

3rd NATIONAL CONFERENCE ON EMERGING TRENDS IN MECHANICAL ENGINEERING April 6th & 7th 2017

REGISTRATION FORM

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☐ Student ☐ Academia ☐ Industry

Title of the Paper:

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Registration Fee

Students / Research Scholars: Rs.750
Academicians: Rs.1000
Industrial participants: Rs.2000
(DD drawn in favour of Sathyabama University,
payable at Chennai)

Chronicle

Submission of final paper: 28th March, 2017
Notification of acceptance: 31st March, 2017
Last Date for Registration: 01st April, 2017

Depending on originality, quality and other editorial
considerations, Peer reviewed research papers of the
conference will be published in Scopus Indexed Journal
(Based on Request)

Address for Correspondence:

The Organizing Secretary, NCETIME 2017,
Department of Mechanical Engineering,
School of Mechanical Engineering,
Sathyabama University, Jeppiaar Nagar,
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Mob: +91 9994069306 & Ph: 044-2450 3142
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3rd NATIONAL CONFERENCE ON EMERGING TRENDS IN MECHANICAL ENGINEERING

NCETIME 2017

April 6th & 7th, 2017



Organized by

Department of Mechanical Engineering
School of Mechanical Engineering
Sathyabama University
(Established Under Section 3 of UGC Act, 1956)
Jeppiaar Nagar, Rajiv Gandhi Salai
Chennai – 600 119, Tamil Nadu.
www.sathyabamauiversity.ac.in

About Sathyabama University

Sathyabama University established under section 3 of UGC Act, 1956 (A Christian Minority Institution) was formerly known as Sathyabama Engineering College established by SATHYABAMA EDUCATIONAL TRUST. It is a pioneer institute imparting quality education in the field of engineering, science & technology. The institution's progress and contribution in the field of technical education for over two decades made the Ministry of Human Resources Development, Government of India to grant Deemed University status on 16th July, 2001 and University status on 13th September, 2006. Sathyabama University is under the blessings of our Founder Chancellor Colonel Dr. JEPPIAAR M.A., B.L., Ph.D and dynamic leadership of our Chancellor Tmt. Remibai Jeppiaar. Our University strengthens its development activities to bring the fruits of research for the betterment of the society with the able support and valuable guidance of Pro Chancellor, Vice President, Vice-Chancellor, Pro Vice Chancellor, Deans, Registrar and Controller of Examination. The University has been awarded category "A" University status by MHRD, Government of India. The University is offering exemplary education from last 29 years. The University has undertaken various sponsored and collaborative R&D projects funded by national organizations such as ISRO, DST, DBT, DRDO, BRNS and IGCAR.

About Department of Mechanical Engineering

The Mechanical Engineering Department, established in the year 1988 is one of the first departments in Sathyabama University and has been offering B.E. degree programme in Mechanical Engineering, M.E. degree programmes and Ph.D Research programmes. The department has seen a tremendous growth over the last two decades with faculty members doing their doctoral research in various fields of Mechanical Engineering. The department has state of art laboratory

facilities to give a wide exposure to the students for practical knowledge and hands-on-experience and also to cater to the research needs of students and faculty members. We enjoy a symbiotic relationship with many leading institutions and industries in and around Chennai. In line with our policy of keeping abreast with the latest development, by the collective and responsive effort of the faculty the department conducts workshops, symposia and national and international conferences.

Paper Are Invited But Not Restricted To The Following Themes

- Applications of AI Techniques in Design & Manufacturing
- Applied Mechanics
- Biomechanics
- Design & Manufacturing
- Fatigue & Fracture
- Alternate Fuels
- Bio-Energy Production
- Computational Fluid Dynamics
- New & Renewable Energy
- Heat and Mass Transfer
- Advanced Manufacturing Technology
- Advanced Material Processing and Properties
- Automation, Mechatronics and Robotics
- Composite and Smart Materials
- Nano Technology

Guidelines for preparing paper

The paper must be written in English limited to a maximum of 6 pages including references and must conform to IEEE double column format. Soft copy (.doc) of the paper should be sent to the convener at: ncetime2017@sathyabamauiversity.ac.in

Registered & Selected papers will be published in conference proceedings with ISBN number and published in Scopus indexed journals. (Based on Request)

With the divine Blessings of

Colonel Dr. JEPPIAAR, M.A., B.L., Ph.D.,
Founder Chancellor, Sathyabama University

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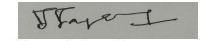
Chennai – 600 119, Tamil Nadu.

