



# NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY

T. M. Palayam, Coimbatore-641 105

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Accredited by NAAC, Recognized by UGC with 2(f) and 12(B)

NBA Accredited UG Courses: AERO, CSE, MECH



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### ***3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years***

<b>S.No</b>	<b>Academic Year</b>	<b>Page No</b>
1	2018-2019	2
2	2017-2018	88
3	2016-2017	148
4	2015-2016	173
5	2014-2015	187



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## Academic Year: 2018-2019

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	ISBN/ISSN number of the proceeding	Name of the publisher
1	Mr. S. Daison Stallon	-	Bi polar operation investigation of current sources converter based WECS		Dr.N.G.P. Institute of Technology
2	Mr. P. Parthiban	-	Bi polar operation investigation of current sources converter based WECS		Dr.N.G.P. Institute of Technology
3	Mr. S. Daison Stallon	-	Smart Municipal waste collection and management		Dr.N.G.P. Institute of Technology
4	Mr. M.K. Jeyakumar	-	Investigation On Inducing Swirl Flow To Achieve Thrust Reversal		Nehru College Of Aeronautics And Applied Science
5	Mr.J.Karthikeyan	-	Design And Fabrication Of Glow Engine Powered RC Plane		Kalaigarkarunani dhi Institute of Technology
6	Mr.R.Kousik Kumaar	-	Analytical And Experimental Comparative Study Of Coaxial Jet		Kalaigarkarunani dhi Institute of Technology
7	Mr.J.Karthikeyan	-	Analytical And Experimental Comparative Study Of Coaxial Jet		Kalaigarkarunani dhi Institute of Technology

8	Mr. A. Basithrahman	-	Design And Fabrication Of Fertilizer Pesticide Drone		Kalaighnarkarunani dhi Institute of Technology
9	Dr. P. Maniiarasan		Performance Evaluation And Fabrication Of Sheilded Drone		Kalaighnarkarunani dhi Institute of Technology
10	Dr. P. Maniiarasan	-	Experimental Analysis of Conical Flame Holder		Kalaighnarkarunani dhi Institute of Technology
11	Mrs. S. Abirami	-	Amphibious Resque Drone		Kalaighnarkarunani dhi Institute of Technology
12	Mr. L. Oblisamy	-	Study And Fabrication Of Bladeless Uav Sprayer For Agriculture Purpose		Kalaighnarkarunani dhi Institute of Technology
13	Mr. L. Oblisamy	-	Design And Analysis Of Three Cylinder Axial Engine		Dhaanish Ahmed Institute Of Technology
14	Mr. V. Dinesh Babu	-	Experimental Study Of Shockwave Generated By Using A Shock Tube		Kalaighnarkarunani dhi Institute of Technology
15	Dr. R. Arravind	-	Study And Fabrication Of Contra Rotating Propeller		Kalaighnarkarunani dhi Institute of Technology
16	Dr. R. Arravind	-	Experimental Study Of Shockwave Generated By Using A Shock Tube		Kalaighnarkarunani dhi Institute of Technology
17	Mr. M.Manivel	-	Study And Fabrication Of Retractable Small Scale Wind Mill		Kalaighnarkarunani dhi Institute of Technology
18	Mr. M.Manivel	-	Study And Fabrication Of Solar Powered UAV		Kalaighnarkarunani dhi Institute of Technology
19	Mr. M.Manivel	-	Study and		Kalaighnarkarunani

			Fabrication of Bladeless UAV Sprayer for Agriculture Purpose		dhi Institute of Technology
20	Dr. V. Sankar	-	Control Of Transition In Dual Bell Nozzle With Conductive Cooling		Kalaigarkarunani dhi Institute of Technology
21	Dr. V. Sankar	-	Study Of Effect Acoustic In A Convergent Nozzle		Kalaigarkarunani dhi Institute of Technology
22	Ms. A. Senthamil Selvi	-	Deign And Analysis Of Corrugated Wing Section		Mangayarkarasi College Of Engineering
23	S. Balaji		Design And Fabrication Of Missile Dropping Drone		Kalaigarkarunani dhi Institute of Technology
24	Mr.J.Karthikeyan	-	Investigation Of Flight Characteristics Of Wing With Leading Edge Troop	-	Hindustan Institute Of Technology & Science
25	Mr. V. Dinesh Babu	-	Investigation Of Flight Characteristics Of Wing With Leading Edge Troop	-	Hindustan Institute Of Technology & Science
26	MR. D. Manikandan	-	Investigation Of Flight Characteristics Of Wing With Leading Edge Troop	-	Hindustan Institute Of Technology & Science
27	Mr. M. Manorajapaul	-	An Artificial Neural Networks Approach to fault Detection in grid connected photo voltatic system		Kumaraguru College of Technology
28	M.Amutha	-	Credible Ballot System Based on block chain Technology.		Hindusthan Institute of Technology

29	KrishnaPrasath.K	-	Waste Compacting and Maintaining at the source using modern Technology.		Hindusthan Institute of Technology
30	A.Reyana	-	Design of Border alert system for fisherman using LORA.		Hindusthan Institute of Technology
31	S.Jothimani	-	Evaluation the online peers by analyzing the attribute collected from social network using machine learning technology.		Hindusthan Institute of Technology
32	S.Jothimani	-	Real time Point cloud data Processing and dimension discrement using cloud storage.		Hindusthan Institute of Technology
33	G.Jeevanantham	-	Real Time Cybernation of Breaking System using LIDAR.		Hindusthan Institute of Technology
34	G.Jeevanantham	-	Ultra Sonic Navigation system for Blind Pedestrains.		Hindusthan Institute of Technology
35	Dr.A.Suresh	-	An Intelligent Tool to evaluate and Support outcome Based Education System		Hindusthan Institute of Technology
36	Dr.A.Suresh	-	IOT Based Power Consumption in College		Hindusthan Institute of Technology
37	KrishnaPrasath.K	-	Smart Asthma Patient Assist system Using IOT and Android technology.		Hindusthan Institute of Technology

38	KrishnaPrasath.K	-	Android Application for Event Registration and online payment for an Insitution.		Hindusthan Institute of Technology
39	Jeevanantham.J	-	Transform data Leakage Detection and prevention in email server.		Hindusthan Institute of Technology
40	Jeevanantham.J	-	Data Secure Transaction using abe in cloud storage system.		Hindusthan Institute of Technology
41	N.Sathyapriya		Growth, Optical Structural, FTIR and Dielectric studies on succinic acid doped $\gamma$ -glycine single crystals		University of Jaffna, Sri Lanka
42	Dr. T. Brindha	-	Thermal and Spectroscopic studies of trivalent inner transition metal Hydrine complexes with 2-Naphthoxy acetic acid		Lincoln University College
43	Dr. R. Deepa	-	A study on one compound complex sentence for constructive learning platform of L2 learners		Lincoln University College
44	S. Shalini packiam Kamala	-	Characterization of CdS thin films and nanoparticles by a simple Chemical Bath Technique	<u>Materials Letters, Volume 220, 1 June 2018, Pages 161-164</u>	Coimbatore Institute of technology, Coimbatore
45	N. Sathiya priya	-	Characterization of CdS thin films and nanoparticles by a simple Chemical Bath	<u>Materials Letters, Volume 220, 1 June 2018, Pages 161-164</u>	Coimbatore Institute of technology, Coimbatore

			Technique		
46	R. Saravana Kumar	-	Characterization of CdS thin films and nanoparticles by a simple Chemical Bath Technique	<u>Materials Letters, Volume 220, 1 June 2018, Pages 161-164</u>	Coimbatore Institute of technology, Coimbatore
47	S. Gayathri Prabha	-	Math Modelling for River Water Pollution Satisfying a Partial Differential Equation		KG College of Arts and Science
48	T.Nithyaannpoorani	-	Assignment Problem Using Chromatic Polynomial		KG College of Arts and Science
49	Mrs.N.Sathyapriya	-	Synthesis, Growth, and Characterization of Cesium Carbonate Single Crystal using Slow Evaporation Method		K.S.R.College of Arts & Science for Women
50	Basith Rahman	-	Investigation of Mechanical and Tribiological Behavior of AA6601 Metal Matrix Composites		Universiti Sains Malaysia
51	Mr. L. Oblisamy	-	Investigation of Mechanical and Tribiological Behavior of AA6601 Metal Matrix Composites		Universiti Sains Malaysia
52	Mr. L. Oblisamy	-	Enhancing the Mechanical Properties of the Aluminium Metal Matrix Composites		Universiti Sains Malaysia

53	S.Abirami	-	Enhancing the Mechanical Properties of the Aluminium Metal Matrix Composites		Universiti Sains Malaysia
54	Dr. P. Maniirasan	-	Fabrication of Composite Lug		Universiti Sains Malaysia
55	Mr. M.Manivel	-	Fabrication of Composite Lug		Universiti Sains Malaysia
56	Dr.T.Jayaprakash	-	Importance of cd <sup>2+</sup> ions doping in znHpo <sub>4</sub> crystals		Universiti Sains Malaysia
57	S.Jenisha	-	Agro-Waste generated carbon support for fe <sub>2</sub> o <sub>3</sub> nano particles for its effluent dyes		Universiti Sains Malaysia
58	Dr.A.Suresh	Novel Practices and Trends in Grid and Cloud Computing	Role of Cloud Computing in On-Line Social Networking and In-Depth Analysis of Cloud-Sim Simulation, An Intelligent Water Grid Control Using Cloud Computing, An Intelligent Grid Network Based on Cloud Computing Infrastructures, Cloud-Based Predictive Maintenance and Machine Monitoring for Intelligent Manufacturing for Automobile Industry, An Efficient Framework Based on Cloud Computing Integrated with Internet of Things Technology for	ISBN13: 9781522590231 ISBN10: 1522590234	IGI Global Publisher

			Intelligent Waste Management		
59	Jothimani.S	Novel Practices and Trends in Grid and Cloud Computing	An Intelligent Water Grid Control Using Cloud Computing	ISBN13: 9781522590231 ISBN10: 1522590234	IGI Global Publisher
60	Dr.A.Suresh	Internet of Things for Industry 4.0	Internet of Things and Additive Manufacturing: Toward Intelligent Production Systems in Industry 4.0	ISBN 978-3-030-32530-5	EAI/Springer Innovations in Communication and Computing. Springer

P. Mani

Dr. P. MANIARASAN

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Kalapatti Road, Coimbatore - 641 048, Tamil Nadu, India



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

## National Conference on

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### CERTIFICATE OF PARTICIPATION

This is to certify that Dr. / Mr. / Ms. S. DASSEN STALLON. (AP/EEE) of NEHRU INSTITUTE OF ENGG & TECH has presented a paper on BIPOLAR OPERATION INVESTIGATION OF CURRENT SOURCE CONVERTER BASED WECS in the National Conference on "Cutting Edge Innovations in Engineering and Technology for Societal Welfare (NCIET'19)" organized by Department of Electrical and Electronics Engineering, Dr. N.G.P. Institute of Technology, Coimbatore on 23<sup>rd</sup> March 2019.

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Organizing Co-Chair

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OPERATION INVESTIGATION OF CURRENT SOURCE CONVERTER BASED WECS  
in the National Conference on "Cutting Edge Innovations in Engineering  
and Technology for Societal Welfare (NCIET'19)" organized by Department  
of Electrical and Electronics Engineering, Dr. N.G.P. Institute of  
Technology, Coimbatore on 23<sup>rd</sup> March 2019.

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Organizing Co-Chair

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*K. Porkumaran*

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in the National Conference on "Cutting Edge Innovations in Engineering  
and Technology for Societal Welfare (NCIET'19)" organized by Department  
of Electrical and Electronics Engineering, Dr. N.G.P. Institute of  
Technology, Coimbatore on 23<sup>rd</sup> March 2019.

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This is to certify that Mr./Ms. M. K. JAYAKUMAR..... ASSISTANT.....

from NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY.....

had participated in the International Conference on Sustainable Development of Aviation Industry held on 03rd October 2018

and presented a paper entitled INVESTIGATION ON INDUCING SWIRL FLOW TO.....

ACHIEVE THRUST REVERSAL.....

