

CURRICULUM VITAE

1. Name of the Faculty : **Dr. P .USHA SRI**
 2. Father's Name : Mr. P. Narasimha Rao
 3. Date of Birth : 19-03-1972
 4. Designation : Associate Professor
 5. Department : Dept. of Mechanical Engineering
 6. Field of Specialization : CFD, Turbomachinery, Thermal Engineering
 7. Address for Correspondence : Associate Prof., Dept. of Mech. Engg. Univ. College of Engg. Osmania University, Hyderabad - 7
 8. Academic Qualifications :

| Degree | Institute/University | Specialization | Year of Pass | Division |
|--------|--|-----------------------------------|--------------|------------------------------|
| B.E | University College of Engineering, Osmania University, Hyderabad | Mechanical Engineering | 1992 | First Class with Distinction |
| ME | University College of Engineering, Osmania University, Hyderabad | Turbo Machinery | 2000 | First Class with Distinction |
| Ph.D. | Indian Institute of Technol Madras, Chennai | Mech. Engineering Turbo Machinery | 2007 | CGPA=9.25 |

9. Teaching Experience :

| Organization | Designation | Period | |
|---|---------------------|-------------|-----------|
| | | From | To |
| Mechanical Engineering Department, University College of Engineering, Osmania University, Hyderabad | Associate Professor | Jan 2006 | till date |
| Mechanical Engineering Department, University College of Engineering, Osmania University, Hyderabad | Assistant Professor | August 1997 | Jan 2006. |
| Dr. B R Ambedkar Govt. Model Residential Polytechnic College for Women, Karimnagar, A P | Lecturer | Jan 1996 | July 1997 |

10. Industrial Experience:

| Organization | Designation | Period | |
|--------------|-------------|--------|----|
| | | From | To |
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11. Number of Publications : 02 journals
 13 International Conference
 05 National Conference

- 1) Published a paper titled “Comparative study of Eco-friendly refrigerants in a lower capacity air-conditioning systems”, International conference on Mechanical and Automobile Engineering(ICMAE-2012), Bangkok, Sept 8-9, 2012.
- 2) Published a journal paper titled “A Comparative Study of the Performance of a Low Heat Rejection Engine with Three different Levels of Insulation with Vegetable oil Operation”, Journal of *The Archive of Mechanical Engineering* Vol.LIX 2012, Number 1, 10.2478/v10180-012-0006-1.
- 3) Presented a paper titled “ CFD Analysis of Elbow Draft Tube” in National Conference on Recent Advances in Mechanical Engineering (RAME 2012), organised by Mechanical Engineering Dept., University College of Engineering, Osmania University, Hyderabad during March 16-17, 2012.
- 4) Published a paper titled “Performance Evaluation of R32 as Retrofit Refrigeration in Existing Air Conditioners in Indian Scenario” in National Conference on Recent Advances in Mechanical Engineering (RAME 2012), organised by Mechanical Engineering Dept., University College of Engineering, Osmania University, Hyderabad during March 16-17, 2012.
- 5) Presented a paper titled “ A Comparative Study on the Performance and Environmental Impact of Alternative Refrigerants to Replace R-22” in International Conference on Advancements in Engineering and Management”, RITS ICAEM-2012, organised by Royal Institute of Technology and Science, Hyderabad during 28 &29 Feb 2012.
- 6) Paper titled “Innovative Teaching-Learning Methods for Engineering Education” is published in International Conference on Reforms in Technical Education – Global trends, ICORTE-2010, organised by Mechanical Engineering Dept., University College of Engineering, Osmania University, Hyderabad during August 27-28, 2010.
- 7) Paper titled “Computational Analysis on Performance of a Centrifugal Pump Impeller” is published in 4th International Conference on Fluid Mechanics and Fluid Power” organized by IIT-Madras, December 16-18, 2010. ISBN: 978-81-910571-1-9
- 8) Paper titled “Design And Analysis of Francis Turbine Casing” is presented in International Conference on Recent Advances in Mechanical Engg. (ICRAME2010) 8-9, April 2010, Noorul Islam University, Kumaracoil, Kanyakumari Dist., Tamilnadu
- 9) Paper titled “Computational Analysis of a Centrifugal Pump Impeller” is presented in International Conference on Recent Advances in Mechanical Engg. (ICRAME2010) 8-9, April 2010, Noorul Islam University, Kumaracoil, Kanyakumari Dist., Tamilnadu
- 10) Paper titled “Global Wind Energy Scenario- Role of Mechanical Engineering” is presented in International Conference on Recent Advances in Mechanical Engg. (ICRAME2010) 8-9, April 2010, Noorul Islam University, Kumaracoil, Kanyakumari Dist., Tamilnadu

