

BIOGRAPHICAL SKETCH: Dr. P. MANNAR JAWAHAR (updated on 10-11-17)

Address:

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Senior Professor (Rtd.) and
Former Vice Chancellor, Anna University, Chennai.

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POSITION TITLE: At present Vice-Chancellor, Karunya Institute of Technology and Sciences,
Deemed-to-be-University, Karunya Nagar, Coimbatore.

EDUCATION / TRAINING:

INSTITUTION	DEGREE	FIELD OF STUDY
Warsaw University of Technology, Poland.	Post-Doctoral Research	Vehicle Dynamics
Indian Institute of Technology, Delhi	Ph.D.	Vehicle Dynamics
P.S.G College of Technology, Coimbatore	M.E.	Mechanical Engg.
Madras Institute of Technology, Chennai	DMIT	Automobile Engg.
Madurai Kamaraj University, Madurai	B.Sc.	Mathematics

A. CURRENT RESEARCH FOCUS:

Vehicle Dynamics

Mathematical Modelling and Analysis of Biological, Psychological and Sociological Processes
Biomedical Engineering,

B. POSTING

1. Senior Professor, Department of Automobile Engineering, MIT campus, Anna University, 2009-2013
2. Professor, Department of Automobile Engineering, MIT campus, Anna University 1998-2009
3. Associate Professor, Department of Automobile Engineering, MIT campus, Anna University, 1990-1998
4. Assistant Professor, Department of Automobile Engineering, MIT campus, Anna University, 1978-1990

C. POSITIONS

1. Vice Chancellor, Anna University, Chennai, 2008-2012
2. Director, Board of NLC Tamil Nadu Power Ltd. (NTPL), (On the recommendation of Her Excellency, the former President of India Smt. Pratibha Patil) 2011-2014
3. Director, Centre for University Industry Collaboration, Anna University, 2004-2008
4. Head, Department of Automobile Engineering, MIT, Anna University, Chennai, 2006-2008
5. Head, Department of Production Engineering, MIT, Anna University, Chennai, 2002- 2004
6. Head, Department of Automobile Engineering, MIT campus, Anna University, 1999-2002
7. Head, Department of Automobile Engineering, MIT, Anna University, Chennai, 1993-1996
8. Vice President, MIT Alumni Association, 2002-2008
9. President, Automobile Engineering Association, 1998-2002
10. Placement & Training Officer, MIT Campus, 1994-2004

11. Transport Officer, 1990-1993
12. Executive Warden, MIT Hostels, 1990-1994
13. Deputy Warden, MIT Hostels, 1980-1986
14. Technical Assistant to the Director, MIT Campus, 1980-1984
15. Secretary, Staff Recreation Club, MIT Campus, 1979-1984

D. CHAIRMANSHIP

1. Chairman, AICTE (SRC), 2010-2011
2. Co-Chairman, Engineering Accreditation and Evaluation Committee (EAEC) of the National Board of Accreditation, 2012-2015
3. Chairman, Standing Hearing Committee, AICTE, New Delhi, 2016-2017
4. Chairman, The Syndicate, Anna University, Chennai, 2008-2012
5. Chairman, Board of Studies, Anna University, 2008-2012
6. Chairman, Finance Committee, Anna University, Chennai, 2008-2012
7. Chairman, Executive Committee of the Centre for Sustainable Coastal Zone Management, 2010-2012
8. Chairman, Governing Council, AU-KBC Research Centre, Anna University, Chennai, 2008-2012
9. Chairman, Tamil Nadu Engineering Admissions (TNEA), 2008-2012
10. Chairman, Tamil Nadu Common Admission (TANCA), 2008-2012
11. Chairman, Tamil Nadu Common Entrance Test (TANCET), 2008-2012
12. Chairman, Academic Council, Anna University, Chennai, 2008-2012
13. Chairman, Executive Council of Departments/Centres/Institutes of Anna University, 2008-2012
14. Chairman, Board of Studies, Faculty of Mechanical Engineering, Anna University, 2002-2004

