C.V.

PERSONAL INFORMATION

Name: Dr. Abdul Karim Sadiq Mahdi Al-Bayati
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ACADEMIC QUALIFICATIONS

1- *Ph.D. in Electrical Engineering* (12/1/1999 - 20/10/2003).
Dept. of Electrical Engineering, Indian Institute of Technology, Delhi, (IIT Delhi), New Delhi, INDIA.*Title of Thesis*: "Blind and semi-blind Detection and Estimation Techniques in Multiuser DS/CDMA Systems".
CGPA: 10.0/10.0 (Total Course Grades)

2- *M.Sc. In Electrical Engineering* / Electronics and Communications.(10/2/1985-14/4/1987), Dept. of electrical Engineering, College of Engineering, University of Baghdad, Baghdad, IRAQ

3- *B.Sc. in Electrical Engineering* (awarded in 30/7/1980)
Dept. of electrical Engineering, College of Engineering, University of Baghdad, Baghdad, IRAQ

COURSES TAUGHT

1- Digital Communications
2- Digital Signal Processing
3- Signals and Systems
4- Probability and random Processes
5- Digital Filter Design
6- Electromagnetics-I
7- Digital Electronics
8- Electrical Circuits-II
9- Engineering Mathematics
10- Introduction to Electrical and Electronic Circuits
11- Electrical Circuits LAB
12- Logic LAB
13- Microprocessor LAB

RESEARCH AND PUBLICATIONS

US PATENT:

" Blind detection of BPSK signals in a multiuser environment"
Surendra Prasad, Abdul Karim Al-Bayati, Shankar Prakriya,
Patent No.:US 7,639,758 B2
Date of patent: Dec., 29, 2009

JOURNAL PUBLICATIONS

1- A.K.S. Al-Bayati and O.M.Aloquili, "Constellation switching precoding for blind detection of co-channel signals: application to 8-ary signaling", *IEEE Trans. on Communications*, Vol. 57, No. 10, October, 2009, pp. 2891-2894.

2- A. K. S. Al-Bayati, S. Prakriya, M. A. Smadi, and S. Prasad, "Blind detection of co-channel QPSK signals: a phase precoding –based approach", accepted for publication in *Wireless Personal Communications* in 2010.

3- A. K. S. Al-Bayati and M. A. Smadi, " Efficient Blind Equalization of BPSK signals", (*IET) Electronics Letters*, Vol. 46, Number 9, 29th April 2010, pp.658-660.

4- M. A.Smadi,V. K.Prabhu, A.K.S.Al-Bayati," Performance analysis of optimum diversity combining for partially coherent frequency-selective fading channel with intersymbol interference", *IEEE Transactions on Vehicular Technology*, Vol. 57,No. 6, pp.3589-3597,Nov. 2008.

5- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad, " Block modulus precoding for blind multiuser detection of DS/CDMA signals", *IEEE Trans. on Communications*, Vol. 51, No. 1, January, 2003, pp.52-56.

6- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , "Block phase-precoding for blind multiuser detection of BPSK/DS-CDMA signals", *IEEE Trans. on Communications*, Vol. 52, No. 7, July, 2004, pp. 1043-1046.

7- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , "Block spectral precoding for blind multiuser detection of DS/CDMA signals", *IET Communications*, Vol. 152, No.1, Feb 2005, pp.95-102.

8- A. K. S. Al-Bayati, " Blind detection in MIMO/BPSK systems based on phase encoding", (*IET) Electronics Letters*, Vol. 43, Number 2, 18th January 2007, pp.115-116.

9- A. K. S. Al-Bayati, and S. Prasad, " Modified constant modulus algorithm for blind DS/CDMA detection", *IEE Electronics Letters*, Vol. 35, no. 23, 11/Nov./ 1999, pp. 2005-2006.

10- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , "Semi-Blind Space-Time Receiver for Multiuser Detection of DS/CDMA signals in Multipath Channels", *IET Communications*, Vol. 153, No.3, pp. 410-418, June 2006.

11- A. K. S. Al-Bayati, and Arif A. R. Aljudi, " Novel design of a simple and accurate white gaussian noise generator", *International Journal of Electronics*, Vol. 70, No. 2, pp. 321-326, Feb. 1991.

CONFERENCE PUBLICATIONS

12- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad, "Blind space-time constrained minimum variance detection of DS/CDMA signals", *International Conference on Communications (ICC' 2002)*, Vol.2, pp. 792-796, New York, USA, April 28-May 2, 2002.

13- A. K. S. Al-Bayati, " Multiuser detection of modulus-precoded DS/CDMA signals in a channel with time-varying attenuation", *The 6th Jordanian International Electrical and Electrionics Engineering Conference (JIEEC)*, Amman Jordan 2006.

14- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad, "Block phase precoding for blind multi-user detection in QPSK/DS-CDMA systems", *IEEE* conference *GLOBECOM' 2005*, Vol. 3, pp. 1560-1564, 28 Nov.-2 Dec. 2005 , USA.

15- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , "Block spectral precoding for blind multiuser detection of DS/CDMA signals", *International Conference on Personal Wireless Communications (ICPWC' 2002)* PP. 238-242, New Delhi, INDIA, Dec. 15-17.

16- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , Deterministic semi-blind detection of quasi-synchronous DS/CDMA signals using antenna arrays, *Eighth National Conference on Communications (NCC' 2002)* , pp. 413-417, Mumbai, INDIA, Jan. 25-27, 2002.

17- A. K. S. Al-Bayati, S. Prakriya, and S. Prasad , "Blind subspace DOA estimation in multipath DS/CDMA channels, *Eighth National Conference on Communications (NCC' 2002)*, pp.325-329, Mumbai, INDIA, Jan. 25-27, 2002.

18- A. K. S. Al-Bayati, " A novel design of a speech security system for telephone channels", *Mediterranean Electrotechnical Conference, IEEE MELECON' 91*, Vol.1, pp.456-459, Ljubljana, Slovenia, 22-24 May 1991.

19- M. N. A. Abu Rgheff, A. K. S. Al-Bayati, and A.M. Al-Jiboury, " A new FH/MFSK receiver for stationary multitone jamming", *Mediterranean Electrotechnical Conference, IEEE MELECON'89,* , pp. 436-440, Lisbon , Portugal , 11-13 April ,1989.

20-M. N. A. Abu Rgheff, A. K. S. Al-Bayati , " A new receiver design for FH-SS under multitone jamming", *International Symposium on Electronic devices, Circuits, and Systems*", Kharagpur, India, Dec. 1987.

RESEARCH RELATED ACTIVITIES

1- I am currently a regular reviewer for the *IET Communications* journal and IET *Electronics Letters*, reviewing papers in the areas of:

Multiuser detection, Blind detection techniques, Interference cancellation in multiuser systems, Detection MIMO systems, CDMA systems and performance analysis, OFDM, MC-CDMA, Multiple Access systems, statistical signal processing, digital communications in general.

2- I have reviewed several papers for international conferences such as GLOBECOM and ICC.

RESEARCH INTERESTS

Digital communications systems in general, Wireless communications, statistical signal processing in blind detection and equalization, Blind Multiuser detection techniques (specifically in DS/CDMA systems), Co-channel Interference cancellation, detection in MIMO channels, OFDM, MC-CDMA, data precoding for detection and interference cancellation and equalization, Direction of Arrival (DOA) and delay estimation, Blind detection in multiuser space-time coded systems.