Dr. P. Muthuswamy  
Convenor

Dr. P. R. Balaji  
Dean- Academic Affairs

Dr. P. Krishna Kumar  
CEO & Secretary, NGI

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has presented a paper titled Design and fabrication of  
glow Engine powered Rc plane  
in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

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Organizing Chair

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Vice-Principal

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This is to certify that Dr./Mr./Ms./Prof. P. Kousik Kumar  
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has presented a paper titled Analytical and Experimental  
comparative study of coaxial jet  
in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

  
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of Nehru Institute of Engineering and Technology  
has presented a paper titled Design and Fabrication of  
Fertilizer Pesticides Drone  
in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
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Dr. M. Muthukrishnan  
Organizing Chair

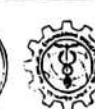
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Dr. N. Mohan Das Gandhi  
Principal

  
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Nehru Institute of Engg. & Technology  
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ICSTEM 19AE109

DESIGN AND FABRICATION OF FERTILIZER PESTICIDES  
DRONE

Sivaneshwaran P C  
Nehru institute of engineering and technology  
Coimbatore

Manoj Kumar R  
Nehru institute of engineering and technology  
Coimbatore

Sri Vignesh S  
Nehru institute of engineering and technology  
Coimbatore

Basithrahman  
Nehru institute of engineering and technology  
Coimbatore

**Abstract:** Indian agriculture needed production as well as protection materials to achieve high productivity. Fertilizer and chemical frequently needed to kill insects. The WHO (World Health Organization) estimates there are more than 1 million pesticide affective cases in every year. In that around one lakh deaths in each year, especially due to the pesticides sprayed by human being. The pesticide affects the nervous system and also leads to disorders. A Remote Controlled Unmanned Aerial Vehicle (UAV) is used to spray the Pesticide. In recent times the development of small UAV is under the interest of many researchers and wants to explore the application because the design of a quadcopter is autonomous in nature (less risk to human life). There are currently a large range of projects and research topics emerging in this field. Preliminary research has shown that the most versatile and mechanically easy to construct UAV is a quadrotor helicopter. This is due to the fact that quadrotoraerial robot is an automatic system which is an unmanned VTOL (vertical take-off and landing) helicopter. Quadrotors can be controlled by varying the speed of the four rotors and no mechanical linkages are required to vary the rotor blade pitch angles as compare to a conventional helicopter.

**Keywords:** *Unmanned Aerial Vehicle, quad rotor helicopter, vertical take-off and landing.*

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## Certificate of Appreciation

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of Nehru Institute of Engineering and Technology  
has presented a paper titled Performance Evaluation and  
Fabrication of shielded Drone  
in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

Dr. M. Muthukrishnan  
Organizing Chair

Dr. M. Ramesh  
Vice-Principal

Dr. N. Mohan Das Gandhi  
Principal

  
**Dr. P. MANIARASAN**  
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ICSTEM 19AE106

PERFORMANCE EVALUATION AND FABRICATION OF SHIELDED DRONE

Vennela S  
Nehru institute of engineering and technology  
Coimbatore

Aiswariya Raj  
Nehru institute of engineering and technology  
Coimbatore

Sabarinath G.K  
Nehru institute of engineering and technology  
Coimbatore

Ann Joe James  
Nehru institute of engineering and technology  
Coimbatore

Dr. Maniiarasan P  
Nehru institute of engineering and technology  
Coimbatore

**Abstract:** Quad copters can achieve vertical flight in a stable manner and be used to monitor or collect data in a specific region such as mapping terrains. Our project focuses on a drone than can reach the space where humans cannot reach such as pipelines, gas turbines and so on. It is mainly used for inspection purposes in industries. The project also focuses on the safety of the drone as well as the people around it. We know that when we fly drone, it should be handled with great caution because even small impacts with objects can cause drones to fly out of control, potentially colliding with ground or others. So we planned to provide a cage around the drone. The cage acts as a protective shield around the drone so that dangerous collisions can be avoided, thus providing safety. It will significantly reduce consumer fear of ruining the expensive drone as well. Here, we used carbon fiber material for the frame as well as the cage. Carbon fibers are used as a light weight alternative to materials such as aluminum which is twice as heavy. It also has excellent strength to weight ratio compared to another materials.

**Keywords-**Quadcopter, Shielded cage, Roll, Hower, Climb, Light weight, BLDC Motor, ESC, FCB, Lithium polymer battery, Carbon fiber frames, DOF

  
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of Nehru Institute of Engineering and Technology  
has presented a paper titled Experimental Analysis of  
Conical Flame holder

in the **International Conference on Science, Technology, Engineering and Management (ICSTEM'19)** held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

**Dr. M. Muthukrishnan**  
Organizing Chair

**Dr. M. Ramesh**  
Vice-Principal

**Dr. N. Mohan Das Gandhi**  
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Nehru Institute of Engineering & Technology  
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ICSTEM 19AE103

**AERODYNAMIC CHARACTERIZATION OF TORUS SHAPED AEROSTAT**

Vijayalakshmi .C  
UG scholar  
Dhanalakshmi Srinivasan college of Engineering  
and Technology

Arehana.R  
UG scholar  
Dhanalakshmi Srinivasan college of Engineering  
and Technology

Vasupradha .G.K  
UG scholar  
Dhanalakshmi Srinivasan college of Engineering  
and Technology

Dharmaraj.P—  
UG scholar  
Dhanalakshmi Srinivasan college of Engineering  
and Technology

**Abstract:** This project thesis proposes the use of a tether aerostat system with a constant volume. Torus shaped envelope is a platform for variety of social application at low altitudes. Manufacturers can make balloons into variety of shapes, most common are spherical and ellipsoidal tether balloon and constant volume balloon have been in use for years but it is not common to see both in combination. In preliminary development and evaluation of the tether balloon system of angle and shape .Torus envelope could be viable but the envelope must be very large to withstand low to moderate winds. In this thesis the main criteria is to reduce the volume and increase stability. The flow characterization can be done by ANSYS and the comparison is made with wind tunnel results. Hoop stress is the force exerted circumferentially in all directions on every particle in the cylinder wall. When the vessel has closed ends the internal pressure acts on them to develop a force. The outside and inside experience the same total strain which however is distributed over different circumferences. This hoop stress is analyzed using NASTRAN and PATRAN and is minimized.

**Keywords –** aerostat, torus, stability, wind tunnel, lift-to-weight

  
**Dr. P. MANIWARAN**  
Principal

ICSTEM 19AE104

**EXPERIMENTAL ANALYSIS OF CONICAL FLAME HOLDER**

Nehru Institute of Engg. & Technology  
T.M.Palayam, Coimbatore - 641 105

Balaji Deepak R  
UG scholar  
Nehru institute of engineering and technology  
Coimbatore  
Kodeeswaran G  
UG scholar  
Nehru institute of engineering and technology  
Coimbatore

Karthik Kumaran M  
UG scholar  
Nehru institute of engineering and technology  
Coimbatore  
Dr Maniwaran P  
Principal  
Nehru institute of engineering and technology  
Coimbatore

**Abstract:** In this paper we have designed a model of conical shaped flame holder and done experimental analysis to measure its performance. The result shows that at lean conditions conical flame holder enables high combustion efficiency than other type of flame holders.

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of Nehru Institute of Engineering and Technology  
has presented a paper titled Amphibious Resque Drone

*P. Mani*

**Dr. P. MANIARASA**

Principal,  
Nehru Institute of Engg. & Technology

T.M.Palayam, Coimbatore - 641

in the **International Conference on Science, Technology, Engineering and Management (ICSTEM'19)** held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

*Dr. M. Muthukrishnan*

**Dr. M. Muthukrishnan**  
Organizing Chair

*Dr. M. Ramesh*

**Dr. M. Ramesh**  
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in the **International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19)** held during 22-23, March 2019 at  
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This certificate is presented to Prof./Dr./Mr./Ms. L. OBLISAMY  
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OF THREE CYLINDER AXIAL ENGINE

in the International Conference on Recent Developments in engineering  
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This is to certify that Dr./Mr./Ms./Prof. V. Dinesh babu  
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has presented a paper titled Experimental Study of Shock wave  
Generated By using a shock tube

in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

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ICSTEM 19AE110

**. EXPERIMENTAL STUDY OF SHOCKWAVE GENERATED BY  
USING A SHOCK TUBE**

Arravind R  
Nehru institute of engineering and technology  
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Raja Mohamed J  
Nehru institute of engineering and technology  
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Pandimuneeswaran M  
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Nehru institute of engineering and technology  
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**Abstract** :The prime focus of this project is to design and fabricate a diaphragm based shocktube and to study the variation of parameters across the generated shockwave. The drastic variation in pressure, temperature and entropy, can be used in various industrial applications. The main objective is to produce a shockwave using diaphragms of varying thickness as well as material, and also theoretically calculating the variation of shock waves for different parameters. The diaphragm is placed in an air tight chamber between the driver and driven section. Pressurized air is supplied to the driver section in which the chamber pressure is monitored. The buildup of pressure in the driver section causes the diaphragm to rupture, which in turn produces shockwaves. The calculated change in parameters for different diaphragm and the speed of the shock is tabulated corresponding to the diaphragm material used. Using the obtained information, various parameters like pressure, temperature and entropy change is calculated theoretically and obtained the results are analyzed.

**Keywords:** *diaphragm, shockwaves, shock tube.*



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..... **contra rotating propeller** .....  
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EXPERIMENTAL STUDY OF SHOCKWAVE GENERATED BY  
USING A SHOCK TUBE

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**Abstract :** The prime focus of this project is to design and fabricate a diaphragm based shocktube and to study the variation of parameters across the generated shockwave. The drastic variation in pressure, temperature and entropy, can be used in various industrial applications. The main objective is to produce a shockwave using diaphragms of varying thickness as well as material, and also theoretically calculating the variation of shock waves for different parameters. The diaphragm is placed in an air tight chamber between the driver and driven section. Pressurized air is supplied to the driver section in which the chamber pressure is monitored. The buildup of pressure in the driver section causes the diaphragm to rupture, which in turn produces shockwaves. The calculated change in parameters for different diaphragm and the speed of the shock is tabulated corresponding to the diaphragm material used. Using the obtained information, various parameters like pressure, temperature and entropy change is calculated theoretically and obtained the results are analyzed.

**Keywords:** diaphragm, shockwaves, shock tube.

  
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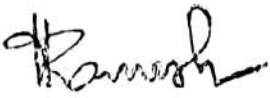
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This is to certify that Dr./Mr./Ms./Prof. Manivel  
of Nehru Institute of Engineering and Technology  
has presented a paper titled Study And Fabrication of  
Retractable Small Scale wind mill  
in the **International Conference on Science, Technology, Engineering and Management (ICSTEM'19)** held during 22-23, March 2019 at KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

  
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ICSTEM 19AE111

MATERIAL TESTING OF NICKEL TITANIUM ALLOY USED IN AEROSPACE INDUSTRIES

S Sulthan  
C.Abdul Hakeem College of Engineering and Technology  
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D Elangovan  
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S Rajesh kumar  
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S Vanishree  
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**Abstract:** Most of the metals in aerospace industries are 50% of Aluminum, Stainless steel, Titanium and Copper/brass alloys are used extensively in aviation and automotive industries because of their low cost and availability. These materials have some disadvantages like Higher spring backundesirable in forming, Abrasion tooling. To overcome these difficulties by using some alternative material like Aluminum, Chromium, Titanium And Nickel alloy in certain proportion. Here we done some mechanical test like tensile test, double shear test, hardness test, impact test and hardness test then we compared with material which is suitable for aerospace fasteners.

**Keywords:** Copper/brass alloys , Abrasion tooling, aerospace fasteners.

ICSTEM 19AE112

STUDY AND FABRICATION OF RETRACTABLE SMALL SCALE WIND MILL


Manivel  
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Avinash  
Nehru institute of engineering and technology  
Coimbatore  
Reshmaparveen  
Nehru institute of engineering and technology  
Coimbatore

**Abstract**

The ultimate objective of the work is to satisfy the low power needs in farms as well as in rural areas. The main advantage of this model is that, it is a Retractable model and avoids damage of the turbine during heavy wind. The blades are designed in such a way to increase the reliability of the Wind turbines through the inclusion of air foil structure. NACA63215 air foil cross section is considered while modeling blade, to reduce the noise produced during running period of wind turbine blades. Winglets are also added at the tip of the blade to increase the efficiency of the wind turbine. By increasing the efficiency, the amount of electricity generated is also increased. The model is also included with USB charging system to charge the electronic gadgets like mobile phones and laptops during travel. The blades are modeled using modeling software SOLID WORKS. After attaining a good efficiency, the model is fabricated.

**Keywords –** Winglets, NACA63215, Retractable model.

  
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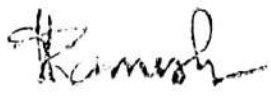




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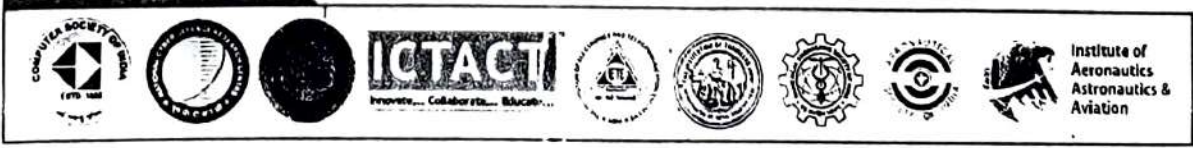
  
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has presented a paper titled Study and fabrication  
of Solar powered UAV

in the International Conference on Science, Technology, Engineering and  
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has presented a paper titled Study and Fabrication of

Bladeless UAV Sprayer for Agriculture Purpose

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## ICSTEM-19 AE101

### CHARACTERISTICS OF WINGS WITH APEX STRAKES

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**Abstract:** The vortex flow characteristics of a double delta wing, which can change the incidence of its strake was investigated and represented using Steady state, three-dimensional Computational Fluid Dynamics (CFD) at velocity of 100 m/s. The apex strake has sharp edges and can change its incidence angle at 23% chord (from the apex). The present study reveals that deflection of apex strake can greatly alter vortex flow pattern and the spanwise flow experienced at high angles of attack. Hence, suggesting that apex strakes could be used as vortex flow controllers in a double delta wing.