E. EXPERT MEMBER / ADVISORY MEMBER / COUNCIL MEMBER

1. Expert Member, Departmental Promotion Council, Vikram Sarabhai Space Centre (VSSC), 1994-2007
2. Expert Member, Departmental Promotion Council, Indian Space Research Organization (ISRO), 1994- 2007
3. Expert Member, Selection/promotion committee, Defence Research and Development Organization (DRDO), 2002-2017
4. Expert member, Tamil Nadu State Council of FICCI, 2005-2008
5. Expert member, Madras Chamber of Commerce, 2005-2008
6. Expert Member, AICTE, 1996-2017
7. Member Secretary, Executive Committee of Centre for University-Industry Collaboration, Anna University, 2004-2008
8. Advisory Council Member, Small Industries Services Institute (SISI), 2006-Till Date
9. Member, Board of Studies, Anna University, Chennai, 1993-2008
10. Member, Board of Studies, PSG College of Technology, 2004-2007
11. Member, Board of Studies, Karunya University, 1998-2007
12. Member of Academic Council, Anna University, Chennai, 1993-2008
13. Member, Centre for Research on Sustainable Agricultural and Rural Development (CRSARD), M S Swaminathan Research Foundation, 2010-2012
14. Member, Governing Council, Kamaraj College of Engineering and Technology, 2004-2007
15. Member, Grievance Redressal Committee, Anna University, 2002-2005
16. Ex-officio Member, Advisory Board of Vice-Chancellors, Tamil Nadu State Council For Higher Education (TANSCH), 2008-2012

F. ADDITIONAL RESPONSIBILITIES

- 1. Camp Officer, Central Valuation, Self-financing Colleges, 2002-2003 (2 times)**
- 2. Chief Superintendent for University Examinations, 1999-2002 (6 times)**
- 3. Chief Coordinator - Entrance Examinations, 1993-1995 (3 times)**
- 4. Faculty Advisor of Automobile Engineering Association, 1991-1998**
- 5. NSS coordinator at MIT Campus, 1978-1982**

G. AUTHORED BOOKS

- 1. Mathematical Modelling of systems and Analysis, Publisher: Prentice Hall (PHI) (In Press), 2017.**
- 2. Text Book on Engineering Mechanics, Publisher: DD Publishers, 2002.**

H. EDITED BOOKS

- 1. ACMA Automobile Engineering, Publisher: Anna University.**
- 2. Strength of Materials, Publisher: Anna University, 2004.**

I. EDITORIAL EXPERIENCE

- 1. Editor, Computational Methods for Dental Image Analysis, IGI Global Publishers**
- 2. Guest Editor, Current Bioinformatics (Impact Factor - SCI: 0.77)**
- 3. Guest Editor, European Journal for Biomedical Informatics (Official Journal of the European Federation for Medical Informatics)**
- 4. Member, Scientific Board, International Journal of Advances in Chemical Engineering and Biological Sciences**

J. BOOK CHAPTERS

- 1. "Coupling of Optimization Algorithms Based on Swarm Intelligence: An Application for Control of Heroin Addiction Epidemic", in Nature-Inspired Intelligent Techniques for Solving Biomedical Engineering Problems, IGI Global Publishers, 2017 (Accepted)**
- 2. "Linear Modelling the Simulation of Railway Car Body with Conventional and Unconventional Wheel Set", in Advances in Mechanical Engineering – Volume II –Mechanics and Thermal Sciences, Narosa Publishing House, 1996.**
- 3. "Chapter 2: Automobiles–Introduction", in ACMA Automobile Engineering, Publisher: Anna University.**
- 4. "Chapter 10: Suspension Systems", in ACMA Automobile Engineering, Publisher: Anna University.**
- 5. "Chapter 16: Modern Developments in Vehicle Technology", in ACMA Automobile Engineering, Publisher: Anna University.**
- 6. "Chapter 6: Deflection of Beams", in Strength of Materials, Publisher: Anna University, 2004.**

K. MEMBERSHIP IN PROFESSIONAL SOCIETIES/ASSOCIATIONS

- 1. Fellow Member, The Institution of Engineers**
- 2. Member, Society of Automobile Engineers (USA)**
- 3. Member, Indian Society for Non-Destructive Testing**
- 4. Member, Indian Society of Mechanical Engineers**
- 5. Member, Indian Society for Technical Education**

