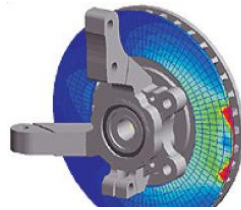


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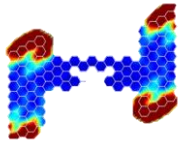
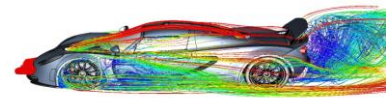
International Conference on Computational Methods and Simulation

19th – 20th August 2015, Department of Mechanical Engineering
R V College of Engineering, Bangalore India

Computational
Solid
Mechanics



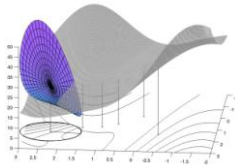
Computational
Fluid Dynamics



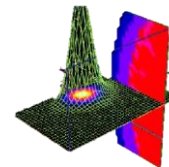
ICCMS - 15

Electrical
&
Electronics

Computational
Mathematics



Numerical
Algorithms



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R V College of Engineering
Bangalore – 560059**

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Welcome to ICCMS 2015

The International Conference on Computational Methods and Simulation (ICCMS 2015) will be organised during 19th -21st August, 2015 at R V College of Engineering, Bengaluru India. The event is organized and hosted by Department of Mechanical Engineering, R V College of Engineering. The conference is aimed at enhancing knowledge in the field of Computational Mechanics and Simulation.

About the conference

The increasing power of computers means that simulations can now help to understand and describe more complex processes than ever before. Computational science and engineering is a cross disciplinary field with roots in mathematics as well as computer science and with an area of influence that spans the entire science and engineering spectrum.

In Academia and Industry, simulations enable the study of complex systems and phenomena that would be otherwise too expensive, dangerous, or impossible to study by direct experimentation.

Computational mechanics and simulation deals with the application of numerical techniques to understand the physical phenomena governed by the principles of mechanics. It has enormous future growth and applications by incorporating new models of physical and biological systems.

The main objective of this Conference is to provide a forum for scientists, academicians, analysts, designers and practicing engineers around the globe to interact, exchange ideas and establish relationships from theoretical, computational and experimental aspects. This also includes theoretical modelling, methods of analysis and instrumentation besides setting directions for future growth. It also encompasses basic discipline-oriented areas such as dynamics, continuum mechanics, geo-mechanics, biomechanics as well as inter-disciplinary subjects such as new numerical and computational techniques, systems control technology, engineering design tools, manufacturing technology, materials, energy technology and environmental engineering. ICCMS 2015 will focus on computational mechanics of solids, fluids and simulations with particular emphasis on the themes listed below, but not limited to them.²²

About the Institution

R.V. College of Engineering (RVCE), Bengaluru, India, is one of India's premier technical institutes. Established in 1963. The college currently has about 5200 students and over 400 faculty and 250 supporting staff. RVCE currently offers 12 Bachelor & 22 Master programs (annual intake of about 1750 students), and carries out research and consultancy activities in all the 15 departments, with provision for PhD Studies. RVCE has set a vision "Leadership in Quality Technical Education, Research & Innovation, through Teamwork, with a focus on Development of Sustainable and Inclusive Technology". RVCE is an Autonomous Institution affiliated to Visvesvaraya Technological University, Belgaum. The institute has been rated among the top 6 institutions in India for Industry-Academic Collaboration by the recent (Nov, 2012) AICTE-CII-PWC survey. Over 22 companies have invested in labs and facilitated course in the college. The faculty is actively involved in R & D activities (~ 100 projects) and consultancy in collaboration with public and private agencies with funding to the tune of over Rs 30 Crores.

About the Department

The Department of Mechanical Engineering was established in 1963 with affiliation to Bangalore University and an initial intake of 40 students. Presently the department is affiliated to Visvesvaraya Technological University (VTU) with autonomous status. Mechanical Engineering emphasizes on Design, Materials & Manufacturing, Thermal Engineering, and also interdisciplinary areas like CAD/CAM/CAE, Automation, Operational Research, Mechatronics, FEM, Managerial Aspects of Industry, etc. The Department has well qualified and experienced faculty and technically competent supporting staff on its rolls. Twenty one faculty members have doctoral degrees. Seventeen faculty members are pursuing doctoral degrees. Eight faculty members were awarded UGC career Award in 1998. Department conducts training programmes for UG & PG in emerging fields like CAD/CAM/CAE and Advanced Materials. The department has following ten state of the art laboratories catering to UG and PG students. The department has Memorandum of Understanding (MoU) with several foreign Universities for Research, Masters, Doctoral and Post Doctoral Studies: University of Wisconsin (USA), University of West Virginia (USA), Lamar University (USA), University of Aachen (Germany). The department has an Industry Institute Partnership Cell (IIPC), sponsored by AICTE. The Centre of Competence for Automation Technologies is a joint initiative of BOSCH Rexroth with RVCE.