**Keywords:** double delta wing, apex strakes.

  
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## ICSTEM-19 AE102

### STUDY AND FABRICATION OF BLADELESS UAV SPRAYER FOR AGRICULTURE PURPOSE

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**Abstract:** Our aim is to involve an advanced technology to develop the Agriculture in the rural areas of the developing countries, where more than 70% of the people depends up on the agriculture fields. Direct Usage of chemicals becomes an essential practice in modern farming but at the same time it put risk to human beings health. To overcome the health problem so human when they spray manually a bladeless UAV issued and the bladeless UAV is constructed with the convergent nozzles and where the sprayer is used to spray the fertilizers with the help of sprinkler. The bladeless UAV can be used easily, where the equipment and labors difficulty to operate.

**Keywords:** Bladeless UAV(Unmanned Aerial Vehicle), Sprayer, Convergent nozzle

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of *Nehru Institute of Engineering and Technology*  
has presented a paper titled *Control of Transition In Dual Bell  
Nozzle with Conductive Cooling*

in the International Conference on Science, Technology, Engineering and  
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KIT-Kalaignarkaranidhi Institute of Technology, Coimbatore, Tamilnadu, India.

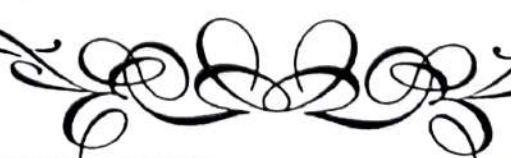
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CONTROL OF TRANSITION IN DUAL BELL NOZZLE WITH  
CONDUCTIVE COOLING

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R Sabarirajan,  
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Dr .V. Sankar,  
Nehru institute of engineering and technology  
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**Abstract:** Interest in the launch of Nano satellites has driven the development alternative, more efficient, rocket nozzles. One such option is the dual bell (DBN), in which the geometry is designed to achieve two ideal design points over the ascent profile, resulting in a higher average specific impulse for the booster stage compared to a conventional nozzle. The dual bell nozzle is a concept of altitude adaptive nozzle. The flow adapts separation at the wall inflection at low altitude and full flowing altitude. To understand the Phenology of the flow by the transition from low to high altitude mode, a series of CFD simulations are carried out to understand the physics of flow. In order to decrease the temperature in dual bell nozzle and in order to increase the fuel efficiency many cooling method has been adopted. Among those types of cooling types, conductive cooling or regenerative cooling has been considered. Various cooling ,methods is used to avoid the excess of temperature in dual bell nozzle and its effect of efficiency on nozzle Results has been extracted by using ANSYS CFD POST with pressure ,temperature ,velocity streamlines , etc.,

**Keywords:** dual bell nozzle, bell nozzle, conductive cooling, fuel efficiency.

  
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This is to certify that Dr./Mr./Ms./Prof. V. Shankar  
of Nehru Institute of Engineering and Technology  
has presented a paper titled Study of Effect Acoustics In  
a Convergent Nozzle.

in the International Conference on Science, Technology, Engineering and  
Management (ICSTEM'19) held during 22-23, March 2019 at  
KIT-Kalaignarkarunanidhi Institute of Technology, Coimbatore, Tamilnadu, India.

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STUDY OF EFFECT OF ACOUSTICS IN A CONVERGENT NOZZLE

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Dr. P. MANI ARASAN  
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*Abstract:* In the present era, the characteristics of acoustics are becoming the interested topics for studies. Aircraft noise is noise pollution produced by any aircraft or its components, during various phase of a flight. In this paper the effect of acoustics in a convergent nozzle is studied. The paper presents some result so investigation on using convergent nozzle with different physical wear. The model of the convergent nozzle is scaled model. The measurements of an original nozzle are reduced with respect to a ratio. The model is fabricated by turning operation in lathe machine. A model of combustion chamber is also done for combustion mechanism. The gases are made to flow through the combustion chamber and the ignition occurs in combustion chamber which in turn results in jet passing through the nozzle.

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in the International Conference on Trending Technologies in  
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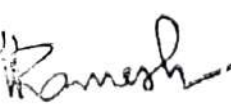
  
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Missile Dropping Drone

in the International Conference on Science, Technology, Engineering and  
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in the "NATIONAL CONFERENCE ON AEROSPACE TECHNOLOGY-NCAT 2018" held at Hindustan Institute of Technology & Science, Madur, Tamil Nadu, during September 27 & 28, 2018.

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*V. J. J.*  
Convener

*[Signature]*  
Vice Chancellor



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NEHRU INSTITUTE OF ENGINEERING

a paper entitled INVESTIGATION OF FLIGHT CHARACTERISTICS OF WING  
WITH LEADING EDGE DECOUP

in the "NATIONAL CONFERENCE ON AEROSPACE TECHNOLOGY-NCAT-2018"

held at Hindustan Institute of Technology & Science, Kadirupatti, Tamil Nadu,

during September 27 & 28, 2018.

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Organizing Secretary

*[Signature]*  
Convener

*[Signature]*  
Vice-Chancellor

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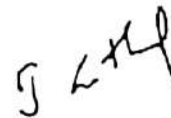
has presented a paper entitled An Artificial Neural Network

Approach to Fault Detection in Grid Connected Photovoltaic System

in the **FIRST INTERNATIONAL CONFERENCE ON SCIENCE, TECHNOLOGY,  
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THE SOURCE USING MORDERN TECHNOLOGY  
in the National Conference on Advances in Computing Technologies organized by the Department of Information Technology,  
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Paper titled **THERMAL AND SPECTROSCOPIC STUDIES OF**

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In the Seventh International Conference on Contemporary Issues in Agriculture, Engineering, Management, Information Technology, Life Sciences, Social Sciences & Humanities jointly organized by Nehru College of Management, India & Lincoln University College, Malaysia at Langkawi from 7<sup>th</sup> to 11<sup>th</sup> May 2019.

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has Presented / Presented in Absentia / Participated

Paper titled **A STUDY ON ONE COMPOUND COMPLEX**

**SENTENCE FOR CONSTRUCTIVE LEARNING**

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In the Seventh International Conference on Contemporary Issues in Agriculture, Engineering, Management, Information Technology, Life Sciences, Social Sciences & Humanities jointly organized by Nehru College of Management, India & Lincoln University College, Malaysia at Langkawi from 7<sup>th</sup> to 11<sup>th</sup> May 2019.

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## Characterization of CdS thin films and nanoparticles by a simple Chemical Bath Technique

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### ABSTRACT

Cadmium Sulfide (CdS) thin films and nanoparticles were prepared by using simple Chemical Bath Deposition technique. The thickness of the prepared thin films are in the range of 106–117 nm. Better transmittance behavior in the visible region along with an energy gap around 2.3 eV of as-prepared CdS thin films confirms the candidature for solar cell applications. The structural analysis of the prepared thin films and nanoparticles was carried out by Powder X-ray diffraction technique using  $\text{CuK}\alpha$  radiation. The scanning electron micrographs reveal that all the compounds have uniform crystallite structure. The energy dispersive X-ray analysis confirms the formation of pure cadmium sulfide nanoparticles. The reverse magnetization behavior was identified in all the compounds which confirm the diamagnetic property of CdS nanoparticles. The resultant compounds confirm the competent candidature for solar cells, photodiodes, light emitting diodes, nonlinear optics and heterogeneous photo catalysis.

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### 1. Introduction

The science and technology of nanomaterials has created a great excitement and expectations in last few years. The deposition and characterization of cadmium sulfide nanoparticles and thin films has received considerable interest due to its potential application in the area of electronic and opto-electronic devices. This material came to the attention of scientific community when Reynolds et al., observed photovoltaic effect in CdS single crystals [1]. Bube also reported the photo conductivity in CdS thin films [2]. CdS is a typical wide band gap ( $E_g = 2.26\text{--}2.5$  eV) semiconductor, which has many commercial and potential applications in photovoltaic solar cells, light-emitting diode and photo electric devices [3–5]. In the present work, CdS nanoparticles and thin films were synthesized by simple Chemical Bath Deposition technique and Chemical precipitation method. The structural determination, surface and elemental analysis and magnetic property which are useful for solar cell applications were analyzed and reported.

### 2. Experimental


All the chemicals are purchased from Nice company and used without any further purification. 0.24 g of Cadmium sulphate ( $\text{CdSO}_4$ ), various wt % of Ammonium hydroxide ( $\text{NH}_4\text{OH}$ ) and 0.25 g of thiourea [ $\text{CS}(\text{NH}_2)_2$ ] were used for the preparation of cadmium sulfide thin films and nanoparticles. All the solutions were prepared by dissolving appropriate quantity of materials into the de-ionized water [6]. Both the experiments were done in open air atmosphere and the solutions were prepared at room temperature.

$\text{CdSO}_4$ ,  $\text{CS}(\text{NH}_2)_2$  and  $\text{NH}_4\text{OH}$  were added successively into the de-ionized water with constant stirring to get a homogeneous solution with pH = 10. Initially, a clean and color less solution was obtained and turned to clear yellowish solution while reaching the temperature of 55 °C, which indicates the reaction have been initiated to yield CdS thin films and nanoparticles [7]. Aqueous solutions of cadmium sulphate and thiourea were used as the sources of Cd and S respectively. Both the prepared thin films and nanoparticles are annealed at 100 °C for 1 hr in open air atmosphere.

All the prepared films and nanoparticles were characterized by X-ray diffraction (XRD), Scanning Electron Microscope (SEM), Energy Dispersive Spectroscopy (EDAX), UV Visible spectroscopy and Vibrating Sample Magnetometer (VSM).

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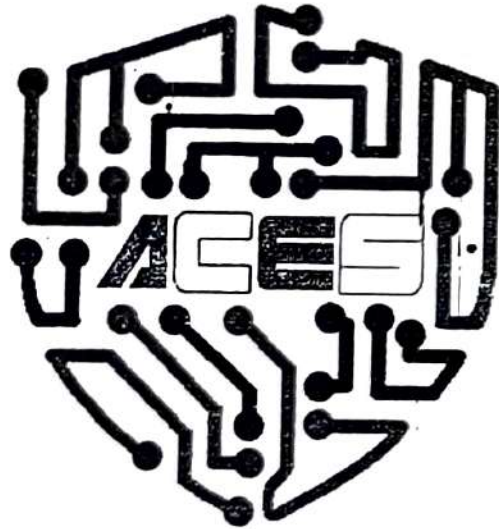
  
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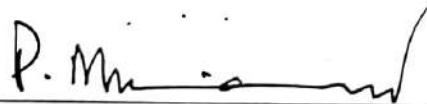
  
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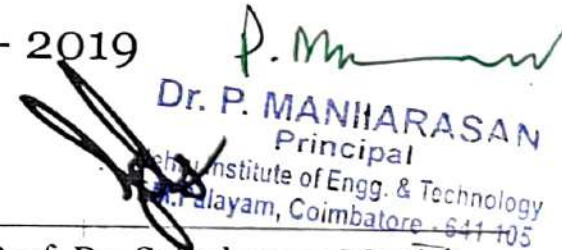
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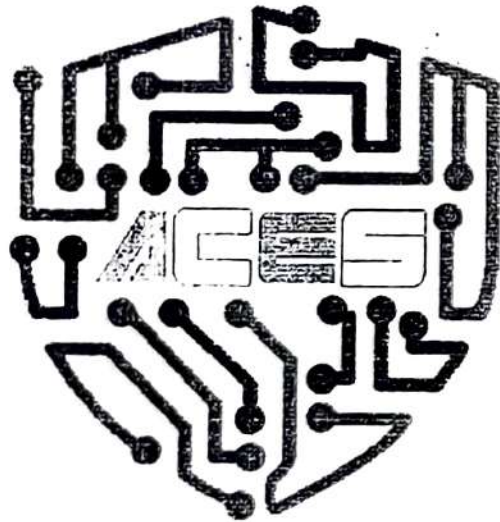


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## Investigation of Mechanical and Tribological Behaviour of AA 6061 Metal Matrix Composites

Oblisamy.L<sup>[1]</sup>, Basith Rahman.A<sup>[2]</sup>, Sweetha.M<sup>[3]</sup>

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### ABSTRACT

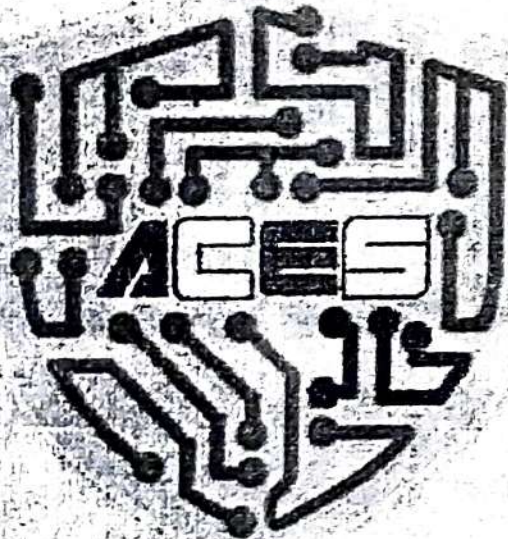
In current case scenario, aluminium matrix composites reinforced with hard ceramic particles have a massive number of applications in aircraft, automobiles, structural and non- structural, and transportation applications such as drive shaft, connecting rod, brake drum, wing hub and stringers in an aircraft. The foremost objective of this experiment is to enhance the physical and mechanical properties of AA 6061 by reinforcing it with Titanium-di-boride and Boron carbide processed by liquid metallurgy process (Stir Casting). Mechanical and wear properties such as Hardness, Tensile strength, ultimate strength and Impact were determined for the material having different constituents of the reinforcements. Three different compositions of reinforcements such as 3, 5, & 7% were studied. Hardness, Impact and Tensile strength of the composite was significantly better than AA 6061 without the reinforcement. Hardness was measured using Brinell hardness testing machine. Impact was measured using Charpy test. Tensile strength was measured using Universal testing machine. The effect of the reinforcement was determined by performing various mechanical tests. The study of this experiment is that Hybrid composites are better substitutes for single reinforced composites.

