

BIODATA

Name : Ajat Shatru Arora

Father Name : Mr. Ram Saran Arora

Date of Birth : 27.04.1969

Place of Birth : Amroha

Nationality : Indian

Marital Status : Married

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Kabir Nagar
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Area of Specialization : Electrical Engineering

Education Qualification:

Examination	Univ/Board	Main Subject	Year of Passing	Marks Obtd.	Class/ Division
Matric	UP Board, Allahabad	Science Subjects	1983	367/500	Ist
10+2/ Pre-Med/ Pre-Engg.	UP Board, Allahabad	Phy, Chem, Math	1985	357/500	Ist
B.E.	Univ. of Roorkee	Electrical Engg.	1990	3520/4800	Ist
M. E.	Univ. of Roorkee	Electrical Engg.	1992	1539/2000	Ist
Ph. D.	I.I.T. Roorkee	Biomedical	2002	-	-

Employment Experience:

Name & Address Employer/ Institution	Date of		Degn.	Nature of Job
	Joining	Leaving		
Director, SLIET, Longowal	5 th Feb., 1992	15 th March, 1999	Lecturer	Teaching, other academic and administrative duties
Director, SLIET, Longowal	16 th March, 1999	31 st Aug., 2007	Asst. Professor	Teaching, other academic and administrative duties
Director, SLIET, Longowal	1 st Sept., 2002	05-10-2009	Professor	Teaching, other academic and administrative duties
President, DAVCMC, New Delhi	06-10-2009	Till date	Principal	Administrative & Academic

Period of Teaching Experience: 17 Years

	Subjects Taught	Period	
		From	To
Postgraduate Classes	Biomedical Instrumentation	2002	2009
Degree Class	Basic Electrical, Microprocessor, Machines, Network Theory, Instrumentation Engineering	1993	2009
Certificate/ Diploma		1993	2007

Details of Research Work:

	Period	
	From	To
Own research Work	Aug, 1998	Oct., 2002
Supervising Research (Details attached as Annexure- I)	2005	Till date

Publications:

Description	No. of Publications
International Journal	06
National Journal	06
International Conference	07
National Conference	28

Seminars/ Conferences/ Workshops/ Refresher Courses etc. participated and sessions presided over:

1. Curriculum Development Workshop at TTTI, March 2004, Chandigarh.
2. Attended short term course on DSP and its Applications at SLIET, Longowal, during Dec 22, 2003 to Jan 2, 2004.
3. Attended One day seminar *Telemedicine: A Vision Tuned Mission*, 19th March, 2004, IIT, Delhi.
4. Delivered Expert lecture at TIET, Patiala, in short term course on “*Recent trends in sensors & their applications*” during May 22-June 02, 2006.
5. Delivered Expert lecture at NIT Jalandhar, in short term course on “*Recent Advances in Instrumentation & Control Engineering*” from March 05-09, 2007.
6. Delivered Expert Talk on ‘Wellness for computer Professionals’ during Symposium on Current Trends in Computer Engineering and IT’ conducted by CSE Department, SLIET, Longowal during March 25-26, 2008.
7. Rapporteur for technical session during National Conference on Communications and Networking (NCCN-08) organized by ECE Department, SLIET, Longowal, March, 2008.
8. Conducted a session on ‘Application of AI Techniques in Biomedical Engineering’ during AICTE sponsored Summer School on ‘Artificial Neural Networks and Fuzzy Logic’ at NITTTR, Chandigarh, on 31st July, 2008.
9. Attended as Expert Regional Workshop for designing Curricula for Non formal programmes for the scheme of PWDs, Organised by NITTTR and SLIET, Nov 5-7,2008.
10. Chaired a session at National conference on Technological Advances and computation Techniques in Electrical Engineering (TACT-09), NIT, Hamirpur, March 16-17,2009.
11. Delivered an Invited Talk on Development of Prosthetic Hand at CSIO, Chandigarh.
12. Delivered an Expert Lecture on ‘ Applications of Artificial Intelligence in Engineering Research’ During Short term course on Engineering Research Methods organized by Mechanical Engineering Department, SLIET, Longowal March, 2009
13. Attended a workshop at IIT, Roorkee on MeLT Project as an Expert, May, 2009.
14. Attended International Conference ICBBE-09, Beijing, China, 11-13 June, 2009

15. Delivered lecture on 'Application of Biomedical Engineering in Automation of Industries' during AICTE sponsored Summer School on 'Automation in Industries' at NITTTR, Chandigarh on 24th July, 2009.

