RESUME

Dr. A. ARIVAZHAGAN
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OBJECTIVE

To pursue a challenging career, utilizing my skills for the growth of the organization, which in turn will provide an environment where ethics and talent reign supreme, leading to my professional and personal growth.

SUMMARY & SKILLS

- ***5 years*** of research experience in Vehicle Dynamics and Control Systems.
- ***5 years*** of work experience in the Teaching Field.
- ***11 months*** of work experience in Quality Control.
- Good Knowledge in ***Matlab, Simulink, Auto CAD and Pro-e***.
- Highly determined, committed and confident.

ACADEMIC QUALIFICATION

Course	Institute	Year of Completion	Marks
Ph.D. (Full-time)	Anna University – MIT Campus, Chennai.	2021	8.43 CGPA
M.E – Automobile (Part-time)	Anna University – MIT Campus, Chennai.	2014	6.72 CGPA
B.E – Mechanical (Full-time)	Sri Sai Ram Engineering College, Chennai.	2007	67 %
Higher Secondary (Regular)	J.R.K. Matriculation School, Chennai.	2003	76 %
S.S.L.C (Regular)	J.R. Matriculation School, Chennai.	2001	73 %

WORK EXPERIENCE

ANNA UNIVERSITY, MIT Campus – CHENNAI

Designation : Project Fellow under UGC – SAP project
Project Title : Development of Vehicle Dynamics Laboratory
Department : Automobile Engineering
Period : July 2017 – January 2018.

Responsibilities

- Modeling and simulation of vehicle suspension system in Matlab/Simulink.
- Ride comfort analysis in terms of sprung mass acceleration and pitching acceleration.
- Scientific findings are presented and published in reputed journal and conferences.
- Preparation of the minutes of technical committee meeting.

VELS UNIVERSITY – CHENNAI

Designation : Assistant Professor
Department : Mechanical Engineering & Automobile Engineering
Period : May 2014 – January 2016.

VELS UNIVERSITY – CHENNAI

Designation : Teaching Assistant
Department : Mechanical Engineering & Automobile Engineering
Period : January 2011 – May 2014.

Responsibilities

- Department ERP Co-ordinator.
- One of the members in the University exam cell.
- Co-ordinator for the national level seminar on Computational Fluid Dynamics.
- Co-ordinator for national level technical symposium IGNIZ – 2K13.
- Organizing committee member in various Department and University activities.

Subjects Handled

- Automotive Transmission, Vehicle Dynamics
- Engineering Mechanics, Kinematics of Machinery, Dynamics of Machinery
- Automobile Engineering, Materials Engineering
- Basics of Civil and Mechanical Engineering

K.K. PRESS TOOLS AND COMPONENTS PRIVATE LIMITED – CHENNAI

Designation : In-process Quality in Charge
Period : June 2008 – April 2009.

Responsibilities

- In-process Quality In-Charge.
- Raising In-process sheet, In-process rejection reports and processing the updates, Quality Problem Counter Measure Reports and PPAP Documents.
- Member of the KAIZEN group and maintaining 5S.

RESEARCH EXPERIENCE

Completed my full-time Ph.D. in the faculty of Mechanical Engineering and my Ph.D. thesis entitled "***Investigation on Ride Comfort Behavior Adopting Driver and Passenger Biomechanics in Active Suspension System***" under the guidance of Dr. K. Arunachalam, Department of Automobile Engineering, MIT campus, Anna University, Chennai.

RESEARCH THEME

My research work is mainly focused on to address the following factors:

i. 14-DOF human vehicle road integrated system model is extensively developed to consider the response of passenger in addition to the driver and sprung mass cabin.
ii. Ride comfort in terms of occupants (including driver and passenger) head acceleration, sprung mass acceleration and pitching acceleration are considered.
iii. The severity among the driver and passenger, when exposed to vertical vibration, is studied with the aid of the developed model.

iv. Then, active suspension based on the genetic algorithm optimized proportional integral derivative controller is incorporated to enhance the vehicle performance.
v. Eventually, the human biomechanical responses are compared with the ISO 2631-1:1997 Health guidance caution zone (Annexure-B) graph.

AREA OF SPECIALIZATION

- Vehicle Dynamics and Control Systems
- Mathematical Modeling and Simulation
- Human Body Response to Vibration
- Passive and Active Suspension Systems
- Parameter Optimization

INTERNATIONAL VISIT

(As Anna University Research Scholar)

1. Visited the ***United States of America*** for presenting a paper under the title of "Study and Analysis of the Behavior of a Seated Human Body in a Vehicle by the Influence of an Active Suspension System" in ***WCX SAE World Congress Experience 2019*** organized by SAE International held on from April 9 – 11, 2019 at Detroit, MI, USA. The Visit was financed through the ***CSIR Travel grant***.