Certificate of participation

This is to certify that Mr. / Ms. Beemkumar.R has successfully complete the “**3rd National Conference on Emerging Trends in Mechanical Engineering**” at Sathyabama Institute of Science and Technology, Chennai – 600119, Tamilnadu, India from **April 6th & 7th, 2017.**


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Organizing Secretary


Coordinators

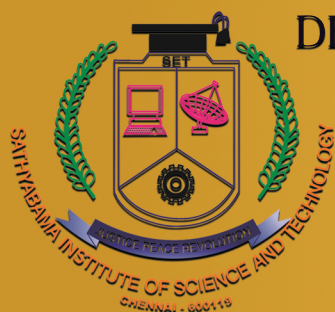
Total number of participants – 165

CONFERENCE PROCEEDINGS OF
THE 3rd NATIONAL CONFERENCE ON
EMERGING TRENDS IN MECHANICAL ENGINEERING
(NCETIME 2017)
6TH & 7TH APRIL 2017



ORGANIZED BY

DEPARTMENT OF MECHANICAL ENGINEERING
SCHOOL OF MECHANICAL ENGINEERING



SATHYABAMA UNIVERSITY
(Established U/S 3 of UGC Act, 1956)
JEPPIAAR NAGAR, CHENNAI – 600119

NCETIME 2017

Abstract Book

3rd National Conference on Emerging Trends in Mechanical Engineering

(NCETIME-2017) April 6th & 7th, 2017

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Mr. A.Mahendran,

DGM(Mfg), Ashok Leyland, Chennai

Message

It is heartening to note that Sathyabama University, Chennai is organizing a third national Conference on Emerging Trends in Mechanical Engineering (NCETIME-2017) during 6th & 7th April 2017 and I am pretty sure that it is an ample platform that could strengthen the synergy of researchers, industry personal, academicians, students and professionals of this vast realm.

The fascination and thrust for exploring the frontiers of automobile and mechanical engineering have been exponentially rising untie the secrets of nature in modern times. Intelligence manufacturing, Nanomechanics, Artificial intelligence, expert systems for design and manufacturing. Green and sustainable technologies. Novel approaches to energy conversion, design of recyclability. Plug in hybrid cars are some of the frontier areas finding innumerable application and scope in the years to come. Of course, the quest in search of alternate technology and solutions to the engineering problems in the ultimate driving factor for innovations and discoveries.

I hope the conference will pave a pay to get into the insight of the frontiers of automobile and mechanical engineering; to foster collaborations across the globe; development of state-of-the-art future technologies for potential application and predominantly in devising feasible solution for the comfortable life of the mankind.

Once again, may I take this opportunity in wishing this conference a Grand Success.

(Mr. A. Mahendran)

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CHANCELLOR MESSAGE



On behalf of the Management, we welcome you all to the 3rd National Conference on “**Emerging Trends in Mechanical Engineering**” from 06th to 07th April 2017 organized by Department of Mechanical Engineering, School of Mechanical Engineering, Sathyabama University, Chennai.

Mechanical engineers use the core principles along with tools like computer-aided design and product life cycle management to design and analyze manufacturing plants, industrial equipment and machinery, automobiles, aircraft, robotics and others. The development and manufacturing of modern Machine Tools, Automobiles and Aircrafts are extremely complex and demand careful balance and compromise between abilities, design, available technology and costs. Sathyabama University has come forward to confront with the recent discoveries and findings advancements in the field of Mechanical Engineering in a national forum by organizing the **3rd National Conference on Emerging Trends in Mechanical Engineering (NCETIME 2017)**. This conference is a perfect platform to share experience, foster collaborations across industry and academia and evaluate emerging technologies to challenges across the globe.

I wish the conference a grand success.