Significant Contribution towards teaching/ academic environment/institutional corporate life at SLIET, Longowal:

Major contributions in the above mentioned field are listed below:

- a. Guided 16 M. Tech. Thesis and 3 are under progress
- b. At present 5 Candidates are registered for Ph.D.
- c. Continuously involved in PG teaching
- d. Continuously guided B. Tech/ Diploma projects
- e. Using computer aided guidance to students
- f. Encouraged the students to develop PPT presentations after completion of course
- g. Actively involved in counseling the students
- h. **Sports-** Faculty advisor for *badminton*. Accompanied the badminton team for inter engineering competition and coached the students.
- i. **Construction wing-** member of construction committee was responsible for looking after the electrical works in buildings.
- j. **Cultural Festival-** was involved in organization of national level cultural & technical festival during 1996, 1997, 2003 and 2004. During 1996 & 1997 as core group member, 2003 as **faculty advisor** and 2006 and 2008 as **Chairman**. Was also involved in organization of institute level cultural festivals.
- k. **Entrance test-** was involved in conducting the entrance test as *Core committee member* (1997, 1998 & 2004) and *convener* of various committees (2002, 2003, 2005 and 2006). Has handled the responsibility for *coding of answer sheets, decoding of answer sheet, dispatch of material to different centres, Centre observer, flying squad, copy checking, paper setting* etc.
- l. **Purchase Committee-** Has been member of central purchase committee twice. Presently member of central purchase committee.
- m. **Academic Board-** Has been member of academic board for several years. Presently member of academic board from the department.
- n. **PTU BOS-** has been member of BOS Electrical & Instrumentation Engineering for Punjab Technical University, Jalandhar.
- o. **Student Counseling-** Chief Student's Counselor from 2005 till date. Responsible for coordinating the student counseling through nearly 70 course counselors.
- p. **Inter-Institute Activities:**
Delivered expert lectures at TIET, Patiala, NIT, Jalandhar, NITTTR, Chd. and SLIET, Longowal
Member Institute Research Board at TIET, Patiala.
External Examiner for Practicals
Paper setter for different Universities.
M. Tech. Thesis Evaluation

q. **Administrative Experience:**

Administrative experience as *Head of department, Chief warden, Chairman Library Committee, Chairman Techfest, Chief Student's Counselor, Chairman, Health Centre and Chairman, Media Committee, Convener Central Inspection Committee.*

Membership of Professional Societies:

1. ISTE
2. Punjab Academy of Sciences

Referees:

S. N.	Name	Occupation/Position	Address
1.	Prof. S.C. Saxena	Director	Indian Institute of Technology Roorkee, Roorkee-247667 (UA) India
2	Dr. V. Sahni	Director	SLIET, Longowal
3	Prof. C. L. Kochher	Regional Director (Engg. Colleges) DAVCMC, New Delhi C/o. DAV Institute of Engg. & Technology, Jalandhar	DAV Institute of Engg. & Technology, Kabir Nagar, Jalandhar-144008