L. AWARDS AND HONORS

1. Fellow of Institution of Engineers (India), 1992
2. Chartered Engineer, Institution of Engineers, 1992
3. Tom Engibus Shield, Texas Instruments India, 2009
4. Google Award, Google, 2010
5. PrakrithiRatna Award, Exnora International, 2012

M. IMPORTANT ACADEMIC/RESEARCH VISITS ABROAD

(Visited several foreign countries for research activities, invited talks, and establishment of bilateral academic relationships)

Poland, Japan, Singapore, Switzerland, France, Italy, Sweden, Norway, UK, Canada, USA, China, Saudi Arabia, Malaysia, Hong Kong, Taiwan, Amsterdam, Belgium, Oman, Bhutan, UAE, Maldives, Australia

N. PROJECTS

1. Principal Investigator, For the Project titled “ IT Enabled Soft-Skill Training Programme” for 5000 Engineering Graduates to enhance their employability skills on Soft Skills and Mobile Communication, funded by Ministry of Telecommunications, New Delhi, 2010-2012, Rs 3 Crores
2. Establishment of a National Centre at Anna University, Chennai for Sustainable Coastal Zone Management, Ministry of Environment and Forest (MOEF), Government of India, since 2011, Rs. 166 .27 crores

O. CONSULTANCY WORK

1. SISI, Madras, Training for ITI Students, 1982
2. Brakes India Limited, Material change to strengthen the pivot, 1990
3. Pallavan Transport Corporation, Fabrication of Semi-automatic transmission, 1991
4. Ashok Leyland Limited, Training for the new recruits, 1989-1994
5. Engine Valves India Ltd., Training for the new recruits, 2000-2001
6. India Piston Ltd., Training for the new recruits, 2001
7. Renault – Nissan, Training for the new recruits, 2008
8. Cognizant Technology Solutions, Training for recruits, 2006-2007

P. SELECTED/IMPORTANT PUBLICATIONS FROM THE PAST FIVE YEARS (2012-2017)

Article Title	Journal	Impact Factor
Selection of Surface Electrodes for Electrogastrography and Analysis of Normal and Abnormal Electrogastrograms using Hjorth Information (Accepted)	International Journal of Biomedical Engineering and Technology	0.7
Effect of Electrode Contact Area on the Information Content of the Recorded Electrogastrograms: An Analysis based on Rényi Entropy and Teager-Kaiser Energy	Polish Journal of Medical Physics and Engineering	0.108
Comparison of Particle Swarm and Bacterial Foraging Optimization Algorithms for Therapy Planning in HIV/AIDS Patients	International Journal of Biomathematics	0.805

Comparison of Swarm Intelligence Techniques for Estimation of HIV-1 Viral Load	IETE Technical Review	0.888
Prediction of Human Immunodeficiency Virus-1 Viral Load from CD4 Cell Count Using Artificial Neural Networks	Journal of Medical Imaging and Health Informatics	0.503
Hybrid BFPSO algorithm based estimation of optimal drug dosage for antiretroviral therapy in HIV-1 infected patients	BMC Infectious Diseases	2.613
Particle Swarm Optimization Based Estimation of HIV-1 Viral Load in Resource Limited Settings	African Journal of Microbiology Research	0.539
Coupled jumping frogs/particle swarm optimization for estimating the parameters of three dimensional HIV model	BMC Infectious Diseases	3.025

Q. DOCTORAL STUDENTS SUPERVISED

CANDIDATE	TITLE OF THESIS	DATE OF AWARD OF DEGREE
Dr. Kamalanand K	Swarm Intelligence Techniques and Artificial Neural Networks based HIV-1 Viral Load Estimation	February 2015
Dr. Arunachalam K.	Design and Fabrication of Quarter Car Model to study the Performance of Active Suspension System	June 2007
Dr. Prem Jeyakumar M.	Modeling, Simulation and Analysis of an Automotive Vehicle System	December 2006
Dr. Kumaraswamidhas L.A.	Computer simulation of railway vehicle to analyze lateral stability, response and sensitivity	April 2006
Dr. Shenbaga Vinayaga Moorthi N.	Development of an Integrated Model for the Prediction of Diesel Fuel Spray Characteristics	April 2006
Dr. Abubackar K.M.	Design Optimization of Final Drive of a Heavy Vehicle using Improved Genetic Algorithms	December 2005
Dr. SenthilKumar M.	Mathematical Simulation for Lateral Dynamics of Conventional and Unconventional Railway Car body	February 1999

