COMSOL Day@IIT Guwahati

Meeting location

The workshop will be held at **Computer Center, Department of Chemical Engineering, IIT Guwahati, Guwahati - 781039**

Workshop details

Computer simulation environment is just an interpretation of real-world physical laws into their virtual frame. How much simplification happens in the interpretation process procedure decides the accuracy of the resulting model. This workshop is intended for anyone who would want a model that precisely depicts what happens in the real world and a simulation environment that includes the possibility to add any desired physical effect to the model.

Why COMSOL?

- Latest than Ansys, Nastran, Abaqus, PZFlex
- Integrates well with Matlab
- Concentrates on "Multiphysics" – coupling more than one physics
- Permits to program one's own differential equations if they are not already implemented

Program (on September 3, 2017)

Introduction to COMSOL Multiphysics (Forenoon)		**Hands-on session (Afternoon)**	
10.00 - 10.30	Introduction to CFD	2.00 - 2.30	Mesh generation
10.30 - 11.00	Introduction to Finite Element Method (FEM)	2.30 – 3.00	Fluid flow physics as an application
11.00 - 12.00	COMSOL: Here we Go!! - Part I Decide representative physics, Define the geometry, Set the material properties, Set the boundary conditions and initial conditions	3.00 - 3.30	Heat transfer physics as an application
12.00 - 1.00	COMSOL: Here we Go!! - Part II Choose an element type and mesh the geometry, Choose a solver, Post-process the results	3.30 - 4.30	Fluid flow and chemical species transport as representative multiphysics problem
		4.30 - 5.30	Post processing and visualization in COMSOL Multiphysics

We hope that this workshop allows even neophyte modelers to model all relevant physical aspects of their systems. We also hope that the general introduction and hands-on session on selected physics will provide you rapid assimilation into your simulations and equip you to build the model you want with real-world precision.

Additional details on COMSOL Multiphysics can be obtained from: **https://www.comsol.com/products**

Disclaimer: Under extenuating circumstances, we may have to make substitutions for topics/times