabic Language analyser and combination using expert system
- Design and implementation of intelligent software for deaf-mute utterance correction
- Design and implementation of circuits to connect Braille machine (for blind) to computer
- Design and implementation of Braille editor for blind
- Design and implementation of voiced software for blind
- Study and implementation of Arabic Braille Language for blind.
- Automation of wheelchair for handicapped using programmable logic controllers
- Design and implementation of automated software for railways
- Prepare technical specification for tender books in the field of: communication, IT, railways, administration, . . .

Railways Experiences

- Manager of data bank for Middle East IT networks
- Study and design technical specifications of computer networks and softwares necessary for Middle East IT data bank
- Study and design technical specifications of the centralised ticketing system
- Supervise and follow up the execution of centralised ticketing system contract
- Study and design technical specifications of connecting the centers and governorates of Syrian Railways through LANs
- Study and design LANs for main buildings of Syrian Railways
- Study and design technical specification of WANs of Syrian Railways centers
- Supervise and follow up all works related to executing installing computer networks, and design automated softwares for general Directorates at HQ
- Supervise and follow up of the execution of systems analysis contract, for all works and activities of the Syrian Railways and its organisation
- Supervise and follow up of the execution of the automation contract, for Syrian Railways accounting, financial, archives and other softwares
- Study and design technical specifications of the Internet web site
- Follow up, co-ordinate, and Supervise on establishing Internet portal of the Syrian Railways, and follow up the phases of works progress, scientific solutions and the procedures taken, in addition to studying and collection the information needed to be placed at Syrian Railways Internet portal
- Study and design technical specifications of central departments softwares in Syrian Railways
- Study the topology of the Syrian Railways general building

- Study the topology and the curriculum of the Railways institute
- Study computer networks connection with Syrian virtual university
- Study, execute, supervise and follow up of all IT works in the Syrian Railways
- Study and discuss the initial structure of the accounting, financial and administrative systems at Syrian Railways with electronic industries company
- Supervise IT department technically, organise the administrative and technical staff, follow up the execution, study all the technical matters and prepare technical specifications for tender books of the projects and their handing over
- Study and design of automated system of the mechanical barriers to insure safety and security of level crossings
- Manager of IT department from 21/4/2000 up to 18/6/2001
- Member of Board directors from 21/4/2000 up to 18/6/2001

Published papers

- Adaptive Resonance Theory for Pattern Recognition, International Conference on Control, Automation, Robotics and Vision, pp. 226-230, December, 1996, Singapore

- A predictor Based on Adaptive Resonance Theory, Journal of Artificial Intelligence in Engineering 12, pp. 219-228, 1998

- A supervised Neural Network for Dynamic Systems Identification, 1995 IEEE International Conference on Universal Personal Communications, pp. 697-701, November,1995 Tokyo, Japan

- Design of Adaptive NNs-Robust-PID Controller for a Robot Control, IEEE International Conference on Control Applications, pp. 508-513, September, 1996 Michigan, USA

- Design of Adaptive Robust Robot Control Using BP-SEMNs, IEEE International Conference on Industrial Technology, pp.522-526, December, 1996, Shanghai, China

- Force Control of a Robot Using RHN, Fuzzy Logic and Applications ISFL 97, pp. 44-49, February, 1997, Zurich, Switzerland

- Internal Model Control of a Robot Using new Neural networks, 1996 IEEE International Conference on Systems, Man and Cybernetics 1996, Vol. 2, pp. 3095-3100, October, 1996, Beijing, China

- Match Adaptive Resonance Theory Neural Network for Arabic Alphabet Recognition, 2nd WSES 2001 International Conference on Neural Networks and Applications, Feb 2001, Tenerife, Spain

- Modified Self-Organising Maps Neural Network for Arabic Phoneme Recogniser, 3rd WSES 2002 International Conference on Neural Networks and Applications, Feb 2002, Interlaken, Switzerland

- Non-Model Based Robust Robot Control Using RHNN, International Conference on Control, Automation, Robotics and Vision, pp. 206-210, December, 1996, Singapore

- Robot Track Recognition Using Neural Network, 21st International Cartographic Conference, Durban, South Africa, Friday 8 to Sunday 10 August 2003

- Smart House for the Elderly and the Disabled Using Artificial Intelligence Techniques, The Second International Conference on Information Technology, April, 1999, Syria

- Supervised Adaptive Resonance Theory Neural Network for Modelling Dynamic Systems, 1995 IEEE International Conference on Systems, Man and Cybernetics, Vol. 3, pp. 2500-2505, October, 1995 Vancouver, Canada

- Supervised Neural Network for Dynamic Systems, 1998 IEEE International Conference on Intelligent Engineering Systems, pp. 211-215, September, 1998, Vienna, Austria

- Self-Organizing Predictor Using Adaptive Resonance Theory, International Conference on Computation Graphics and Visualization Techniques, pp. 246-253, December, 1995, Algarve, Portugal