Dr. Abdelmalek ZIDOURI
Electrical Engineering Department
KFUPM, Dhahran, 31261 Saudi Arabia
Tel. +966 3 860 3677
Fax: +966 3 860 3535
malek@kfupm.edu.sa
a.zidouri@ieee.org

Professional Profile

Eager to transfer knowledge and experience to students and bring them into the twenty-first century using a unique combination of education experience coupled with three years' industry background in computer systems management and administration.

- Hold Doctor Degree in Applied Electronics, Masters Degree in Control Engineering and Bachelors Degree in Electrical and Electronics Engineering.
- Experienced in use of the Internet and educational software for e-learning and online course design and delivery.
- Dedicated to enthusiastic and dynamic teaching as a means of creating and nurturing a lifelong love of knowledge and career building.

Education, Honors, and Certifications

"...the instructor should be praised for his obvious interest in the students' learning. He is liked by the students, and they consider him an effective teacher...."

Dr. A. Khathlan ADC Peer Consultant 25 April 2003

PhD in Applied Electronics
Doctor of Engineering, Tokyo Institute of Technology, Japan. 1995

M.S. Control Engineering
Control Engineering Dept, Bradford University, UK. 1984

Bachelor of Engineering Electrical and Electronics
Electrical and Electronics Engineering Dept, Bradford University, UK. 1982

Provisional Certifications
Cambridge Joint Matriculation Board certification. 1979

Tohoku University International Language School, Japanese Language Certification, Sendai, JP. 1991

Key Qualifications

Certified in JAVA Programming and Introduction to SQL & PL/SQL under Oracle Academic Initiative Program.

Plan and instruct each subject area using wide variety of teaching aids, motivational and implementation strategies to engage students in active learning.

Incorporate learning modality principles into classroom and individual instruction. Develop and conduct surveys to enhance and improve course content delivery effectiveness and motivation.

Implement technological approaches to subject material. Research educational resources on the Internet. Assist novice students with information retrieval.

Speciality

Pattern Recognition and Signal Processing

Narrow Speciality

- Character Recognition and Segmentation
- Document Image Analysis and Understanding
- Pattern Classification
- Image and Data Compression
- Run Length Coding

"...During our association, I have found Zidouri to be an excellent scientific community member who demonstrated his academic and research abilities, desire to learn more , and initiative upon numerous occasions....I recommend him without any reservation..."

Professor Makoto Sato,
Precision and Intelligence Lab.
Tokyo Institute of Technology

Experienced Advisor and Facilitator

Supervised and conducted various senior projects and Master Thesis in Electrical Engineering Department and Information and Computer Science. In industry, Instructed corporate personnel in use of various software applications, desktop publishing, and drafting programs for conversion from manual typesetting and drafting to computer assisted methods. Designed the network expansion and managed the Local Area Network of DTP Company in Tokyo which boosted their profit to more than double. Designed and maintained their internet access and homepage.

Computer Skills

- Software (IBM and MAC environments): Microsoft Windows® and DOS, WordPerfect, Lotus123, Microsoft Word, PageMaker, AutoCAD, Books in Print, Baker & Taylor Links, Bibbase
- Working knowledge of the Internet
- System installations and debugging; terminal/printer operations

Employment

Professional Development in Academia

- Assistant Professor, EE Dept, September 1999 to present
- Student Advisor, EE Dept., September 1999 to present
  KFUPM, Dhahran, Saudi Arabia
- Associate Visiting Scholar, Fall 1995
  Precision and Intelligence Laboratory, Tokyo Institute of Technology, Yokohama, JP
- Assistant Professor, September 1984 to April 1991
  Department of Electronics, University of Science and Technology , Oran, DZ

Computer Systems Management

- Network Administrator, January 1997 to August 1999,
  Torindo Co., LTD. Tokyo, JP
- System Engineer, January 1996
  Torindo Co., LTD. Tokyo, JP
- System Administrator and Postmaster, December 1998
  Torindo Co., LTD. Tokyo, JP

Professional Affiliations

IEEE Society Senior Member
Signal Processing Society
Communications Society
Engineering Education Society

Funded Research Projects

Automatic Text Recognition: A Need In Arabization
EE/Autotext/232

Publications

Journals and Book Chapters:

[1] S. Chinveeraphan, A. B. C. Zidouri, and M. Sato, "Fast Algorithms for Minimum Covering Run Expression," IEICE Trans. Inf. \&. Syst., Vol.E77--D, no. 3, pp. 317--325, March 1994.

