1st International Workshop on Computational Fluid Dynamics (CFD)

Date: *Dec 16th 2015*
Time: *8AM - 12PM*
Venue: Hotel Park Plaza, Marathahalli/Outer Ring Road, Bangalore, India.

SCOPE AND OBJECTIVE

Computational Fluid Dynamics (CFD) is a numerical method for solving problems that involve fluid flow. With recent advancements, CFD methods are now capable of solving complex flow physics and can be coupled with structural analysis and others. These days CFD methods are extensively used in industries such as, aerospace, automobile, oil and gas, energy, electronics, healthcare etc. CFD analysis has now become an essential tool in design in many of these industries. It can be a cost effective alternative or complement to experiments. CFD methods are flexible to design parameters and can provide detailed physics description, at full scales under realistic operating envelope, where experiments are either not feasible or high cost. The CFD methods require extensive computational power due to involvement of multiple equations that need to be solved iteratively at millions of points.

The developments in computer hardware and mathematical algorithms have helped make CFD a feasible tool for design and analysis by reducing the computational time. But scalability of CFD codes is still limited in some applications, and in that case it can take several days of computational time to solve for a few seconds of real time physics. This sometime makes CFD an impractical tool for some of the industrial applications. *This workshop is intended for CFD user community to give a common platform to share their experiences, best practices and challenges in high performance computing and discuss with the developers of hardware and algorithms on how to best help CFD users with challenges in high performance computing.*

This workshop invites papers in the broad area of Computational Fluid Dynamics, but not limited to, the various research areas mentioned below. The workshop will also try to organize a good quality keynote presentation and a discussion panel on challenges in CFD.

TOPICS

- Computational Modeling of Multiphase Flow
- Computational Modeling of Free Surface Flow
- Fluid Structure Interaction
- Aerodynamics
- Aerothermics
- Complex Heat Transfer and thermal management
- Turbulence Modeling
- Multiphysics Modeling
- Complex Rheology of Non-Newtonian Fluids

- CFD for Biomedical applications
- High Performance computing (HPC) challenges for CFD
- Pre-processing, Post-processing and Visualization for CFD.

Important Dates
- ~~July 31, 2015~~ August 15, 2015 – Workshop Paper Submissions Due (Extended)
- Aug 31, 2015 – Notification of Acceptance/Rejection
- September 31, 2015 – Camera-Ready Paper Submission
- October 16, 2015 – Author Registration Deadline
- November 14, 2015 – Early Registration Deadline
- December 16, 2015 – HiPC CFD Workshop in Bangalore, India.

Submissions

Submitted manuscripts should be structured as technical papers and may not exceed ten (10) single-spaced double-column pages using 10-point size font on 8.5x11 inch pages (IEEE conference style), including figures, tables, and references. See style templates for details:

- LaTex Package (ZIP)
- Word Package (ZIP)

Electronic submissions must be in the form of a readable PDF file. Manuscripts must be received by July 31, 2015. All manuscripts will be reviewed by the Technical Committee and evaluated on originality, relevance of the problem to the conference theme, technical strength, rigor in analysis, quality of results, and organization and clarity of presentation of the paper. Authors are highly encouraged to list the key contributions of their paper. This should be in a separate paragraph in the introduction to the paper.

Submitted papers must represent **original** unpublished research that is not currently under review for any other conference or journal. Published proceedings will be available at the workshop. Presentation of an accepted paper at the workshop is a requirement of publication.

To submit manuscripts, click here to take you to the EasyChair submission site.

Authors may contact the Organizers at the email address below for further information or clarification.

WORKSHOP SCHEDULE *(details to follow soon! check for updates)*
- Keynote speech
- Technical paper presentation
- Panel discussion
- General conclusions
- Poster session

ORGANIZERS

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