- 11) A paper titled “Computational Study of Effect of Chord in Low Solidity Vane and Conventional Vane Diffusers” is presented in *International Conference on Computational Methods in Engineering and Sciences (ICCMES-2009)* organised by CBIT, Hyderabad, during 8-10 Jan2009.
- 12) A paper titled “Computational Investigation of Flow in a Centrifugal Impeller with Chamfered Blade Tips: Effect of Tip Clearance” is published in *National Conference on CFD Applications in Power & Industry Sectors*, organised by Corporate (R&D) Division, BHEL, Hyderabad-500 093, India,during Nov 17-18, 2006.
- 13) Presented a paper titled “Tip Clearance Effects on Flow Field of a Centrifugal Compressor” at *International Conference on Theoretical Applied Experimental and Computational Mechanics* organised by IIT- Kharagpur during 28-30 Dec 2004.
- 14) Paper titled “Computational Study of Tip Clearance Effects in a Centrifugal Compressor” is published in *International Conference on Computational Methods* organised by National University of Singapore, Singapore during 15-17 Dec 2004.
- 15) Journal Paper titled “ Heat Transfer Analysis of Free convection of Non-Newtonian Power Law Fluid over a Vertical Plate with Constant Heat Flux” is published in *The Journal of The Institution of Engineers(India) -Chemical Engineering*, Vol. 84, September 2003, pp. 25-32.
- 16) Presented a paper titled “Small Wind Turbine Electrical Pump Systems for Rural Applications in India- A Renewable Energy option” at *International Conference on Energy Management -beyond 2000* held at Lucknow during October 19-21, 2000 organised by The Institution of Engineers (India), U P State Centre, Lucknow.
- 17) Presented a paper titled “Wind Energy in India – Future Prospects” at *International Conference on Energy Management -beyond 2000* held at Lucknow during October 19-21, 2000 organised by The Institution of Engineers (India), U. P. State Centre, Lucknow.
- 18) A paper titled “Application of Quality Systems in Technical Education” is contributed at *National Conference on “Technical Education in the new Millennium – Management & Challenges (TECMANCH-2000)”* organized during March 12-13, 2000 by University College of Engineering (Autonomous), Osmania University, Hyderabad
- 19) A paper titled “Quality Management Systems for Technical Education” is published at *National Seminar on Restructuring of Technical Education System for Better Efficiency and Effectiveness* organised by ISTE Chapter, V.R.Siddhartha Engineering College, Vijayawada during December 5-6, 1997

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| 12. Number of Ph.Ds Guided | : 04 guiding |
| 13. Number of M.E. Projects Guided | : 32 |
| 14. Research Projects | : 02 |

| Year of Funding | Sponsoring Organization | Title of Project | Amount of Grant | Co-Investigators (if any) | Duration of Project |
|-----------------|-------------------------|--|-----------------|---------------------------|---------------------|
| Dec 2011 | AICTE | Computational Analysis of Grooved Casing in a Centrifugal Compressor | 10.16 lakhs | | 2 years |
| Aug 2011 | DST-PURSE | Development and experimental analysis of window air conditioning system with roll bond condenser | 5 lakhs | Mr. B. Hadya | 3 years |