Mrs. Remibai Jeppiaar

Chancellor,
Sathyabama University, Chennai, India

PRO CHANCELLOR AND VICE PRESIDENT MESSAGE



On behalf of the Management, we welcome you all to the 3rd National Conference on “**Emerging Trends in Mechanical Engineering**” from 06th to 07th April 2017 organized by Department of Mechanical Engineering, School of Mechanical Engineering, Sathyabama University, Chennai.

The conference provides an opportunity for academicians to transmit the knowledge generated through their research. Conferences are considered as vital part of academic programmes of all good Universities

We are also glad to learn that many academicians and scholars from all over the world have shown interest to participate in this conference. We are sure this conference will quench the knowledge thirst of research activist and share their knowledge in the field of Mechanical, Production Automobile and Aeronautical technologies, conference continues to focus on heterogeneous areas of space research and applications, but the scope has been expanded to include a wider range of topics including issues on reliability, security and robustness. We extend a warm welcome to delegates from industry and academia to join us for three exciting days of new ideas dissemination and technical discussions.

Last but not least, we would like to thank all the authors, the reviewers and the delegates for their contributions and participation. The Conference will not be a success without your expertise and active participation. On behalf of the Organizing Committee, we thank you for making this conference a great success.

Dr. MARIAZEENA JOHNSON

Pro Chancellor
Sathyabama University

Dr. MARIE JOHNSON

Vice President
Sathyabama University

Message from Vice Chancellor

I take the privilege to welcome the delegates and research scholars for the 3rd National Conference on **“Emerging Trends in Mechanical Engineering”** from 06th to 07th April 2017 organized by Department of Mechanical Engineering, School of Mechanical Engineering, Sathyabama University, Chennai.

I expect it to be a great opportunity and an inspiring occasion for learning. We look forward to your contribution and participation and hope that the conference will provide stimulating discussions, networking and cooperation.

Dr. K. V. Narayanan

Vice Chancellor,
Sathyabama University, Chennai

Message from Pro Vice Chancellor

I would like to congratulate the NCETIME 2017 organizers for the achievement of collecting around 120 papers for this conference. This 3rd National Conference on **“Emerging Trends in Mechanical Engineering (NCETIME 2017)”** provides a platform to bring together not only researchers, postgraduate students but also industrial people. With this platform, NCETIME will embark on a whole process of making new discoveries and then translating them into products and services for the marketplace and this is only made possible with people like all of you.

Dr. T. Sasipraba

Pro Vice Chancellor,
Sathyabama University, Chennai

Message from Registrar

With gratification I welcome the delegates and speakers for the National Conference which is also expected to be a good get-together of senior and young professionals. The conference has emerged out of more than three months of hard work of the organizing committee with due guidance of our honorable Pro Chancellor and Vice President. A number of persons from industry and academia are participating in this conference and is nourished with keynote lectures, discussions and technical interactive sessions.

I hope that this conference would surely induce modern ideas among the participants paving way for new inventions in the Mechanical, Production Automobile and Aeronautical sector.

Dr. S. S. Rau

Registrar,
Sathyabama University, Chennai

Message from Controller of Examinations

Conferences are an important mode of transfer of knowledge and ideas among technologists and researchers. To fulfill the vacuum in academic learning, 3rd National Conference on “**Emerging Trends in Mechanical Engineering**” from 06th to 07th April 2017 organized by Department of Mechanical Engineering, School of Mechanical Engineering, Sathyabama University, Chennai.

I sincerely wish this conference a laudable success.

Prof. S Igni Sabasti Prabu

Controller of Examinations,
Sathyabama University, Chennai

Message from Director Research

The Third National Conference on “**Emerging Trends in Mechanical Engineering**” (**NCETIME 2017**) provides a unique forum for academics, researchers, and practitioners to come together to promote the exchange and dissemination of their experience and knowledge on theory and practices in emerging aspects of information resources.

I sincerely wish this conference a commendable success.