GRANT RECEIVED

(As Anna University Research Scholar)

1. Received an amount of ***Rs 140010/-*** (Full Air Fare Only) from ***CSIR Travel grant*** during February 2019 to participate in the WCX SAE World Congress Experience - 2019 held in Detroit, Michigan, USA.

JOURNAL PUBLICATIONS

(As Anna University Research Scholar)

1. ***Arivazhagan Anandan*** & Arunachalam Kandavel, "Combined input-output finite-time stability with H_∞ static output-feedback control approach for active suspension", ***IETE Journal of Research***, 2021, doi:10.1080/03772063.2021.1973587. ***IF – 1.125.***
2. ***Arivazhagan Anandan*** & Arunachalam Kandavel, "Investigation and performance comparison of ride comfort on the created human vehicle road integrated model adopting genetic algorithm optimized proportional integral derivative control technique", ***Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics***, 2020, vol.234, no.2, pp. 288-305. ***IF – 1.713***.
3. ***Arivazhagan Anandan*** & Arunachalam, K, "Enhancement of Occupant Ride Comfort by GA Optimized PID Control Active Suspension System", ***SAE Technical Paper*** 2020-01-1532, doi:10.4271/2020-01-1532, 2020. ***IF – 0.51.***
4. ***Arivazhagan Anandan*** & Arunachalam, K, "Behavioral Study on Passenger and Driver Dynamics Utilizing 14-DOF Half Car Active Suspension System", ***SAE Technical Paper*** 2020-01-1006, doi:10.4271/2020-01-1006, 2020. ***IF – 0.51.***
5. ***Arivazhagan Anandan*** & Arunachalam, K, "Study and Analysis of the Behavior of a Seated Human Body in a Vehicle by the Influence of an Active Suspension System", ***SAE Technical Paper*** 2019-01-0403, doi:10.4271/2019-01-0403, 2019. ***IF – 0.51.***

6. ***Arivazhagan Anandan***, Arunachalam Kandavel, and Arockia Suthan Soosairaj, "Comparison of quarter car suspension model using two different controllers", ***Lecture Notes in Mechanical Engineering***, Springer, Singapore, 2019.

   (As Vels University Faculty)

7. Vijayraj S, ***A Arivazhagan***, G Prakash, and G Prabhu "Optimization of Machining Parameters of AL-SIC Nano Composites Using DOE", ***International Journal of Applied Engineering Research***, Vol. 10, no. 7: 2015. ***IF – 0.51.***

CONFERENCE PRESENTATIONS

INTERNATIONAL

(As Anna University Research Scholar)

1. Paper presented under the title of "Study and Analysis of the Behavior of a Seated Human Body in a Vehicle by the Influence of an Active Suspension System" in WCX SAE World Congress Experience 2019 organized by SAE International, held on from April 9 – 11, 2019 at Detroit, MI, USA.
2. Paper presented under the title of "Influence of vehicle speed and suspension damping on human body in passenger car", in FISITA 2018 World Automotive Congress, held at Chennai Trade Centre from October 2 – 5, 2018.
3. Paper presented under the title of "Comparison of quarter car suspension model using two different controllers", in the IDAD - 2018 conducted from 22 – 24 February 2018 at Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai.
4. Paper presented under the title of "Study and Comparison of Quarter Car Suspension Model" in the International Conference on Civil, Mechanical, Chemical Engineering & Technologies – 2018 (ICCMCT - 2018) organized by SVS College of Engineering, held on 23 & 24, February 2018 at Coimbatore.
5. Paper presented under the title of "PID Controller for 3-DOF Quarter Car Active Suspension Model" in the International Conference on Civil, Mechanical, Chemical Engineering & Technologies – 2018 (ICCMCT – 2018) organized by SVS College of Engineering, held on 23 & 24, February 2018 at Coimbatore.

   (As Anna University PG Student)

6. Paper presented under the title of "Development and testing of Vehicle Speed Controller by using Image Processing for Hybrid Vehicle Safety" in the International Conference on Computational Intelligence & Advanced Manufacturing Research – ICCIAMR 2014, organized by Vels University, Chennai on 2nd and 3rd May 2014.

NATIONAL

(As Anna University Research Scholar)

7. Paper presented under the title of "Mathematical Modelling and Simulation of Active Suspension System Using PID Controller" in National Conference on Advancement's in Mechanical Engineering – 2019 (NCAME'19) organized by M Kumarasamy College of Engineering held on 15th March 2019 at Karur.
8. Paper presented under the title of "Comparative Analysis Between Passive and PID Controlled 3-DOF Suspension System" in National Conference on Advancement's in Mechanical Engineering – 2019 (NCAME'19) organized by M Kumarasamy College of Engineering, held on 15th March 2019 at Karur.