Annexure- I

M. Tech. Thesis Guided

S. N.	Name of Students	Title of the Thesis	Main Guide	Co-guide(s)
1.	Mr. Navleen Singh	Analysis and classification of EMG signal for limb function	Dr. A.S. Arora	Dr. Sukhwinder Singh
2.	Mr. Gurmanak Kaur	Analysis of EMG signal using soft computational techniques for neuromuscular disease identification	Dr. A.S. Arora	-
3.	Mr. Neeraj Kumar	Development of Control Strategy for EMG based multifunction Prosthetic Hand	Dr. A.S. Arora	-
4.	Mr. Deepak Joshi	Study and development of threshold based EMG prosthetic hand	Dr. A.S. Arora	-
5.	Mr. Ranjan Walia	Identification and Classification of MUAPS for the Neuromuscular Disorders	Dr. A.S. Arora	Mr. S.K. Soni
6.	Mr. Pawan Kumar	Multifunction prosthetic controller using fuzzy logic technique	Dr. A.S. Arora	-
7.	Mr. Amit Kaul	Text Independent speaker recognition system	Dr. A.S. Arora	Mr. Manmohan Singh
8.	Ms. Navneet Jassar	Neuromuscular Disease Diagnosis Using Neural Networks	Dr. A.S. Arora	Mr. S.K. Soni
9.	Ms. Preeti	Mathematical Modeling of EMG	Dr. A.S. Arora	Mr. S.K. Soni
10.	Ms. Surbhi Sharma	Reconfigurable Reed-Solomon CODEC design using FPGA	Dr. R.C. Chauhan	Dr. A.S Arora Mr. Sanjay Sharma
11.	Ms. Neelam Kaushik	ECG disease diagnosis	Dr. A.S. Arora	Ms. Manpreet Kaur
12.	Ms. Parminder Kaur	Study on Trends in Power System Load Dispatch and Control Centre	Dr. R.C. Chauhan	Dr. A.S Arora
13.	Mr. Parveen Garg	Realization of an Neural Network based Adaptive controller	Sh. S. Chatterji	Dr. A.S. Arora Ms. Lini Mathew
14.	Ms. Jasjeet Kaur	Mathematical Morphology based segmentation of Medical Images	Dr. A.S. Arora	Dr. Savita Gupta
15.	Ms. Nidhi	Classification of ECG signals using Wavelet	Dr. A.S. Arora	Ms. Manpreet Kaur
16.	Mr. Jatindera Yadav	Baseline removal of EMG signal using adaptive filtering	Dr. A.S. Arora	-

Thesis under process at Ph.D.

S. N.	Name	Title of Thesis	Main Guide	Co-guide(s)
1.	Mr. Sunil Singla	Development of dual biometric security solutions for human authentication	Dr. A. S. Arora	-
2.	Ms. Manpreet Kaur	Analysis of ECG	Dr. A. S. Arora	-
3.	Mr. Hardeep Singh	Study of issues in development of electronically operated prosthetic hand	Dr. Ravinder Agarwal	Dr. A. S. Arora
4.	Mr. Manoj Goel	Studies on RSI	Dr. Rajesh Kumar	Dr. A. S. Arora
5.	Mr. Amit Kaul	Multimodal biometric system	Dr. Sushil Chauhan	Dr. A. S. Arora
6.	Ms. Pratibha Tyagi	Study on Back Rest	Dr. A. S. Arora	Dr. Vikas Rastogi
7.	Mr. J. S. Aujala	Energy Management	Dr. A. S. Arora	Dr. Rajesh Kumar

Sponsored Projects Undertaken

Sr. No.	Title of the Project	Cost	Period	Funding agency	PI & Co-PI
1.	Development of EMG based Hand Prosthesis	9 lakhs	2 Years	MHRD	A.S. Arora, PI
2.	Development of expert system for EMG based neuromuscular Disease Diagnosis	10 lakhs	3&1/2 Years	MHRD	A.S. Arora, PI S.K. Soni, Co-PI
3.	Modernization of Biomedical Signal Processing Lab	10 Lakhs	2 Years	MHRD	A.S. Arora, Co-PI S.K. Soni, PI

Details of Refresher Courses/Summer School/ Short term courses/ Conference/ workshop organized

Name of Course	Duration	
	From	To
National seminar on 'Challenges in Vocational & Technical Education to Persons with Disabilities'	24-9-2002	25-9-2002
One Day Workshop on 'Education, Training and Rehabilitation of Persons with Disabilities'	28-02-2004	-
One Day Workshop on 'INDEST's User Convention'		
National conference on 'Computational Intelligence in Electrical Engineering', CIEE-05 during 18-19 Nov,2005 as organizing secretary	18-11-2005	19-11-2005
Short Term course on 'Telemedicine: Information Technology in Biomedical Engineering'	23-12-2002	03-01-2003