Prof. Dr. B. Sheela Rani

Director – Research
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3rd NATIONAL CONFERENCE ON EMERGING TRENDS IN MECHANICAL ENGINEERING
(NCETIME-2017)
PROGRAMME SCHEDULE
6th - 7th April 2017

6th April 2017, Thursday		
Registration : (08.00 -8.30)		
Inaugural Function (8.30-10.00)- Main A/C Auditorium Chief Guest : Shri A.Mahendran , DGM(Mfg), Ashok Leyland, Chennai		
High Tea (10.00-10.30)		
SMART CLASS ROOM 1	SMART CLASS ROOM 2	SMART CLASS ROOM 3
10.30-12.30	10.30-12.30	10.30-12.30
<u>ORAL SESSION -1</u> <u>Design 1 (D 101-D112)</u> Session Chair Dr.E.V.V.Ramanamurthy Head, Mechanical and Production Engineering Sathyabama University	<u>ORAL SESSION -2</u> <u>Manufacturing 1 (M 301-M 318)</u> Session Chair Dr.V.K.Bubesh Raja Head , Automobile Engineering Sathyabama University	<u>ORAL SESSION -3</u> <u>Manufacturing 2 (M 319-M 336)</u> Session Chair Dr.N.Pragadish Professor, KCG College of Technology
Lunch (12.30 -13.30)		
SMART CLASS ROOM 1	SMART CLASS ROOM 2	SMART CLASS ROOM 3
13.30-15.30	13.30-15.30	13.30-15.30
<u>ORAL SESSION -4</u> <u>Thermal 1 (T 201-T 218)</u> Session Chair Dr. S.Sekar Professor Velammal Engineering College	<u>ORAL SESSION -5</u> <u>Thermal 2 (T 219-T 236)</u> Session Chair Dr.S.Ramachandran Professor, School of Mechanical Engineering Sathyabama University	<u>ORAL SESSION -6</u> <u>Thermal 3 (T 237-T 253)</u> Session Chair Dr.A.Karthikeyan Professor , Automobile Engineering Sathyabama University
<u>Mechanical Events</u> (13.30-15.30) Prod CAD Lab/ CFD Lab		

SATHYABAMA UNIVERSITY
JEPPIAAR NAGAR , RAJIV GANDHI ROAD, CHENNAI -119
3rd NATIONAL CONFERENCE ON EMERGING TRENDS IN MECHANICAL ENGINEERING
(NCETIME-2017)
PROGRAMME SCHEDULE
6th - 7th April 2017

7th April 2017, Friday	
SMART CLASS ROOM 1	SMART CLASS ROOM 2
8.30-10.30	8.30-10.30
<u>ORAL SESSION -7</u> <u>Manufacturing 3 (M 337-M 355)</u> Session Chair Dr.M.Chandrasekaran Director, School of Mechanical Engineering, Vels University	<u>ORAL SESSION -8</u> <u>Design 2 (D 113-D127)</u> Session Chair Prof. Alexander Head, Aeronautical Engineering Sathyabama University
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Sathyabama University, Chennai, India

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INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited "A" Grade by NAAC, 12B Status by UGC, Approved by AICTE

SCHOOL OF MECHANICAL ENGINEERING

RELIABILITY - CENTERED MAINTENANCE (RCM)

Session Handledby:

**Mr K.S.RAVI,
Project Manager,
And**

**Mr KRISHNAMURTHY,
Manager (HR),**

Enmas O&M, Chennai

18-07-2017

10.00 AM – 1.00PM

CHIEF PATRONS

Dr.Mariazeena Johnson
Chancellor

Dr.Marie Johnson
President

PATRONS

Dr.T.Sasipraba
Vice Chancellor

Dr.S.Prakash
Dean, Mechanical

Dr.G.Arunkumar
HOD, Mechanical

CONVENERS

Mr.S.Lakshmishankar

COORDINATOR

Mr.Nivin Joy

The Department of Mechanical Engineering organised a Seminar/guest lecture on 18/07/2017. It was a full day programme. 60 Students of III and IV year Mechanical Engg Students attended the programme. **Mr K.S.RAVI , Project Manager, and Mr Krishnamurthy , Manager (HR), Enmas O&M, Chennai visited Sathyabama University.**

Mr K.S.RAVI , Project Manager, presented a topic on **Reliability - Centered Maintenance (RCM). RCM** is a process to ensure that systems continue to do what their users require in their present operating scenario. It is a process to establish the safe minimum levels of maintenance. Initially the concept was introduced to United Airlines after considering the failures of the aircraft systems and later it was extended to various fields. Successful implementation of RCM will lead to increase in cost effectiveness, machine uptime, and a greater understanding of the level of risk that the organization is managing. The talk was in focus in answering the following questions.