R. EXAMINERSHIPS

- 1. Examiner in State Public Service Commission including Tamil Nadu, Andhra Pradesh and Karnataka.**
- 2. Examiner of Doctoral Theses in Various Universities at the National and International levels.**
- 3. External Examiner for a number of Ph.D. Viva Voce Examinations.**

S. IMPORTANT MOU'S FORMULATED FOR ACADEMIC COLLABORATIONS

- 1. Instrumental in signing more than 100 MoU's between Several Universities, Institutions, Industries with Anna University, Chennai.**
- 2. Initiated a number of MoUs between Anna University and foreign Universities like University of Nebraska USA, Curtin University of Technology, Australia, Technical University of Liberec, Czech Republic, Ryerson University, Canada and 90 more universities across the globe.**
- 3. Spearheaded several MoUs between Anna University and Industries like Cognizant Technologies Solutions, AIEMA, NISSAN, Cypress Semi-Conductor Corporation.**
- 4. Signed MoU's between Anna University and Ministry of Environment and Forests, Government of India, Department of Science and Technology, CVRD, etc**

T. FORMULATION OF ACADEMIC PROGRAMMES

P.G. PROGRAMMES INTRODUCED

- 1. M.E. Aerospace Technology**
- 2. Solar Energy**
- 3. Rubber Technology**
- 4. Space Technology**
- 5. Printing and Packaging Technology**
- 6. Transport Engineering**
- 7. M.Tech (IT) and**
- 8. M.Sc. Computer Science (Free/Open Source Software)**
- 9. M.Sc. Computational Biology**
- 10. MBA Hospitality Management**

ESTABLISHED FOUR NEW DEPARTMENTS:

- 1. Department of Information Science & Technology**
- 2. Department of Computer Technology**
- 3. Department of Medical Physics**
- 4. Department of Applied Science and Technology**

ESTABLISHED FOUR NEW CENTRES:

- 1. Centre for Food Technology**
- 2. AU-RU Urban Energy Centre**
- 3. Technology Incubation Centre**
- 4. AU-BCT Kalam Centre of Excellence**

FORMULATED SEVEN DIVISIONS UNDER NATIONAL CENTRE FOR SUSTAINABLE COASTAL MANAGEMENT:

- 1. Geospatial Sciences Division**
- 2. Integrated Social Sciences & Economics Division**
- 3. Coastal Impact Assessment Division**
- 4. Conservation of Coastal & Marine Resources Division**
- 5. Knowledge Governance & Policy Division**
- 6. Futuristic Research Division**
- 7. Integrated Island Management Division**

ESTABLISHED SEVEN NEW LABORATORIES:

- 1. Automotive Electronics Lab**
- 2. Embedded System Lab**
- 3. Automotive Electrical Testing Lab**
- 4. Automotive Engine Calibration lab**
- 5. Modern Automotive Components Lab**
- 6. Modern Engine & Vehicle Testing Lab**
- 7. Modelling and Simulation Lab**

U. SELECTED/IMPORTANT CONFERENCE PUBLICATIONS

- 1. Hybrid BFPSO algorithm based estimation of optimal drug dosage for antiretroviral therapy in HIV-1 infected patients, in *2nd International Science Symposium on HIV & Infectious Diseases, 2014, Chennai.***
- 2. Bacterial Foraging Based Estimation of Optimal Drug Dosage for Anti Retroviral Therapy in HIV/AIDS Patients, in *International Conference on Biomedical Systems, Signals and Images, IIT Madras, 2012.***
- 3. Resource Limited Estimation of HIV-1 Viral Load From CD4 Cell Count Using Coupled Bacterial Foraging/Jumping Frogs Algorithm, in *World Allergy Organization– International Scientific Conference, 2012, Hyderabad.***
- 4. Estimation of HIV-1 Viral Load from CD4 Cell Count using Bacterial Foraging Optimization and Three Dimensional HIV/AIDS model, in *1st Asian Conference on Hepatitis B and C, HIV and Influenza, 2012, Beijing China.***
- 5. Coupled jumping frogs/particle swarm optimization for estimating the parameters of three dimensional HIV model, in *HIV Science, 2012, Chennai.***