(As Vels University Faculty)

9. Paper presented under the title of "Optimization of Machining Parameters of AL-SIC Nano Composites Using DOE", in the National Conference Frontiers in Mechanical Automobile Civil and Electrical Sciences – FMACE 2015 organized by Tamil Nadu College of Engineering held on 15th May 2015 at Coimbatore.

SKILL DEVELOPMENT PROGRAMMES – PARTICIPATED

SEMINAR

(As Anna University Research Scholar)

1. UGC SAP sponsored one-day national seminar on Recent Trends in Vehicle Dynamics conducted by the Department of Automobile Engineering, MIT Campus, Anna University, Chennai on 16th March 2019.
2. One-day national seminar on Recent Trends in Vehicle Dynamics organized by the Department of Automobile Engineering at MIT campus, Anna University, Chennai on 31st March 2017.

FACULTY DEVELOPMENT PROGRAMME (FDP)

(As Anna University Research Scholar)

1. Vehicle Dynamics using Matlab organized by the Department of Automobile Engineering, Sri Venkateswara College of Engineering, Sriperumbudur Tk - 602117, India, from November 27 to December 01, 2018 (Five Days - FDP).
2. Fundamentals of Vibration – Measurement, Analysis and Control at St. Joseph's College of Engineering, sponsored by All India Council for Technical Education, Government of India, New Delhi from 30th Oct - 10th Nov 2017 (Ten Days - FDP).

WORKSHOP

(As Anna University Research Scholar)

1. One Day Awareness Workshop on Intellectual Property Rights (IPR - 2019) conducted by Centre for Intellectual Property Rights (CIPR), Anna University, Chennai on 27.09.2019 at AC Tech Campus, Anna University, Chennai.
2. The two-day workshop on Vehicle Dynamics organized by the Department of Automobile Engineering at Bannari Amman Institute of Technology, Sathyamangalam during 5th and 6th January 2017.
3. Routledge Editorial Workshop 2016 organized by Taylor & Francis India at Anna University, Chennai on August 3rd, 2016.

(As Vels University Faculty)

4. UGC sponsored one day workshop on Recent Trends in Vehicle Technology conducted by the Department of Automobile Engineering, MIT Campus, Anna University, Chennai on 28th February 2015.
5. Two-week ISTE workshop o Control Systems conducted by IIT Kharagpur from 2nd to 12th December 2014.
6. Two-week ISTE workshop o Fluid Mechanics conducted by IIT Kharagpur from 20th to 30th May 2014.
7. Two-week ISTE workshop on Engineering Mechanics conducted by IIT Bombay from 26th November to 06th December 2013.

8. Two-week ISTE workshop on Engineering Thermodynamics conducted by IIT Bombay from 11th to 21st December 2012.
9. Two-day national level seminar cum workshop on Emerging Trends in Alternate Fuels and Automotive Electronics conducted on 7th and 8th September 2012 at Karpaga Vinayaga College of Engineering and Technology.
10. International Workshop on Research held on 9th August 2012 organized by the Department of Mechanical Engineering, School of Engineering, Vels University, Chennai- 600 117.

CERTIFIED COURSES

(As Sri Sai Ram Engineering College Student - UG)

1. Completed the mechanical software tools titled ***AUTOCAD and PRO/E*** and obtained grade ***A*** during the period from July 2005 to October 2005 in CADDAM Technologies (P) Ltd.

REFERENCES

1. Dr. K. Arunachalam
   Associate Professor
   Department of Automobile Engineering
   MIT Campus, Anna University
   Chennai – 600 044.
   E-mail: karunachalam@mitindia.edu
   Mobile: +91- 9884345564.

2. Dr. M. Senthilkumar
   Professor and Head
   Department of Automobile Engineering
   MIT Campus, Anna University
   Chennai – 600 044.
   E-mail: msenthilkumar@annauniv.edu
   Mobile: +91- 9344669253.

PERSONAL PROFILE

Father's Name	P. Anandan
Date of Birth and Age	06.10.1986 and 35
Gender	Male
Marital Status	Married
Nationality	Indian
Languages known	English, Tamil
Passport No.	S9539415
USA Visa Validity	01/04/2019 to 28/03/2029

I do hereby confirm that the information and facts stated above are true and correct to the best of my knowledge and belief. I am looking forward to work in your esteemed concern.

PLACE: Chennai

DATE: 26.04.2022 **ARIVAZHAGAN A**