1. What is the item supposed to do and its associated performance standards?
2. In what ways can it fail to provide the required functions?
3. What are the events that cause each failure?
4. What happens when each failure occurs?
5. In what way does each failure matter?
6. What systematic task can be performed proactively to prevent, or to diminish to a satisfactory degree, the consequences of the failure?
7. What must be done if a suitable preventive task cannot be found?

The lecture was a totally interactive one and the participants involved themselves in a great way. The live examples discussed by Mr K.S. Ravi made the discussion to be very live and students had an opportunity to learn a present time concept followed in Industry.

On behalf of Department of Mechanical Engineering we thank the great team and expect to have many similar programmes.



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IS PRESENTED TO :

For her active participation in the “One day Seminar on Reliability - Centered Maintenance” and for giving effort, ideas, and knowledge.

Coordinator

HOD

DEAN

List of participates

1	3415020	AMIT KUMAR	IV
2	3415021	ANALA JAWAHAR	
3	3415074	CHAPPIDI PRIYA RANJAN REDDY	
4	3415085	DANIEL CHRISTOPHER THOMAS	
5	3415090	DEEPAK.R	
6	3415106	GANGULA PAVAN KUMAR REDDY	
7	3415109	GOGINENI PRUDHVI	
8	3415146	JOSI JUDE.S	
9	3415147	KADURU HARSHA VARDHAN	
10	3415187	MANDALA HEMANTH MANIKANTA	
11	3415190	MANIVASAGAM. V	
12	3415195	MARTHALA NAVEEN KUMAR REDDY	
13	3415244	PONNERI SAI VIVEK	
14	3415251	PRATEEK KUMAR	
15	3415322	THOTA KALYAN KUMAR	
16	3415327	TILAK NATH BHOWMIK	
17	3415704	MUKKAMALLA SAIKUMAR REDDY	
18	3415708	SANKAR M J	
19	3515011	ADRINATH. J. S	III
20	3515012	AJAI SUDARSAN. S	
21	3515036	ARSATH AHAMED. B	
22	3515052	VISWAKANTH BANDARU	
23	3515071	BONDA NARASIMHA SAI KRISHNA	

24	3515072	BUCUPALLI SHIVAKALYAN REDDY	
25	3515079	CHARLAPALLY SHASHANK SHARMA	
26	3515084	CHINIMILLI MANOVENKATA SATYANARAYANA	
27	3515111	GOVIND RAJULU EDETI	
28	3515135	HANEEFA J	
29	3515140	HEAMNATH V	
30	3515148	JAYANTH ADAIKALARAJ.G	
31	3515168	KANDANURU JEELAN BASHA	
32	3515180	KEVIN J	
33	3515245	MOLLA SHAHAD BASHA	
34	3515254	NARASIMMA SATHYA MOORTHY	
35	3515288	PRADEEP M	
36	3515318	REUBEN ROMEL	
37	3515326	SAIRAM KARE	
38	3515336	CHENDREEM SATHYA SAI PUNEETH	
39	3515359	SIVAPRAKASH G K	
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45	3515812	PADALA DIVYASATYADEVENDRA REDDY	
46	3515951	PUCHAARUNKUMAR REDDY	
47	3615012	AKHIL SAJEEVU	II
48	3615047	BOYA SAI PAVAN KALYAN	
49	3615048	BOYAPALLE RAKESH KUMAR REDDY	
50	3615077	ENIYAVAN. G	
51	3615078	ESHWAR. J	
52	3615083	GOKULNATH. A	
53	3615085	GOPINATH. K	
54	3615134	LEO GAIND	
55	3615135	LINGAMPALLY SAI KUMAR	
56	3615141	MADHUBALAN. G	
57	3615170	MYNAMPATI BALASUBRAMANYAM	
58	3615803	DINESH. B	
59	3615805	HARISH KUMAR. S	
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