**Keywords:** AA 6061, Titanium-di-boride, Boron carbide, Hardness, Impact, Tensile strength

  
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## ENHANCING THE MECHANICAL PROPERTIES OF THE ALUMINIUM METAL MATRIX COMPOSITES

S. Abirami<sup>[1]</sup>, L. Oblisamy<sup>[2]</sup>, Gayathri<sup>[3]</sup>

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### ABSTRACT

The present study deals with the investigation of effect of reinforcement (Zirconium oxide & E-Glass Powder) particles on mechanical properties of aluminium alloy (Al6061) composites, fabricated by stir casting method. The MMC's specimens were prepared by varying weight fraction of the reinforcement of the zirconium oxide and E-glass as 2Wt. %, 3Wt. %, and

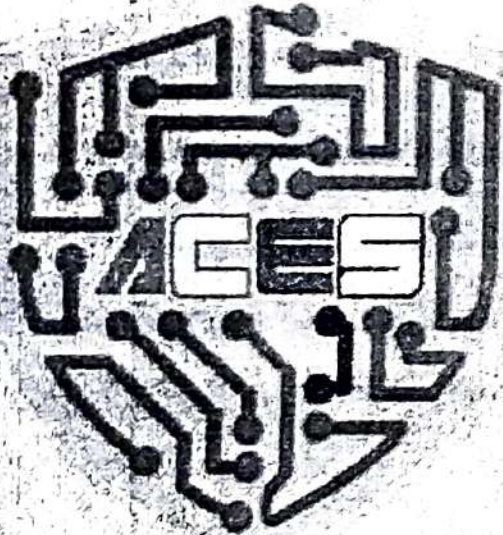
4Wt. % and keeping all other parameters constant. The microstructure and mechanical properties of fabricated MMC's were analysed. Microstructural studies of the MMC's reveal a uniform distribution of zirconium dioxide ( $ZrO_2$ ) and E glass particles in the Al6061 matrix. The mechanical properties like hardness, tensile strength and wear strength were improved with the increase in weight fraction of zirconium dioxide and E glass particles in the aluminium matrix. It was observed that the elongation decrease with increase weight fraction of zirconium dioxide and E glass particles in the aluminium matrix.

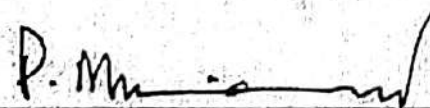
  
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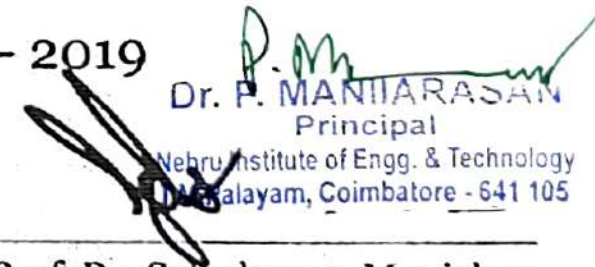
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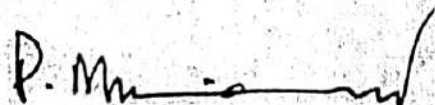
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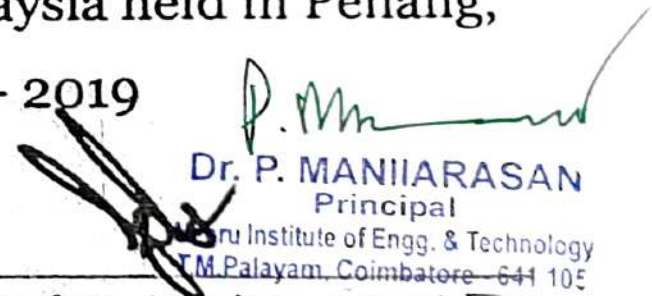
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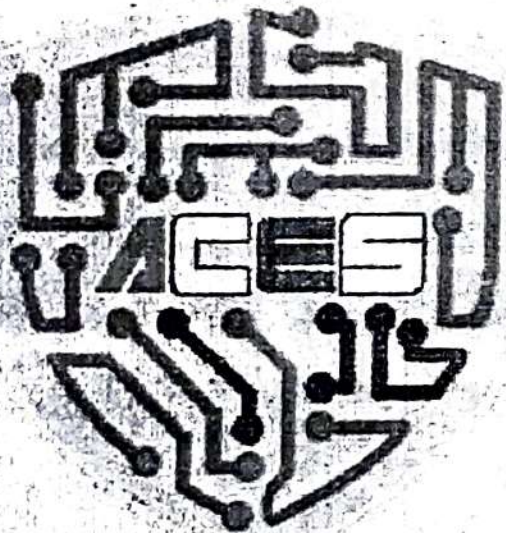
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## FABRICATION OF COMPOSITE LUG

Senthamilselvi . A <sup>[1]</sup>, Maniarasan.P <sup>[2]</sup>,  
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### ABSTRACT

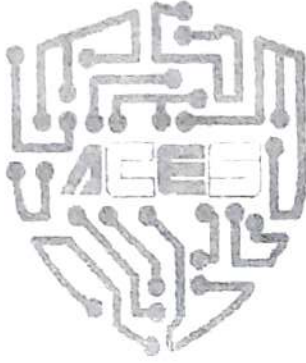
Wing lug is a primary structural element in wing airframe structure which is widely used in connecting wing and fuselage. The bending moment and shear load which acts over the wing are transferred to the fuselage through the attachment of joints. This project mainly focuses on the wing lug materials. Several advancement has been developed for the materials out of which composite material is one of the major parts in materials development. Several parts have been replaced by composite materials in aircrafts to reduce the weight and to improve structural property. In this project conventional material such as aluminium alloys and steel alloys has been replaced by carbon fibres. The carbon fibres are arranged for different layers with different orientation. The specimen has to be analysed by both analytical and numerical approach to determine its structural properties. The numerical analysis has been carried out through the use of commercially available analysis package known as ANSYS- ACP. Based on the results effective configuration has been found and sample model of the composite lug has been fabricated by the hand layup process.

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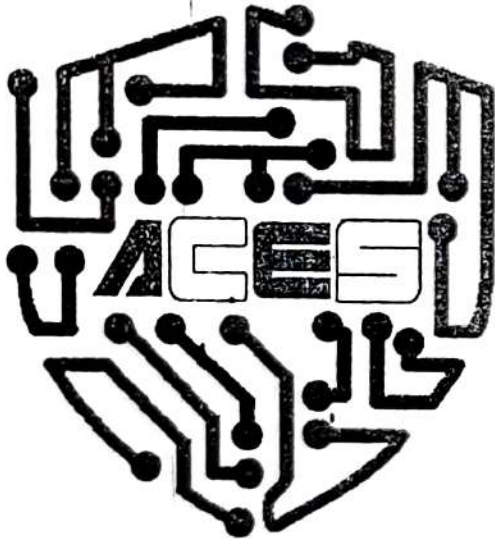
Support for Fe<sub>2</sub>O<sub>3</sub> nano particles for its effluent dye,

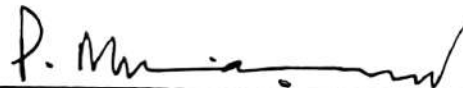
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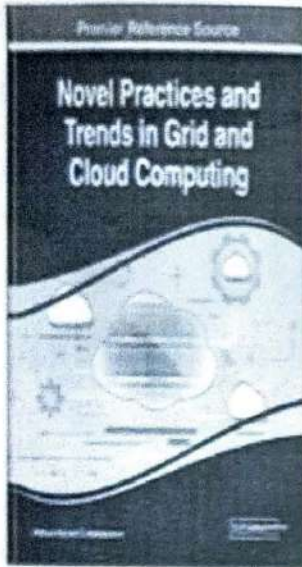
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## An Intelligent Water Grid Control Using Cloud Computing

Suresh Annamalai (Nehru Institute of Engineering and Technology, India) and Jotimani S. (Nehru Institute of Engineering and Technology, India)

Source Title: Novel Practices and Trends in Grid and Cloud Computing

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should be taken to scale the availability of services. As cloud computing has plenty of uncertainty with respect to network bandwidth and resources accessibility, delegating the computing resources as services should be scheduled accordingly. This chapter proposes a study on cloud of clouds and its impact on a business enterprise. It is also decided to propose a suitable scheduling algorithm to the cloud of cloud environment so as to trim the downtime problem faced by the cloud computing environment.

### Chapter 3

Role of Cloud Computing in On-Line Social Networking and In-Depth Analysis of Cloud-Sim Simulator..... 34

*Suresh Annamalai, Nehru Institute of Engineering and Technology, India*  
*Udendhran R., Bharathidasan University, India*

In this chapter, the authors introduced cloudsim simulator and cloud computing role in online social networking. The communication incurred by other activities such as management jobs is negligible. Social relationships can be established for numerous reasons. For example, family members, colleagues, or classmates often have strong social interactions resulting in large communication load. Cloud computing as well as social network-based applications will become dominant in many aspects of life in the next few decades. The performance of such large-scale systems is characterized by system capacity in terms of number of users/clients, flexibility, scalability, and effective cost of operation, etc. Popular social networks have hundreds of millions of users and continue to grow.

### Chapter 4

An Intelligent Water Grid Control Using Cloud Computing..... 47

*Suresh Annamalai, Nehru Institute of Engineering and Technology, India*  
*Jotimani S., Nehru Institute of Engineering and Technology, India*

Most of the people in India depend on the agriculture for their survival. Intelligent water grid control (IWGC) system is a trusted solution for resolving recent significant global water problems. The system will handle the dried geographical area in a smart way with internet of things and edge computing. Since the villages that are far from the rivers are not getting enough water, the smaller water saving areas like pool, lake, ponds can be filled with this smart water management system. In this chapter, the authors discussed the water problems faced by the farmers, dam authority, and by the government.

### Chapter 5

An Intelligent Grid Network Based on Cloud Computing Infrastructures..... 59

*Suresh Annamalai, Nehru Institute of Engineering and Technology, India*  
*Udendhran R., Bharathidasan University, India*  
*Vimal S., National Engineering College, India*

This chapter covers important topics in development of efficient energy grids. Inefficient power generation, unbalanced consumption patterns that lead to underutilization of expensive infrastructure on the one hand, and severe overload on the other, as well as urgent issues of national and global concern such as power system security and climate change are all driving this evolution. As the smart grid concept matures, we'll see dramatic growth in green power production: small production devices such as wind turbines and solar panels or solar farms, which have fluctuating capacity outside of the control of grid operators. Small companies that specialize in producing power under just certain conditions will boom

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in forthcoming years. Energy is stored in the storage during low-cost periods, and the stored energy is used during high-cost periods to avoid the expensive draw from the grid. The authors evaluate the impact of large-scale energy storage adoption on grid electricity demand.

### Chapter 6

Cloud-Based Predictive Maintenance and Machine Monitoring for Intelligent Manufacturing for Automobile Industry ..... 74

*Suresh Annamalai, Nehru Institute of Engineering and Technology, India*  
*Udendhran R., Bharathidasan University, India*  
*Vimal S., National Engineering College, India*

The concept of predictive analysis plays complex information retrieval and categorization systems are needed to process queries, filter, and store, and organize huge amount of data, which are mainly composed of texts. As soon as datasets becomes large, most information combines with algorithms that might not perform well. Moreover, prediction is important in today's industrial purposes since that could reduce the issues of heavy asset loss towards the organization. The purpose of prediction is necessary in every field since it could help us to stop the cause of occurring the error before any vulnerable activities could happen. Predictive maintenance is a method that consumes the direct monitoring of mechanical condition of plant equipment to decide the actual mean time to malfunction for each preferred machine. The authors try to estimate the fault that could occur in the machines and decide the time that could cause a critical situation. This prediction should be done effectively, and for this purpose, they have stepped into the concept of machine learning.