V. SELECTED/IMPORTANT ACADEMIC/RESEARCH EVENTS ORGANIZED

- 1. Two-day International Workshop on Electromagnetic Forming Technology (inaugurated by His Excellency Dr APJ Abdul Kalam), 2010.**
- 2. International Conference on Materials, Design and Manufacturing Process, Anna University, 2016. III. International Conference on Angiogenesis: Basics and Applications, Chennai India, 2012.**
- 3. 2nd International SAEINDIA Mobility Conference, 2002.**
- 4. V.Joint Secretary, National Conference on Advances in Automobile Engineering, in commemoration of the Golden Jubilee of Madras Institute of Technology, 1998.**

W. SALIENT CONTRIBUTIONS TO EDUCATION/SOCIETY

- 1. Instrumental in starting the novel and innovative programme called Tamil Nadu State Level Placement Programme (TNSLPP), beneficial for the students studying in all the Self-Financing Engineering Colleges throughout Tamil Nadu, due to which around 22000 students from the 222 engineering colleges in Tamil Nadu and 9000 students from University Departments have been placed in various National and Multinational Software & Core Engineering Companies with a minimum salary of Rs. 20,000/- per month within a duration of 3 years (2005-2008).**
- 2. Patron for the project funded by THADCO, Government of Tamil Nadu, to conceptualize in devising an employability skill for 900 SC/ST engineering students studying in affiliated Engineering Colleges.**
- 3. During the tenure as Vice Chancellor of Anna University, Chennai the University became the first University among the Indian Universities to create the indigenous design and development of ANUSAT, a micro satellite, by the faculty members and students. ANUSAT was launched on 20th April, 2009 and successfully performed its work in the orbit for 3 years till 19th April, 2012.**
- 4. Organizer and Resource Person for: National Seminars on “Modern Trends in Automobile Engineering” and other areas (5 times during 1994, 1996, 1999, 2000 & 2002), Faculty Development programmes (2 as coordinator), 12 AICTE sponsored summer and winter schools (3 as coordinator),**
- 5. On several occasions, given invited talks in “All India Radio and T.V.” on a variety of subjects, towards popularizing Engineering principles, counseling, etc.**
- 6. Given Live Interviews on Counseling, Higher Studies and Job Opportunities in Engineering on various TV channels.**
- 7. Motivational speaker at various forums like “Vettri Nichayam” particularly for the benefit of rural students.**
- 8. During the tenure of Vice Chancellor, initiated the free basic computer Education to impart 120 self-help groups through NSS Cell of Anna University.**
- 9. Conducted an awareness programme in association with BSNL, Tamil Nadu on the topic “Mobile Communications” for the benefit of students of affiliated engineering colleges in Tamil Nadu.**
- 10. Organized “IT Enabled Soft-Skill Training Programme” for 5000 Engineering Graduates to enhance their employability skills on Mobile Communication and Soft Skills**
- 11. Organized socially relevant training programmes to help and assist the underprivileged youth in the locality through T.V. and All India Radio.**
- 12. Initiated the free basic computer Education to impart 120 self-help groups through NSS Cell of AU.**
- 13. Instrumental in installing the Open Source Lab by Cognizant Technology Solutions Ltd. benefiting the University.**
- 14. Established “National Hub for Healthcare Instrumentation” worth Rs.12.66 crores to strength research in the areas of Biotechnology and Instrumentation.**
- 15. Established “National Institute for Sustainable Coastal Zone Management (NISCZM) exclusively for coastal studies worth Rs, 166.27 crores**
- 16. “MISSION – 10X” to initiate Skill enhancement Programme for the Engineering Teachers in Tamil Nadu. 1500 teachers were benefitted in this programme.**
- 17. Initiated the creation of constituent colleges at Tindivanam, Villupuram and Arni.**
- 18. Guided 78 & 22 candidates respectively in their UG/ PG project work.**
- 19. Secured R&D funding from various agencies such as UGC, DST, AICTE, DIT, DBT, DRDO, CSIR, ICMR, Ministry of Science & Tech, Ministry of Environment and Forest, etc.**
- 20. Declared Anna University as Tobacco Free Zone.**
- 21. During the tenure of Vice Chancellor, Anna University came to 5th position among 319 universities in India and 200th position in the world.**