[2] A. Zidouri, S. Chinveeraphan, and M. Sato, "Classification of Compound Document Image Patterns by MCR Stroke Index," IEICE Trans. Inf. &. Syst., vol. E78-D, no.3, pp.290--294, March 1995

[3] S. Chinveeraphan, A. B. C. Zidouri, and M. Sato, "Modified Minimum Covering Run Expression of Binary Document Images," IEICE Trans. Inf. &. Syst., vol. E78-D, no.4, pp.503--507, April, 1995

[4] A. Zidouri, S. Chinveeraphan, and M. Sato, "Recognition of Machine Printed Arabic Characters and Numerals Based on MCR" IEICE Trans. Inf. &. Syst., vol. E78-D, no.12 pp. 1649--1655, Dec. 1995

[5] A. Zidouri, K. Nako, R. Takamatsu, and M. Sato, "A New Character Segmentation Method for Handwritten Documents Based on Multi-scale Analysis", IIEEJ Journal, vol. 24, no. 3, pp. 216—223, March 1995. (In Japanese)

[6] M. Sarfraz, A. Zidouri and N. Nawaz "On Offline Arabic Character Recognition", *Computer-Aided Intelligent Recognition Techniques and Applications.* Edited by M. Sarfraz © 2005 John Wiley & Sons, Ltd ISBN: 0-470-09414-1.

[7] A. Zidouri "ORAN System: A Basis for an Arabic OCR" The Arabian Journal for Science and Engineering, KFUPM, Dhahran, Saudi Arabia, (to appear)

Conferences:

[8] S. Chinveeraphan, A. Zidouri, and M. Sato, "A New Expression Method of Document Images Based on Maximum Matching of Bipartite Graph," in Proc. IIEEJ 20th Annual Meeting and Advanced Session, (Tokyo), p.A6, June 9--11 1992

[9] A. B. C. Zidouri, S. Chinveeraphan, and M. Sato, "A Strokeness Index by MCR Expression for Document Image," in Proc. the 1992 IEICE Fall Conf., (Tokyo), pp. D--221, Sept.27--30 1992

[10] A. Zidouri, S. Chinveeraphan, and M. Sato, "A Stroke Index For Document Image Analysis Based on The MCR Expression Method," in Proc.MVA'92 IAPR Workshop on Machine Vision Applications, (Tokyo), pp.503--506, Dec.7--9 1992

[11] A. Zidouri, S. Chinveeraphan, and M. Sato, "Classification of Compound Document Image Patterns by MCR Stroke Index," in Proc. ICDAR'93 2nd Int. Conf. Document Analysis and Recognition, (Tsukuba), pp.753--756, Oct.20--22 1993

[12] A. Zidouri, S. Chinveeraphan, and M. Sato, "Arabic Document Image Understanding by MCR expression Method," in Proc. ICSS'94 Int. Conf. Signals and Systems, (Algiers), pp.23--27, Sept.24--26 1994

[13] A. Zidouri, S. Chinveeraphan, and M. Sato, ``Structural Features by MCR Expression Applied to Printed Arabic Character Recognition" in 8th Int. Conf. on Image Analysis and Processing}, (San Remo Italy), pp.557--562, Sept. 13-15 1995

[14] S. Chinveeraphan, A. Zidouri, and M. Sato, "Stroke Representation by Modified MCR Expression as a Structural Feature for Recognition," in Proc. IWFHR—IV @ 4th Int. Workshop on Frontiers of Handwriting Recognition, (Taipei), pp.11--19, Dec.7--9 1994

[15] S. Chinveeraphan, A. Zidouri, and M. Sato, ``Stroke Extraction as a Basis for Structural Analysis of Document Images by Modified MCR Expression," in Proc. MVA'94 IAPR Workshop on Machine Vision Applications, (Tokyo), pp.135--138, Dec.13--15 1994