### Chapter 7

Resource-Aware Allocation and Load-Balancing Algorithms for Cloud Computing ..... 90

*N. Malarvizhi, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, India*

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Dynamic cloud computing technique enables resources to be assigned to different clients based on the current demand of each client turning the cloud to a limitless computational platform with limitless storage space which improves the performance of cloud services. To achieve best resource allocation in dynamic hosting frameworks, cloud service providers should provision resources intelligently to all clients. Cloud computing empowers consumers to access online resources using the internet, from anywhere at any time without considering the underlying hardware, technical management, and maintenance problems of the original resources. In this chapter, the authors present a detail study of various resource allocation and other scheduling challenges as well as cloud simulation frameworks tools like CloudSim and ICanCloud.

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*Lucia Agnes Beena Thomas, St. Joseph's College, India*

With the proliferation of new technologies such as augmented and virtual reality, autonomous cars, 5G networks, drones, and IOT with smart cities, consumers of cloud computing are becoming the producers of data. Large volume of data is being produced at the edge of the network. This scenario insists the need



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for efficient real-time processing and communication at the network edge. Cloud capabilities must be distributed across the network to form an edge cloud, which places computing resources where the traffic is at the edge of the network. Edge cloud along with 5G services could also glint the next generation of robotic manufacturing. The anticipated low latency requirement, battery life constraint, bandwidth cost saving, as well as data safety and privacy are also inscribed by edge cloud. A number of giants like Nokia, AT&T, and Microsoft have emerged in the market to support edge cloud. This chapter wraps the features of edge cloud, the driving industries that are providing solutions, the use cases, benefits, and the challenges of edge cloud.

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*Suresh Annamalai, Nehru Institute of Engineering and Technology, India*  
*Udendhran R., Bharathidasan University, India*

This chapter presents techniques based on internet of things and cloud computing-driven waste management. The data of the World Bank says that the municipal solid waste generation by the year of 2025 will be 1.42 kg/capital per day in the urban residential areas, with the increase in cost of about \$375.5 billion that has a major rise from an annual of \$205.4 billion in the year 2012. Due to the high population with the extreme consumption of goods and services, this leads to a strong association among the income levels, quality of life, and waste generation. In the present situation, more than 50% of the total population is living in the cities. In the governance aspect, it is said that the cost of waste management will be highly expensive. This chapter deals with the effective waste management with the implementation of internet of things (IoT)-based cloud technology with the machine learning algorithm that could be highly intellectual in the management of waste.

## Chapter 10

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*Nirmalan R., Sri Vidya College of Engineering and Technology, India*  
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Cloud computing is a modern exemplar to provide services through the internet. The development of cloud computing has eliminated the need of manpower, which is mainly used for the management of resources. During the cloud computing process, the term cloud balancing is a vital one. It deals with distribution of workloads and computing resources. The load balancing allows the company to balance the load according to the demands by the allocation of the resources to multiple servers or networks. The quality of service (QoS) metrics, including cost, response time, performance, throughput, and resource utilization are improved by means of load balancing. In this chapter, the authors study the literature on the load-balancing algorithms in heterogeneous cluster cloud environment with some of its classification. Additionally, they provide a review in each of these categories. Also, they provide discernment into the identification of open issues and guidance for future research work.

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# Chapter 5

## Internet of Things and Additive Manufacturing: Toward Intelligent Production Systems in Industry 4.0



A. Suresh, R. Udendhran, and G. Yamini

### Introduction

The Internet of things, Industry 4.0, and smart sensors can be combined to make a heady cocktail that suggests an exciting future with effective and improved performance. Security is very essential in every field form in industrial sector. Through an intelligent system, we could able to detect major challenges existing in Industry 4.0 and address it.

A sensor is an electronic device that senses the physical quantity and converts it into electrical quantity. They can be used to sense pressure, temperature, humidity, etc. For the purpose of interpretation and processing, the sensor data could be taken and then displayed in the computer for the human reference purposes. Nowadays, sensors are widely used for the protection of facility control and industries as shown in Fig. 5.1.

Traditional manufacturing process works on the principle in producing certain number of products by holding the reserve in case of unexpected damage or shortages at certain set of periods [1]. There are four main categories involved in the traditional or commercial technology. These are as follows:

*Injection Molding:* As the name refers, a plastic material is softened, and then it is injected during the fabrication process inside a mold [2]. This process comes under a mechanism, and the other mechanism involves the removal of the material from the mold after which it could be cured and solidified. This is highly used in the plastic goods fabrication process that gives a good finishing surface.

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## Multi – objective Analysis and Parametric Estimation of Machining Force Delamination and Surface Quality in Milling Process on FRP composite through Statistical Linked DSA

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### ABSTRACT

Milling process is one among the common traditional metal cutting operations mainly to trim down to the size, shape and required surface quality. At the same time during milling operations on composite materials, the commonly named damage delamination is one of the inevitable issue which are mainly depend on the input machining parameters. In this attempt the optimization of machining parameters referring to the surface roughness and delamination during milling on Viapal VUP 9731 GFRP composite material, is analyzed through Differential Search Algorithm and estimated the optimal combinations of such parameters. The objective is to lay down a path for reference according to the requirement of the product end quality. Initially algorithm is executed in MATLAB to iterate the values and the effectiveness of simulation is analyzed individually by means MSE. Subsequently the regression relationship is taken as the conditional approach for further simulation. On confirming the outcome found to be tuned with the earlier results further forecasting of delamination factor, surface roughness for various combination of machining parameters is executed with step up number of iterations.

**Keywords :** Milling, Viapal 9731 frp composite, Surface finish, Machining Force, Delamination, DSA, Hybrid, Optimisation, Minitab, MATLAB.

### I.INTRODUCTION

As the applications of FRPs are tremendously increased in every field of manufacturing wherever the weight density ratio plays a major role; also having the combination of their physical and mechanical properties such as high specific strength, high specific stiffness. At time of shaping the product concerned with these materials machining operations are being performed to reach the required dimension. Milling operations is one such process and the outcome is associated with the input cutting parameters. During the machining operations on FRP composites the machining forces significantly influence and make the major impact on the surface quality




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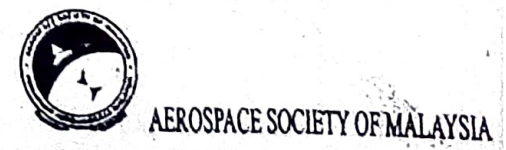
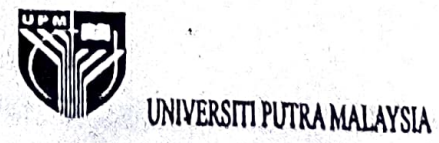
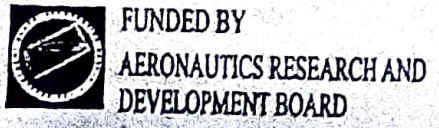
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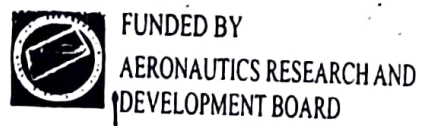
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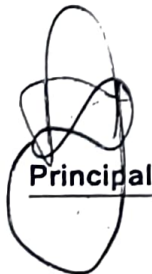



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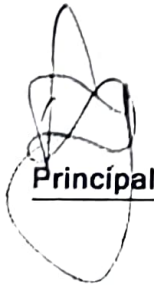



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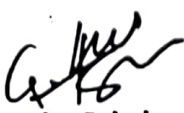
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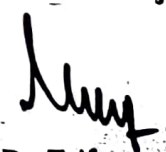
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# ZETA CONVERTER BASED SIMULATION MODEL FOR BLDC MOTOR FED WATER PUMPING SYSTEM

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## ABSTRACT

The main objective of this research work is to develop a simple simulation model, control and efficient brushless DC (BLDC) motor drive for solar photovoltaic (SPV) array combined with wind energy fed water pumping system. The maximum sun irradiance and Wind energy is utilized according to the availability. The speed of the BLDC motor is controlled through a variable DC link voltage of VSI. An appropriate control of zeta converter through maximum power point tracking (P&O MPPT) algorithm offers soft starting of the BLDC motor. In this Maximum power point tracking is achieved by using Perturbation and Observation (P&O) method, also known as hill climbing method, is popular and most commonly used in practice because of its simplicity in algorithm and ease of implementation. The voltage stress can be reduced by employing zeta converter. Power factor can be improved and fourth order harmonics can be reduced. The proposed water pumping system is designed and modeled such that the performance is not affected under dynamic conditions. The suitability of proposed system at practical operating conditions is demonstrated through simulation results using MATLAB/ Simulink followed by an experimental validation.

**Keywords:** BLDC motor, SPV array, Water pump, Zeta converter, VSI, P&O-MPPT

## I. INTRODUCTION

Renewable energy sources in recent years brought a drastic change in few decades in which solar energy and wind energy proved to be a viable source which is used for various applications such as emergency lighting, water heaters, smart grid, and industrial application and so on. The sources of renewable such as wind and solar are cost effective and the availability is abundance. The water pumping, a standalone application of the SPV array generated electricity is receiving wide attention now days for irrigation in the fields, household applications and industrial use. Lot of research work has been carried out in the field of Computer Applications to Electrical Engineering [1-26]. This paper brings a new dimension of utilizing both solar and wind energy. Although there are several researches carried out in solar and wind using DC-DC converter for DC motors this paper exhibits combined renewable energy sources employing zeta converter topology fed water pumping in association with a permanent magnet brushless DC (BLDC) motor. This combined energy source is not explored precisely so far to develop such kind of system. However, the zeta converter has been used in some other SPV based applications. Moreover, a topology of SPV array combined with wind energy fed BLDC motor driven water pump with zeta converter has been reported and its

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**Dr. P. MANIARASAN**  
Principal  
Nehru Institute of Engg. & Technology  
T.M. Palayam, Coimbatore - 641 105

This is to certify that Mr./Ms./Dr. B. Sandarkhan  
Nehru Institute of Engineering and Technology has presented a paper on  
Spectroscopic Studies NLD and NBO analysis by ab initio and DFT calculations  
of 2-Thiophene Carbohydrazide in the CSIR Sponsored  
a Two - Day National Conference on "Emerging Trends in Condensed Matter  
Physics and Modelling of New Material in Industrial World" conducted by the  
Department of Science and Humanities, P. A. College of Engineering and  
Technology on 05<sup>th</sup> and 06<sup>th</sup> April 2018.

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**Coordinator**

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Principal  
Nehru Institute of Engg. & Technology  
T.M.Palayam, Coimbatore - 641 105

This is to certify that Mr./Ms./Dr. N. Sathiya Priya from Nehru Institute of Engineering and Technology has presented a paper on Spectroscopic Studies, NLO and NBO analysis by ab initio and DFT calculations of 2-Thiophene Carbohydrazide in the CSIR Sponsored a Two - Day National Conference on "Emerging Trends in Condensed Matter Physics and Modelling of New Material in Industrial World" conducted by the Department of Science and Humanities, P. A. College of Engineering and Technology on 05<sup>th</sup> and 06<sup>th</sup> April 2018.

Coordinator

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Ramapuram Campus



## 6<sup>th</sup> NATIONAL CONFERENCE ON HIERARCHICALLY STRUCTURED MATERIALS (NCHSM 2018)

16<sup>th</sup> - 17<sup>th</sup> FEBRUARY, 2018

DEPARTMENT OF PHYSICS

### CERTIFICATE

Dr. P. MANIARASAN  
Principal  
Nehru Institute of Engg. & Technology  
T.M. Palayam, Coimbatore - 641 105

This is to certify that Mr. / Ms. / Dr. / Prof. S. Shalini Packiam kamala, Prof (Phy), NIET, CBE

has participated / presented his/her research work entitled Vibrational Spectroscopic Investigation Using HF& DFT analysis on the structure of 2,6-Dichloro Benzyle chloride.

sponsored "6<sup>th</sup> NATIONAL CONFERENCE ON HIERARCHICALLY STRUCTURED MATERIALS (NCHSM 2018)" held during 16 - 17<sup>th</sup> February

2018 at SRM Institute of Science & Technology, Ramapuram Campus, Chennai – 89.

Dr. L. SUDHA

Convener



Dr. V. SUBBIAH BHARATHI

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T.M.Palayam, Coimbatore - 641 105

This is to certify that ~~Mr. / Ms. / Dr. / Prof.~~ *N. Sathiya Priya*, AP, Physics, NIET, CBE.....  
has participated / presented his/her research work entitled *Synthesis & Experimental study of*  
*Some Transition..... as precursors*.....in the CSIR, New Delhi  
sponsored "6<sup>th</sup> NATIONAL CONFERENCE ON HIERARCHICALLY STRUCTURED MATERIALS (NCHSM 2018)" held during 16 - 17<sup>th</sup> February  
2018 at SRM Institute of Science & Technology, Ramapuram Campus, Chennai – 89.