15. Awards/Prizes :
16. Countries Visited :
17. Courses taught at PG and UG :

| Subject/Course | Class |
|------------------------------------|--|
| <i>PG Courses</i> | |
| Principles of Turbomachines | M.E. Turbomachinery I-Sem |
| Computational Fluid Dynamics | M.E. Turbomachinery II Sem |
| Computational Fluid Dynamics | M.E. CAD/CAM II Sem |
| Design of Advanced Gas Turbines | M.E. Turbomachinery II Sem |
| Computational Fluid Dynamics Lab | M.E. Turbomachinery II Sem |
| Turbomachinery Lab | M.E. Turbomachinery I Sem |
| <i>UG Courses</i> | |
| Thermal Turbo Machinery | B E –Mechanical 4/4 (Sem I) |
| Computational Fluid Flows | B E –Mechanical 3/4 (Sem II) |
| Thermal Engineering Lab | B E –Mechanical 4/4 (Sem I) |
| Computer Programing | B E –Mechanical 1/4 (Sem I) |
| Prime Movers and Pumps | B E –EEE 2/4 (Sem II) |
| Elements of Mechanical Engineering | B E –EEE 2/4 (Sem I) |
| Computer Laboratory -I | B E –Mechanical 1/4 (Sem I) |
| Computer drafting | B E –Mechanical 1/4 (Sem II) |
| WorkShop Practice -I | B E –Mechanical & other branches 1/4 (Sem I) |
| WorkShop Practice -II | B E –Mechanical & other branches 1/4 (Sem II) |
| Control and CAD/CAM Lab | B E –Mechanical 4/4 (Sem II) |
| Engineering Graphics-II | B E –Mechanical 1/4 (Sem II) |
| Machine Drawing | B E –Mechanical 2/4 (Sem I) |
| Project Seminar-I | B E –Mechanical 4/4 (Sem I) |
| Project Seminar-II | B E –Mechanical 4/4 (Sem II) |
| <i>Others</i> | |
| Engineering Drawing | Diploma in Instrumentation |
| Production Engineering | Diploma in Instrumentation |

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| Industrial Management | Diploma in Instrumentation |
| Industrial Management | Diploma in Computer Science |
| Industrial Management | Diploma in Electronics |

18. Administrative Experience :

- a. Worked as Warden
- b. Director of CFD Center of the college
- c. Foreign student advisor for the college from 2007-till date
- d. Incharge for Thermal Engineering Lab of the Department

19. Membership of Professional Bodies :

Life member of Indian Society for Heat and Mass Transfer (ISHMT)

20. Seminars/Conferences/Symposia/Workshops etc. Attended:

| S. No | Title of the Paper Presented | Title of the Conference/Seminar | Organised by |
|-------|--|---|--|
| 1 | CFD Analysis of Elbow Draft Tube | National Conference on Recent Advances in Mechanical Engineering (RAME 2012) | Mechanical Engineering Dept., University College of Engineering, Osmania University, Hyderabad during March 16-17, 2012. |
| 2 | A Comparative Study on the Performance and Environmental Impact of Alternative Refrigerants to Replace R-22 | International Conference on Advancements in Engineering and Management”, RITS ICAEM-2012, | organised by Royal Institute of Technology and Science, Hyderabad during 28 & 29 Feb 2012. |
| 3 | Innovative Teaching-Learning Methods for Engineering Education | International Conference on Reforms in Technical Education – Global Trends, ICORTE-2010, Hyderabad during August 27-28, 2010. | Mechanical Engineering Dept., University College of Engineering, Osmania University, |
| 4 | Design And Analysis Of Francis Turbine Casing | International Conference on Recent Advances in Mechanical Engg. (ICRAME2010) 8-9, April 2010, | Noorul Islam UniversityKumaracoil, Kanyakumari Dist., Tamilnadu |
| 5 | Computational Analysis of a Centrifugal Pump Impeller | International Conference on Recent Advances in Mechanical Engg. (ICRAME2010) 8-9, April 2010, | Noorul Islam UniversityKumaracoil, Kanyakumari Dist., Tamilnadu |
| 6 | Computational Investigation of Flow in a Centrifugal Impeller with Chamfered Blade Tips: Effect of Tip Clearance | National Conference on CFD Applications in Power & Industry Sectors, | Corporate (R&D) Division, BHEL, Hyderabad-500 093, India, Nov 17-18, 2006 |
| 7 | Tip Clearance Effects on Flow Field of a Centrifugal Compressor | International Conference on Theoretical Applied Experimental and computational Mechanics, December 28-30, 2004 | IIT-Kharagpur |
| 8 | Small Wind Turbine Electrical | International Conference on Energy | The Institution of Engineers |

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| | Pump Systems for Rural Applications in India- a Renewable Energy option | Management beyond 2000 | (India) U P State Centre, Lucknow, 19-21 Oct 2000 |
| 9 | Application of Quality Systems in Technical Education | National Conference on “Technical Education in the new Millennium – Management & Challenges”(TECMANCH-2000)”, March 12-13, 2000 | University College of Engineering (Autonomous), Osmania University, Hyderabad |