[16] S. Chinveeraphan, A. B. C. Zidouri, and M. Sato, "Fast Algorithms for MCR Expression," PRU 93--135, IEICE Technical Report, Feb. 1993

[17] A. Zidouri, "A Structural Description of Binary Document Images: Application for Arabic Character Recognition" Proceedings CISST'2001, Las Vegas Nevada, June 25-28, 2001

[18] A. Zidouri and M. Sarfraz, "On Optical Character Recognition Of Arabic Text", The 6th Saudi Engineering Conference, KFUPM, Dhahran, December 2002, Vol. 4. pp.109-118.

[19] A. Zidouri and M. Sarfraz, Progress Report I for Research Project EE/Autotext/232 "Automatic Text Recognition: A Need in Arabization" October 2002

[20] A. Zidouri, "ORAN: Offline Recognition of Arabic characters and Numerals ", International Conference: Sciences of Electronic, Technologies of Information and Telecommunications, Susa, Tunisia, March 17-21, 2003

[21] A. Zidouri, "Powerful Tool for Arabic Document Understanding", The First GCC Industrial Electrical & Electronics Conference. Manama, Bahrain, May 2003

[22] A. Zidouri and M. Sarfraz, Progress Report II for Research Project EE/Autotext/232 "Automatic Text Recognition: A Need in Arabization" March 2003

[23] A. Zidouri, M. Deriche, *M. Al-Otaibi, M. Al-Shahrani, M. Al-Mutairi, T. Al-Maleki*, S. Al-Ghunaim, A. Al-Nutaifi, H. Al-Issa, F. Al-Anazi, "Design of an LED-Based Message Board" IEEE Saudi Arabian Section 10th Technical Exchange Meeting Dhahran, Saudi Arabia, , proceedings on CD Session V, VLSI & Electronics. pp. 1-4, March 23-24 2003

[24] A. Zidouri, M. Sarfraz, S. N. Nawaz, and M. J. Ahmad, "PC Based Offline Arabic Text Recognition System", Seventh International Symposium on Signal Processing and its Applications, PARIS July 2003, France

[25] A. Zidouri and M. Sarfraz, Progress Report #3 for Research Project EE/Autotext/232 "Automatic Text Recognition: A Need in Arabization" December 2003

[26] M. Sarfraz, A. Zidouri and M. J. Ahmad, "License Plate recognition system" ICECS'2003, 10th IEEE International Conference on Electronics, Circuits and Systems 14-17 Dec. 2003 Sharjah, United Arab Emirates

[27] M. Sarfraz, A. Zidouri and N. Nawaz "Offline Arabic Character Recognition System" ICECS'2003, 10th IEEE International Conference on Electronics, Circuits and Systems 14-17 Dec. 2003 Sharjah, United Arab Emirates

[28] A. Zidouri and M. Sarfraz, Progress Report #4 for Research Project EE/Autotext/232 "Automatic Text Recognition: A Need in Arabization" June 2004

[29] A. Zidouri, "ORAN: A basis for an Arabic Character Recognition System" 2004 International Symposium on Intelligent Multimedia, Video & Speech Processing The Hong Kong Polytechnic University Hong Kong October 20-22, 2004

[30] A. Zidouri, "Feature Index For Document Image Analysis" The second GCC Industrial Electrical & Electronics Conference., 23-25 Nov. 2004 Manama, Bahrain

[31] A. Zidouri and M. Sarfraz, Progress Report #5 for Research Project EE/Autotext/232 "Automatic Text Recognition: A Need in Arabization" March 2005

[32] A. Zidouri, M. Sarfraz, S. A. Shahab and S. M. Jafri "Adaptive dissection based subword segmentation of printed Arabic text" The 9th International Conference on Information Visualisation IV05 (6-8 July 2005) London

[33] M. Sarfraz, A. Zidouri, S. A. Shahab and S. M. Jafri, "A Novel Approach for Skew Estimation of Document Images in OCR System" IEEE proceedings of the International Conference on Computer Graphics, Imaging and Vision (CGIV 2005) Beijing , China (26-29 July 2005).