  
Dr. L. SUDHA  
Convener



  
Dr. V. SUBBIAH BHARATHI  
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Nehru Institute of Engg. & Technology  
T.M. Balayam, Coimbatore - 641 105

This is to certify that ~~Mr. / Ms. / Dr. / Prof.~~ *A. Lakshmi Priya, AP, Chemistry, NIET, CBE*

has ~~participated~~ / presented ~~his~~ / her research work entitled *Synthesis & Experimental study of Some*

*Transition & Lanthanide metal oxide Nanoparticles* - as precursors in the CSIR, New Delhi

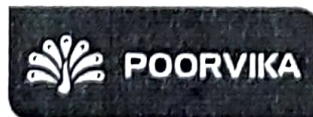
sponsored "6<sup>th</sup> NATIONAL CONFERENCE ON HIERARCHICALLY STRUCTURED MATERIALS (NCHSM 2018)" held during 16 - 17<sup>th</sup> February

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*Dr. L. Sudha*

Dr. L. SUDHA

Convener



*Dr. V. Subbiah Bharathi*

Dr. V. SUBBIAH BHARATHI

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This is to certify that Mr. / Ms. / Dr. / Prof. R. Saravanakumar, AP, Chemistry, NIET, CBE.

has ~~participated~~ / presented his/her research work entitled Impacts of Carbon Adsorbent

properties from wastewaters......in the CSIR, New Delhi

sponsored "6<sup>th</sup> NATIONAL CONFERENCE ON HIERARCHICALLY STRUCTURED MATERIALS (NCHSM 2018)" held during 16 - 17<sup>th</sup> February

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This is to certify that Mr./Ms./Dr. S. P. JOTHIPRAKASH from  
NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY has presented a paper on  
CONTRA PRE b-I - OPEN FUNCTIONS

\_\_\_\_\_ in the CSIR Sponsored a Two day National Conference on "Modern Mathematical Methods and High Performance Computing in Manufacturing and Industrial Engineering Systems" conducted by the Department of Science and Humanities, P. A. College of Engineering and Technology on 24<sup>th</sup> and 25<sup>th</sup> January 2018.

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Nehru Institute of Engg. & Technology  
Pollachi, Coimbatore - 641 105

### ∞ Certificate ∞

This is to certify that Mr./Ms./Dr. Dr. RAMESH from NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY has presented a paper on ON GENERALIZED PRE SEMI CLOSED SETS IN INTUITIONISTIC TOPOLOGICAL SPACES in the CSIR Sponsored a Two day National Conference on "Modern Mathematical Methods and High Performance Computing in Manufacturing and Industrial Engineering Systems" conducted by the Department of Science and Humanities, P. A. College of Engineering and Technology on 24<sup>th</sup> and 25<sup>th</sup> January 2018.

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Principal  
Nehru Institute of Engg. & Technology  
T.M.Palayam, Coimbatore - 641 105

This is to Certify that Mr./Ms./Dr. S.SHALINI PAKKIAM KAMALA  
of Dept. of physics, Nehru Institute of Engg. and Tech. Coimbatore has  
participated /presented a paper titled, vibrational spectroscopic studies of 3-hydroxy benzylidene  
trifluoride.  
in the one day National Conference on **HIGHER ENERGY PHYSICS** Organised by the Department of Physics  
on 20<sup>th</sup> December 2017.



PRINCIPAL

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Dr. P. MANIARASAN  
Principal  
Nehru Institute of Engg. & Technology  
T.M.Palayam, Coimbatore - 641 105

This is to certify that Mr./Ms./Dr. N. SATHIYA PRIYA  
of Dept of Physica, Nehru Institute of Engineering and Technology, Coimbatore has  
participated /presented a paper titled, A Short Review on Polymorphism in Amino Acid Compounds  
in the one day National Conference on **HIGHER ENERGY PHYSICS** Organised by the Department of Physics  
on 20<sup>th</sup> December 2017.

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**DR. P. MANIARASAN**  
Principal  
Nehru Institute of Engg. & Technology  
T.M.Palayam, Coimbatore - 641 105

This is to Certify that Mr./Ms./Dr. R. SARAVANAKUMAR

of Dept. of physics, Nehru Institute of Engg. and Tech. Coimbatore has participated /presented a paper titled, Removal of heavy metal ions from wastewaters by using various carbon adsorbent: A Review in the one day National Conference on **HIGHER ENERGY PHYSICS** Organised by the Department of Physics on 20<sup>th</sup> December 2017.



Principal



# NATIONAL CONFERENCE ON ADVANCED MATERIALS (NCAM 2017)

## CERTIFICATE OF PARTICIPATION

*P. Maniharasam*  
Dr. P. MANIHARASAM  
Principal  
Nehru Institute of Engg. & Technology  
TM Palayam, Coimbatore - 641 105

This is to certify that S. Shalini Parkiam Kamala participated in the National Conference on Advanced Materials (NCAM 2017) during 12-13, December 2017 in PSG College of Technology and presented the paper entitled Vibrational NMR and Mesp of 3-chloro-4-Hydroxy Benzointrile - A scaled Quantum Mechanical Approach.

Dr. R. Balasundaraprabhu  
Convener

Dr. S. Prasanna  
Convener

Dr. M. D. Kannan  
HoD Physics

Dr. R. Rudramoorthy  
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This is to certify that N. Sathya Priya participated in the National Conference on Advanced Materials (NCAM 2017) during 12-13, December 2017 in PSG College of Technology and presented the paper entitled Polymorphism in amino acid compounds - A Review.

Dr.R.Balasundaraprabhu  
Convener

Dr.S.Prasanna  
Convener

Dr.M.D.Kannan  
HoD Physics


Dr.R.Rudramoorthy  
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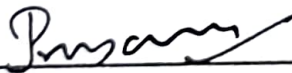
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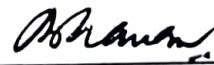
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This is to certify that N. Sathiya Priya participated in the National Conference on Advanced Materials (NCAM 2017) during 12-13, December 2017 in PSG College of Technology and presented the paper entitled Synthesis and various studies on nanocrystalline CdS thin films prepared from simple chemical bath technique.

  
Dr. R. Balasundaraprabhu  
Convener

  
Dr. S. Prasanna  
Convener

  
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HoD Physics

  
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T.M. Palayam, Coimbatore - 641 105

This is to certify that R. Sarovanakumar participated in the National Conference on Advanced Materials (NCAM 2017) during 12-13, December 2017 in PSG College of Technology and presented the paper entitled Role of Carbon on various generations of Solar cells - A Review.

Dr.R.Balasundaraprabhu  
Convener

Dr.S.Prasanna  
Convener

Dr.M.D.Kannan  
HoD Physics

Dr.R.Rudramoorthy  
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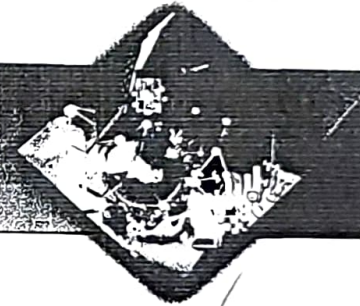
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This is to certify that Dr. Jayan V. K.

of Professor, Nehru Institute of Engineering & Technology has presented the paper  
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HoD  
Dept. of Computer Applications

Dr. K. Ravikumar  
HoD  
Dept. of Management Studies

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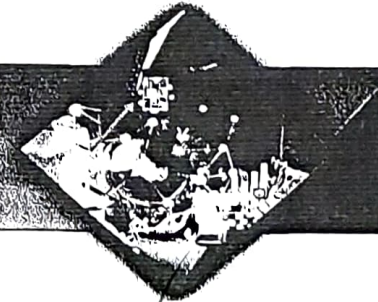
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of Asst. Professor, Nehru Institute of Engineering & Technology has presented the paper  
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**Prof. R. Thiyagarajan**  
HoD

Dept. of Computer Applications

**Dr. K. Ravikumar**  
HoD

Dept. of Management Studies

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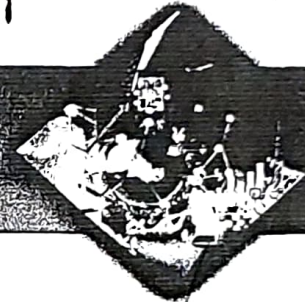
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This is to certify that J. Prakash

of Research Scholar, R.V.S. Institute of Management has presented the paper

entitled A Study on Role of Social Media & Digital Marketing at Organisation

in the National Conference on INNOVATIONS IN IT AND MANAGEMENT (NCITM 2018) held on 28th February 2018,

at NIITM, Coimbatore.

Prof. R. Thiyagarajan  
HoD

Dept. of Computer Applications

Dr. K. Ravikumar  
HoD

Dept. of Management Studies

Dr. R. Moses Daniel  
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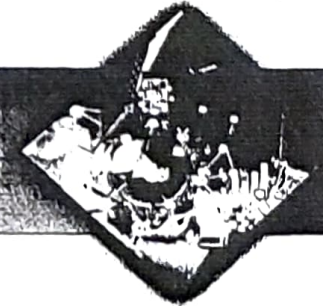
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This is to certify that Mrs. P. Soma  
of Research Scholar, V. B. Jeyakummar College of Arts & Science has presented the paper  
entitled GST Compliance Management

in the National Conference on INNOVATIONS IN IT AND MANAGEMENT (NCIITM 2018) held on 28th February 2018,  
at NIITM, Coimbatore.



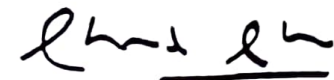
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HoD  
Dept. of Computer Applications



Dr. K. Ravikumar  
HoD  
Dept. of Management Studies

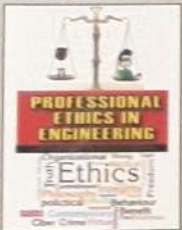


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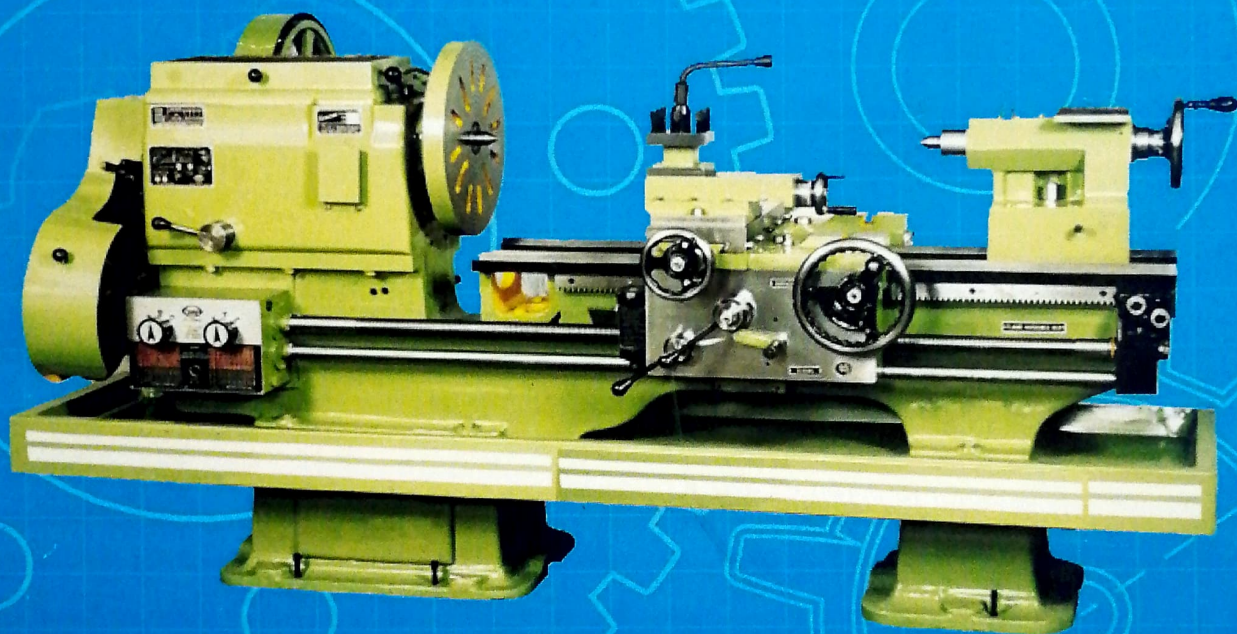


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(As per Anna University syllabus)



**Dr. N. GOPALSAMY, M.B.A, M.E, PhD.,**  
Associate Professor - Mechanical Engineering

**Dr. P. MANIARASAN, M.E, PhD.,**  
Professor - Mechanical Engineering

**Mr. C. MANIVEL, M.E, (PhD).,**  
Assistant Professor - Mechatronics Engineering

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*ASSOCIATE PROFESSOR - MECHANICAL ENGINEERING*  
**NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
*NEHRU GARDENS, T.M. PALAYAM, COIMBATORE -641 105*