21. Orientation/Short-term Courses Attended :

| S. No | Name of the Course/ Summer School | Place and Date | Duration | Sponsoring Agency |
|-------|---|---|----------|---|
| 1 | UGC-Capacity building of women managers in higher education-SAM | Hyderabad 27 th – 31 st August 2012 | 1 week | University College of Technology, Osmania University |
| 2 | Workshop on High Impact Teaching Skills | Hyderabad 30 th June & 1 st July 2008 | 2 days | Mission 10X, Wipro Technologies, Hyderabad |
| 3 | Mission 10X Workshop by Wipro Technologies | Hyderabad 30 th -4 th June 2008 | 1 week | Mission 10X, Wipro Technologies, Hyderabad |
| 4 | Training Programme on “AotoCAD-2007” | Hyderabad 1 st -2 nd Dec 2006 | 2 days | Department of Mechanical Engineering, University College of Engineering (Autonomous), Osmania University , Hyderabad |
| 5 | All India Technical Programme on “ Performance operational Analysis, Diagnosis and Optimisation (PADO) of thermal plants and equipments | Hyderabad 24 th -25 th Nov 2006 | 2 days | Centre for Energy Technology, Osmania University & Tech Pro- Centre for Technical Education |
| 6 | Work shop on “Advances in Plant Engineering and Management” | Hyderabad 31 st Oct 2006 | 1 day | IICT & University College of Engineering, Osmania University, Hyderabad |
| 7 | Workshop on Non – Destructive Testing | Hyderabad 23 rd & 24 th Sept 2006 | 2days | Department of Mechanical Engineering, University College of Engineering (Autonomous), Osmania University , Hyderabad |
| 8 | Refresher course on | Hyderabad | 1 week | M.V.S.R. Engineering College, |

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| | “Computer Aided Engineering” | 3 rd – 7 th July 2006 | | Nadergul, Hyderabad |
| 9 | Refresher Course on “Solar Energy Applications” | Hyderabad 28 th March 2006 | 1 day | CET, University College of Engineering, Osmania University, Hyderabad |
| 10 | Short term course on “Comprehensive Course in CFD” | Chennai 7 th – 19 th June 2004 | 2 weeks | IIT-Madras, Chennai |
| 11 | Short term course on Computational Fluid Dynamics and Some Applications | Chennai 23 rd – 28 th Feb 2004 | 1 week | CFD Centre, IIT-Madras, Chennai |
| 12 | Short Course on “Teaching Methodologies” | Chennai 1 st – 3 rd Dec 2003 | 3 days | TTTI, Chennai |
| 13 | AICTE-ISTE Short term course on “Internet & web design – Concepts to practice” | Perundurai, Erode, 9 th November 2000 to 22 nd November 2000. | 2 weeks | Kongu Engineering College, Perundurai, Erode. |
| 14 | Refresher Course on “Turbo Machinery” | Hyderabad May 1-6, 2000 | 1 week | Sree Nidhi Institute of Science and Technology, Yamnampet, Ghatkesar, Hyderabad |
| 15 | Orientation Course for Degree College Teachers | Hyderabad 7 th June 1999 to 29 th June 1999 | 4 weeks | Academic Staff College , Osmania University, Hyderabad. |
| 16 | <i>Continuing Education Programme:</i> Short Term Course on “OOPS with C + + ” | Hyderabad, Feb 15 th , 1999 to March 17 th , 1999 | 4 weeks | Department of Computer Science and Engineering, University College of Engineering (Autonomous), Osmania University , Hyderabad |
| 17 | <i>Continuing Education Programme:</i> Short Term Course on “ Programming in C for beginners ” | Hyderabad, June 6 th , 1998 to June 17 th , 1998 | 6 weeks | Department of Electronics & Communication Engineering, University College of Engineering (Autonomous), Osmania University , Hyderabad |
| 18 | Work shop on “Energy Conservation and Energy Management” | Hyderabad 29 th Nov 1997 | 1 day | Institute of Post Graduate Studies and Research, JNTU, Hyderabad |

22. Workshops/Training Programmes Conducted :

- 1) Convenor for an International Conference on Reforms in Technical Education – Global Trends, ICORTE-2010, organised by Mechanical Engineering Dept., University College of Engineering, Osmania University, Hyderabad during August 27-28, 2010.
- 2) Organised a Training Programme on “Finite Difference Methods” , 5th to 7th July 2010 as Convener at CFD Center, University College of Engineering, Osmania University, Hyderabad.

- 3) Organised a Two day Training Programme on ANSYS-CFX, 15th & 16th October, 2009 as Convener at University College of Engineering, Osmania University, Hyderabad.
- 4) Convenor for TEQIP sponsored Two day Community Service Programme on “AutoCAD-2007” conducted in collaboration with Academy of Design and Architecture, authorised AutoCAD resellers in the state during December 1-2, 2006.