Computational Fluid Dynamics

- ❖ Aero-elastic and aerodynamic Simulations
- ❖ Atmospheric and climatic modelling
- ❖ Biological fluid dynamics – Turbulence modelling & transport
- ❖ Direct numerical simulation
- ❖ Large eddy simulation
- ❖ Lattice Boltzmann methods
- ❖ Multi-phase flow

Electrical & Electronics

- ❖ Electromechanical
- ❖ Electromagnetic
- ❖ Electrochemical
- ❖ EMV
- ❖ Electronics

Numerical Algorithms

- ❖ Pre- & post-processing for Engineering applications
- ❖ Virtual reality & Real-time Engineering simulations
- ❖ Front- and back-end Development tools
- ❖ Graphics libraries and tools
- ❖ Decision support systems
- ❖ Big data handling and analytics

Computational Solid Mechanics

- ❖ Adaptive & smart structures
- ❖ Constitutive modelling
- ❖ Damage mechanics
- ❖ Optimization Techniques
- ❖ Dynamics, shock, blast, impact, transient & MBD
- ❖ Failure theories
- ❖ Fatigue and fracture
- ❖ Fluid–structure interaction
- ❖ Geo & porous media mechanics
- ❖ Homogenization, multi-scale and MBD
- ❖ Micro and Nano-mechanics
- ❖ Nonlinear analysis
- ❖ Simulation of processes and manufacturing, metal forming
- ❖ Soil–structure interaction
- ❖ Structural health monitoring
- ❖ Tribology
- ❖ Vibration & control of structures

Computational Mathematics

- ❖ Ab-initio first principle methods
- ❖ Discrete element, wavelet and particle methods
- ❖ Finite element methods, boundary element methods
- ❖ Finite difference & finite volume methods
- ❖ Hybrid techniques
- ❖ Spectral FEM
- ❖ High performance computing
- ❖ Iso-geometric analysis
- ❖ Mesh less methods, XFEM/GFEM
- ❖ Probabilistic & stochastic analysis
- ❖ System identification, inverse problems & optimization

REGISTRATION DETAILS

REGISTRATION FEES

Delegates	Amount	
	INR	USD
Students	2000	200
Academicians /Research Scholars	4000	300
Industry	6000	400

All banking charges **MUST BE** borne by the participants.

Presenting authors must register on or before **5th August 2015**.

All registrations must be done online by logging into **www.iccms15.rvce.edu.in**

For payments being made via Demand Draft, please draw in favour of **Principal, RVCE** payable at Bangalore.

Scanned copy of DD should be uploaded to the above mentioned website.

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ICCMS-2015

CALL FOR PAPERS

Authors are requested to send a softcopy of the extended abstract of the original and unpublished research work through email to iccms15@gmail.com on or before 5th of May 2015. The extended abstract should be limited to two A4 size pages. The language of the conference will be English (UK).

The authors should mention their affiliation with corresponding addresses, email, telephone and fax numbers in the abstract. Submission of the extended abstract will be accepted only through email. **Upon acceptance, the authors have to submit the full length paper as per conference format given in the conference website.** Submission of full length paper should be submitted through conference website using the login details of the author as per the format prescribed in the website. Author should register in the conference website before submitting the full length paper. Username and password will be issued to the registered author and the submission of the full length paper should be done by logging to the website. Instructions for submission will be given the conference website. Only one online registration per paper is allowed. The final acceptance of the paper for oral presentation will be based on peer review.

All presented papers will be published in Conference proceedings.

Selected papers will be published in

Journal of Advances in Numerical Analysis

Journal of Engineering Computations

As per their editorial policy.

Important Dates

Abstract Submission	: 5 th May 2015
Abstract Acceptance	: 15 th May, 2015
Submission of full paper	: 5 th July, 2015
Acceptance of full paper	: 25 th July 2015
Last date for Registration	: 5 th August 2015
Pre-conference workshop date	: 18 th August 2015
Conference Dates	: 19 th -21 st August 2015