**Dr. P. MANIARASAN, M.E., Ph.D**

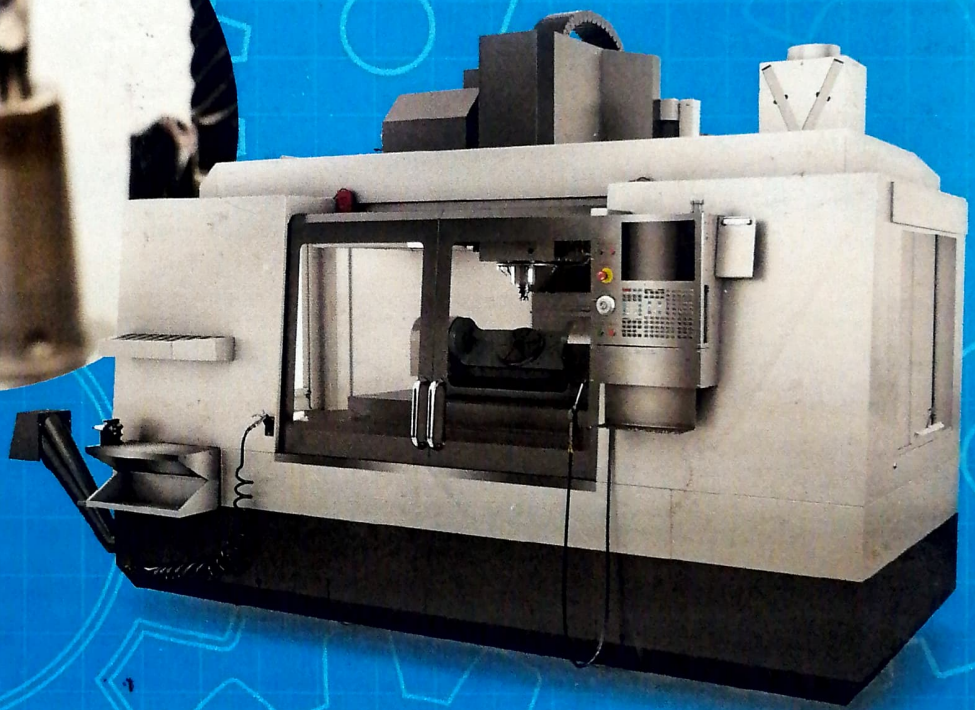
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**Mr. C. MANIVEL, M.E., (Ph.D)**

*ASSISTANT PROFESSOR - MECHATRONICS ENGINEERING*  
**NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
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Academic Year: 2016-2017

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	ISBN/ISSN number of the proceeding	Name of the publisher
1	Ms. A. Senthamil Selvi	-	Aerodynamic Analysis Hypersonic Fore body to Improve its Aerodynamic Efficiency		SNS College of Technology
2	MR. D. Manikandan	-	Model and Analysis of Composte Wing Ribs Using Finite Elemant Method		SNS College of Technology
3	Mr.J.Karthikeyan	-	Model and Analysis of Composte Wing Ribs Using Finite Elemant Method		SNS College of Technology
4	Mr.J.Karthikeyan	-	Effect of Acoustic in Convergent Nozzle		SNS College of Technology
5	Mr.R.Kousik Kumaar	-	Design and Finite Elemant Analysis of Aluminium Cenosphere Composite Disc Brakes		Veltech Dr.RR & Dr.SR University
6	Mr.Vinod Kumar. V	-	Analysis of OFDM systems for wireless applications	-	Karpagam College of Engineering
7	Mr.K.Nagarajan	-	Analysis of OFDM systems for wireless applications	-	Karpagam College of Engineering

8	Mr.K.Nagarajan	-	Analysis of OFDM Systems For High Bandwidth Application		Nehru College of Management
9	Mr. S. Daison Stallon	-	Energy Modelling Economics and Project Management in Wind Energy Technologies		Nehru College of Management
10	Mr.K.Nagarajan	-	Analysis of OFDM systems for High Bandwidth Application	-	VIT University
11	Mr.Vinod Kumar. V	-	Analysis of OFDM systems for High Bandwidth Application	-	VIT University
12	Mrs.Vaisakhi.V	-	Advanced Sign Language Translation System with speech using Android Smartphone	-	RVS College of Engineering and Technology
13	Mrs.K.Sivakami	-	Parametric Estimation of HRV Signals	-	RVS College of Engineering and Technology
14	Mrs.Kavitha B Kumar	-	Parametric Estimation of HRV Signals	-	RVS College of Engineering and Technology
15	Mr. D. saravana kumar	-	Advanced PLC Network controller using Can Bus		Coimbatore Institute of Engineering & Technology
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17	S. P. Jothiprakash	-	On GPS closed		K.S. Rangasamy

			mappings and GPS Homeomorphisms in Intuitionistic Fuzzy Topological Space		College of Arts & Science, Tiruchengode
18	Mr. S. Arun kumar Mr. P. Parthiban	Circuit Theory			Charulatha Publications, Chennai
19	K.Nagarajan, S.Daison Stallon, V.Vinod Kumar	A detailed out line on electronic devices		978-81-910-748- 1-9	ACES publishers



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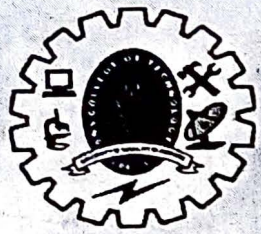
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This is to certify that D. MANIKANDAN  
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..... **RIBS USING FINITE ELEMENT METHOD** ..... in 7<sup>th</sup> National Conference on

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VOLUME-VI

S.NO	PAPER ID	PAPER TITLE
1	5	SMART UNUSUAL EVENT DETECTION USING LOW RESOLUTION CAMERA FOR ENHANCED SECURITY
2	12	EMOTION RECOGNITION SYSTEM TECHNIQUES SURVEY
3	14	PREDICTING DISEASE USING INFORMATION INTEGRATION PLATFORM FOR LARGE DATA
4	16	ANALYSIS OF OFDM SYSTEMS FOR WIRELESS APPLICATION
5	25	ACCELEROMETER BASED MOUSE AND HANDWRITING RECOGNITION SYSTEM
6	32	ADVANCE CONTROL TECHNIQUE FOR POWER MANAGEMENT AND SYNCHRONIZED OPERATION OF HYBRID MICROGRID
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16	239	MODEL BASED ANALYSIS OF SAFETY CRITICAL VALIDATIONAL ALGORITHM

  
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## ANALYSIS OF OFDM SYSTEMS FOR WIRELESS APPLICATION

K.NAGARAJAN<sup>1</sup>, Dr S.SOPHIA<sup>2</sup>, V.VINOD KUMAR<sup>3</sup>

<sup>1,3</sup>ASSISTANT PROFESSOR, <sup>2</sup>PROFESSOR/ DEPARTMENT OF ECE

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[naguambani@gmail.com](mailto:naguambani@gmail.com), [sophia@skcet.ac.in](mailto:sophia@skcet.ac.in) [vinodvijayan02@gmail.com](mailto:vinodvijayan02@gmail.com),

### I. Abstract:

Orthogonal Frequency Division Multiplexing (OFDM) is one of the most attractive candidates for Fourth Generation (4G) wireless communication. Because of multipath propagation & noise the performance of OFDM system affected by channel leakage. OFDM channel is analyzed to estimate the channel leakage along with Mean Square Error (MSE) and Signal to Noise Ratio (SNR) using DWT.

And the other issue in OFDM system is high Peak to Average Power Ratio (PAPR) of the transmitted OFDM signal.. For practical OFDM system the High Power Amplifier (HPA) used to obtain sufficient transmitter power has limited range, thus the OFDM signal with high PAPR could be distorted by non linearity of HPA resulting some additional interference in the system. This work proposes DWT for analyzing the channel estimation and Partial Time Sequence (PTS) to reduce PAPR in 16 QAM OFDM system.

**Keywords** Orthogonal Frequency Division Multiplexing Discrete Fourier Transform Discrete Wavelet Transform



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"ANALYSIS OF OFDM SYSTEMS FOR HIGH BANDWIDTH APPLICATION"

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*Application*

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in National Level Conference on "Intelligent Information and Computing Technologies"  
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KLANN MECHANISM HELD TELEROBOT WITH SECURITY SYSTEMS "In the National level

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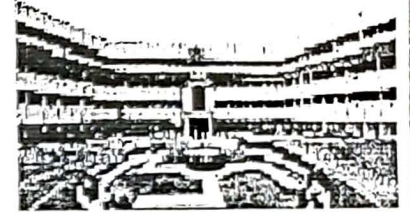
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09. Microprocessor & Microcontroller	14. Microprocessor & Microcontroller	18. Object Oriented Programming	19. Electromagnetic Fields
10. Design & Analysis of Algorithms	15. Design & Analysis of Algorithms		20. Linear Integrated Circuits
11. Operating Systems	16. Operating Systems		21. Communication Theory
12. Computer Networks	17. Software Engineering		
13. Software Engineering			

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<b>ELECTIVES</b>	<b>ELECTIVES</b>	37. Principles of Management	<b>ELECTIVES</b>
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27. Software Testing		38. Professional Ethics In Engineering	43. Operating Systems
28. C# & .Net Programming			

**VIII SEMESTER**

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44. Distributed Systems	51. Distributed Systems	53. Electrical Energy Generation Utilization and Conversation	54. Satellite Communication
45. Software Quality Assurance	52. Principle of Compiler Design		55. Wireless Networks
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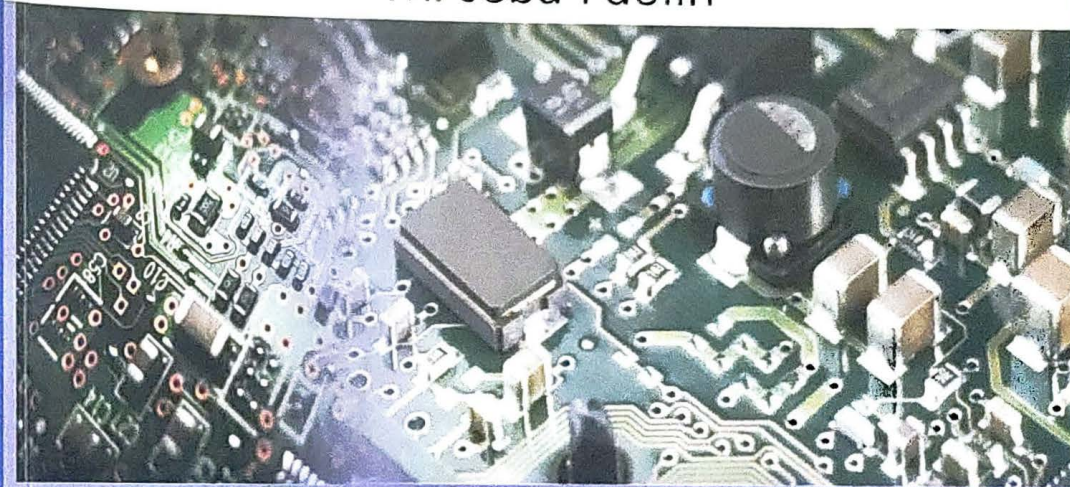
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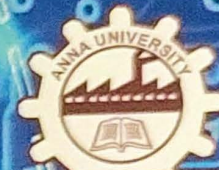
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(2013 REGULATION)  
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**P.KUMAR, M.E., (Ph.D)**

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Academic Year: 2015-2016

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	ISBN/ISSN number of the proceeding	Name of the publisher
1	K.Nagarajan	-	Channel Analysis and PAPR Reduction for OFDM Systems	-	Nehru College of Management
2	Ms.R.Gnanakumari	-	Data Hiding Using JPEG-JSTEG Process	-	Karpagam Institute of Technology
3	Mrs.Jeba Paulin	-	Data Hiding Using JPEG-JSTEG Process	-	Karpagam Institute of Technology
4	Mrs.R.Gnanakumari	-	VLSI Based Lossy Image Compression Technique using DWT	-	Hindusthan College of Engineering and Technology
5	Mr. S. Daison Stallon	-	Minimization of the Building Maintenance Cost by Green Roof Technology	-	Nehru College of Management
6	Mrs.Kavitha B Kumar	-	Estimation of HRV signals using Kalman Smoother Algorithm	-	Nehru College of Management
7	Mrs.Vaisakhi.V	-	Estimation of HRV signals using Kalman Smoother Algorithm	-	Nehru College of Management
8	Narayanasamy P S	-	Employer Branding	-	Nehru Institutue of Management Studies

9	Prakash T	-	Employer Branding		Nehru Institutue of Management Studies
10	Dr P Senthilkumar, Dr.P.Maniiarasan	Environment al science and Engineering		978-81-908910-4-2	iManager publications



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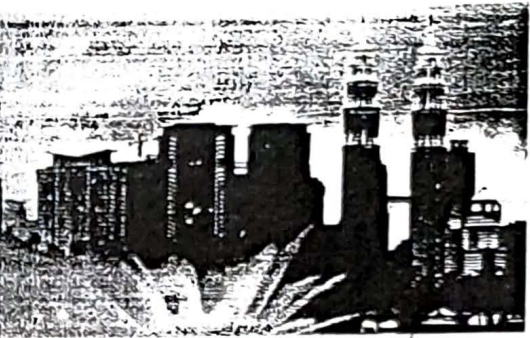
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3<sup>rd</sup> International Conference on  
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Kuala Lumpur, Malaysia



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CHANNEL ANALYSIS AND PAPER REDUCTION

FOR OFDM SYSTEMS

in the 3<sup>rd</sup> International Conference on Contemporary Issues on  
Management & Information Technology (ICMIT) Organized by Nehru College of  
Management, Coimbatore, Tamilnadu, India held at Kuala Lumpur, Malaysia  
on 9th & 10th March 2016.



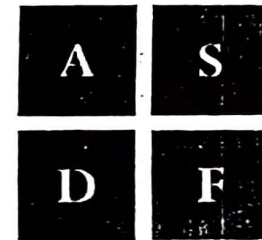
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# ICSSCCET 2016



18 – 19, March 2016 :: Karpagam Institute of Technology, Coimbatore, India

## *Certificate of Publication*

This certify that **R.Gnanakumari** has participated in the International Conference on Systems, Control, Communicaton Engineering and Technology(ICSSCCET 2016) held at Karpagam Institute of Technology, Coimbatore, India between 18<sup>th</sup> March, 2016 and 19<sup>th</sup> March, 2016  
Chair /Keynote Speaker /PC Member /Delegate /Author for his/her research work on **Data Hiding Using JPEG-JSTEG Process** We  
look forward for future participation in ICSSCCET 2017.

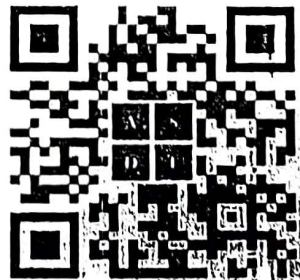
18/03/16

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Dr. T. Ramachandran

**Dr. P. MANIARASAN**  
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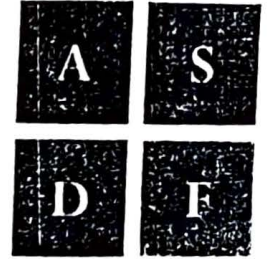


ICSSCCET 2016 Publications Chair

Dr. Daniel James



# ICSSCCET 2016



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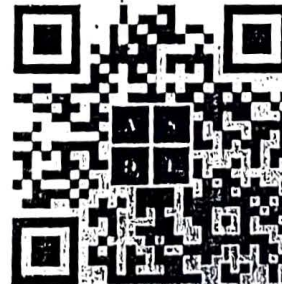
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*T. Ramachandran*  
18/03/16

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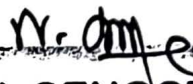
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NEHRU INSTITUTE OF ENGINEERING TECHNOLOGY [NIET] has presented a

paper entitled VLSI BASED LOSSY IMAGE COMPRESSION TECHNIQUE USING DWT

in the "International Conference on Green, Intelligent Computing and

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DR. N. VENKATESHAN





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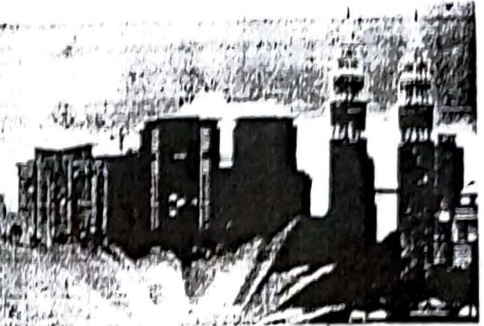
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**MINIMIZATION OF THE BUILDING**

**MAINTENANCE COST BY GREEN ROOF**

**TECHNOLOGY**

In the 3<sup>rd</sup> International Conference on Contemporary Issues on  
Management & Information Technology (ICMIT) Organized by Nehru College of  
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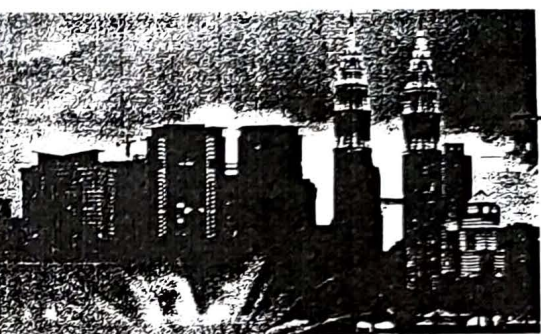
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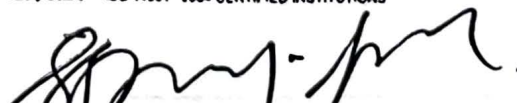
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Estimation of HRV signals Using Kalman  
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In the 3<sup>rd</sup> International Conference on Contemporary Issues on  
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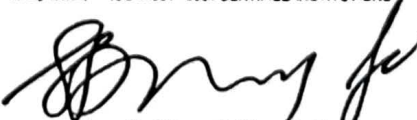
Estimation of HRV Signals Using  
Kalman Smoother Algorithm.



In the 3<sup>rd</sup> International Conference on Contemporary Issues on  
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# ENVIRONMENTAL SCIENCE AND ENGINEERING

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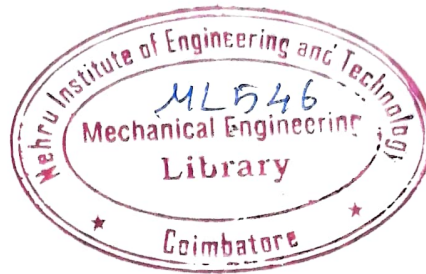
(Mechanical Engineering)



**Prof.P. SENTHILKUMAR**

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Academic Year: 2014-2015

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	ISBN/ISSN number of the proceeding	Name of the publisher
1	Mr.R.Kousik Kumar	-	Construction And Analysis Of Regression Equation For Tribological Properties Of Aluminium - Cenosphere Composites		Sri Subramanya College Of Engineering And Technology
2	M.Saravanapriya	-	Impact of HMIS in Government Hospitals of Tamilnadu - A Theoretical Perspective		Hallmark Business School
3	Dt.P.T.V.Vijayarajakumar	Operations Management		978-93-82249-38-2	Thakur Publishers
4	Mr.R.Kousik Kumar	-	Construction And Analysis Of Regression Equation For Tribological Properties Of Aluminium - Cenosphere Composites		Sri Subramanya College Of Engineering And Technology



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Composite* <sup>AD 168</sup> in the "International

conference on contemporary Innovations in the sphere of Mechanical Engineering  
and Management" organised by Department of Mechanical Engineering, SSCET Palani,

Tamil Nadu, India on 30<sup>th</sup> & 31st March 2015

*D. Pandey*  
Convener

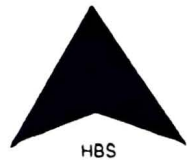
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has participated in One day National Conference on **"Management Challenges & Strategies for Competitiveness"** held at Hallmark Business School, Trichy on 4<sup>th</sup> April, 2014.

He/She Presented the paper entitled.....*Impact.....of.....HMIS.....in.....Government.....Hospitals.....*  
.....*of.....TamilNadu.....A.....Theoretical.....Perspective"*.....

Convener  
Dr. S. Dasarathan

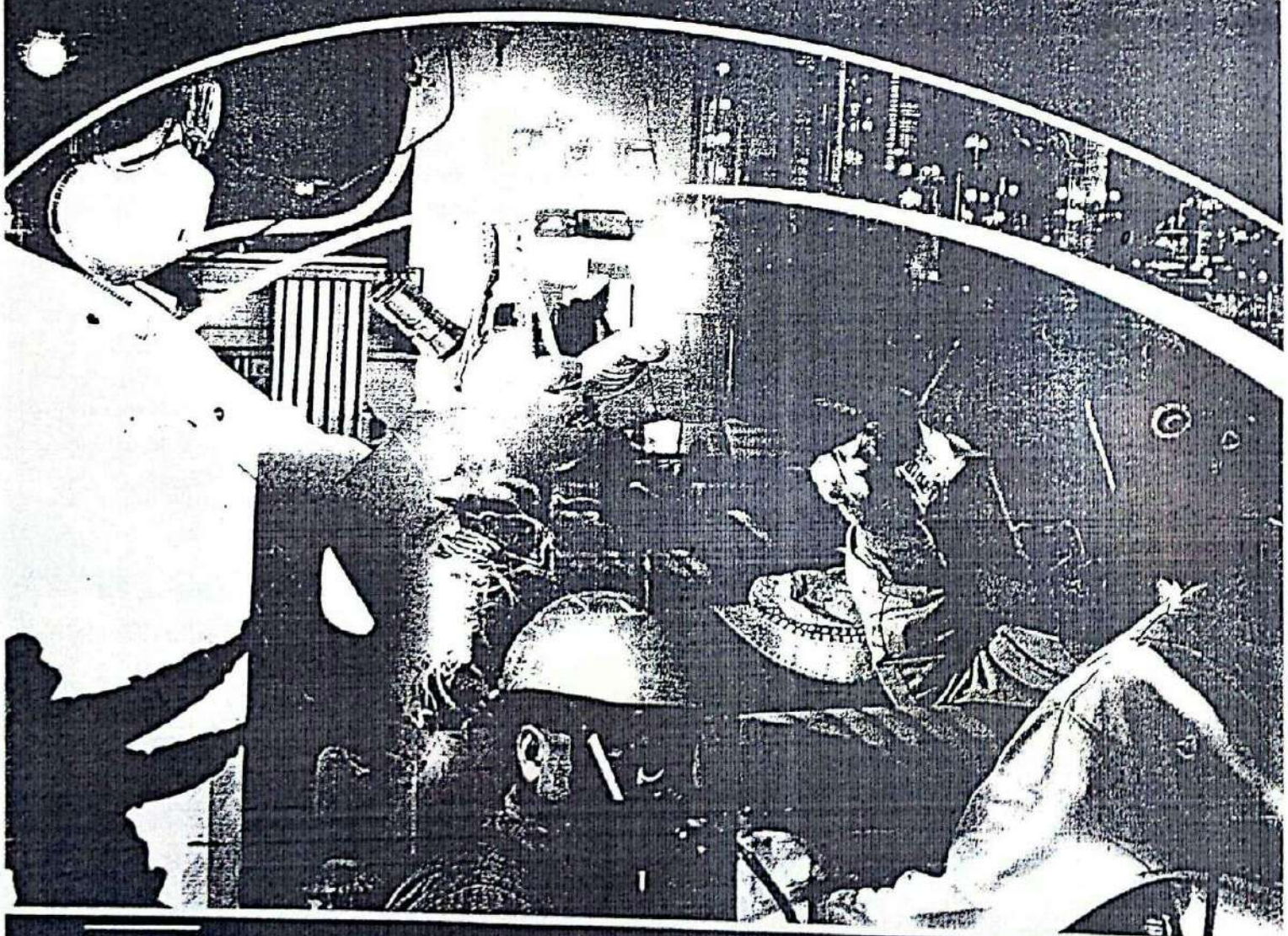
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# Operations Management



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## About the Book

Operations Management concepts are far reaching, affecting every aspect of the organization and even everyday life. This book of **Operations Management** essentially provides the students with the broad framework of operations management like operation strategy, international operation management, demand forecasting, product design, process and capacity decisions. It also covers a wide range of topics such as aggregate planning, MRP/ERP, work study, material management, inventory control, project management and facility planning.

By keeping in view the technological and market changes, this book adopts the modern and integrated approach, to study the different aspects of operation management. The divisions and sub-divisions have been exposed through charts to make it more interesting and observable. A variety of endeavours have been made to present the material in simple, systematic and conceptual manner. In addition to the useful and comprehensive theoretical knowledge, this book also provides the methods, figures, practical examples, solved question papers, unit-wise classification of previous years question papers and index to give the systematic knowledge of the syllabus.

## About the Author



**Dr. P. T. Vijaya Rajakumar** is currently working as **Director** in **Nehru Institute of Engineering and Technology, Coimbatore**. He has more than **12 years** of experience in teaching, research and industry. His specialization is **Entrepreneurship Development, Business Research Methods, Marketing Management, Business Economics** etc. He holds a **Doctorate in Management**. He is basically an **Economics graduate** and completed his **MBA** from **Madurai Kamaraj University**. He has published more than **30 papers** in **International and National Journals and Conferences**. He is also the **Editorial Member** for the **International Journal for Economics and Business and Management**. He has been approved as **Research Supervisor** for **Ph.D. Degree** by **Anna University and Bharathiar University** and guiding research scholars also.



**Dr. G. Bhuvanewari** is presently working with **Nehru Institute of Technology** as **Director** in **MBA Department**. She earned her **BE Degree** from **Thiagarajar College of Engineering, Madurai** and **MBA** from **BSME, Bharathiar University Campus**, a leading **B-School** in **Coimbatore**. She has been awarded her **Ph.D. in Management**. She has more than **10 years** of experience in **Teaching, Industry and Research**. Her areas of interest are **Operations Management, Operations Research and Research Methods**. She is having good exposure and knowledge in **Business Application Software like SPSS, POM and TORA**. She has participated and presented papers in many **National and International conferences** and published papers in **National and International journals**.

### Anna University, Chennai MBA Second Semester

Subject Name	Author Name	Page	Rate
Operations Management	Dr. P.T.V. Rajakumar, Dr. G. Bhuvanewari	312	150
Financial Management	Priyanka Singh, Swati Tiwari	290	150
Marketing Management	T. Devasenathipathi, Prabhu S.	304	150
Human Resource Management	Dr. K. Karupiah, M. Karthik	232	140
Management Information System	S. J. Moses, M. Karthikeyan	272	150
Applied Operations Research for Management	Saroj Kumar, Pravesh Kumar Singh	297	140
Business Research Methods	Dr. T. Veirivel, Dr. P. Priyadarsini	232	140

MRP: ₹150

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