

COMSOL Day
Bethesda



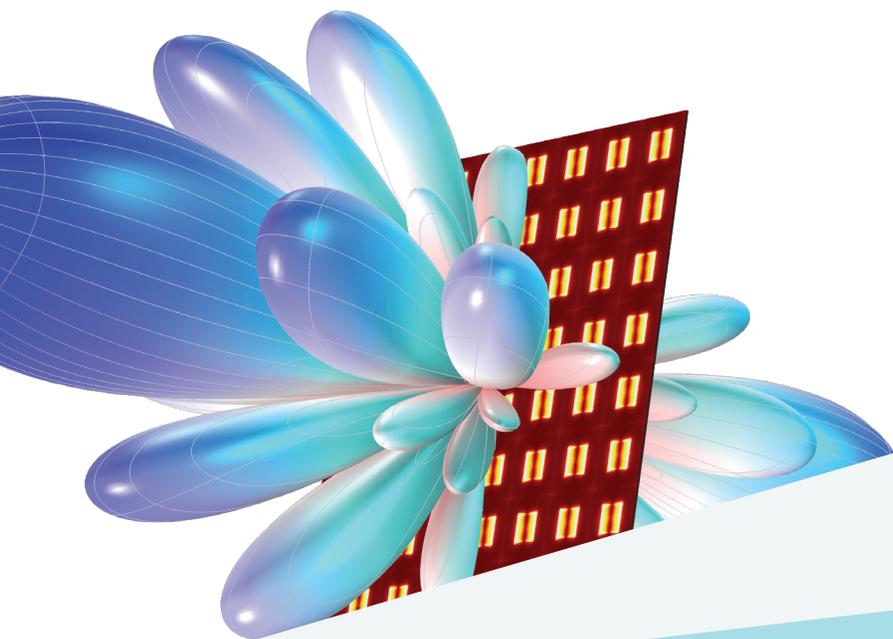
Thursday
April 5, 2018
8:30AM–4:00PM

Join us

FOR A DAY OF
multiphysics simulation & apps

MINICOURSES | PANEL DISCUSSIONS | USER COMMUNITY

Explore how you can use multiphysics modeling in your designs, devices, and processes. Learn how to spread simulation throughout your organization with apps. Connect with COMSOL® software users and get inspiration from industry experts.



FREE REGISTRATION:
comsol.com/comsol-days/bethesda

 **COMSOL**

Bethesda Photo: Original image by Edward Johnson. CC BY 2.0.

COMSOL Day

Bethesda

Thursday
April 5, 2018
8:30AM–4:00PM

8:00AM Registration

8:30AM Welcoming Remarks

8:40AM

Automating Model Building Using the Application Builder

Learn how to use the Application Builder and the Method Editor to automate your model building, including setting up the geometry, material properties, loads and boundary conditions; meshing; solving; and extracting data.

9:00AM Coffee Break

9:15AM Minicourses

Introduction to COMSOL Multiphysics® and the Model Builder

This introductory demonstration will show you the fundamental workflow of the COMSOL Multiphysics® modeling environment. We will cover all of the key modeling steps, including geometry creation, setting up physics, meshing, solving, and postprocessing.

News in COMSOL Multiphysics® Version 5.3a

Get a quick overview of the most significant news from the release of COMSOL Multiphysics® version 5.3a. The release highlights include new interfaces for the boundary element method, shape memory alloys, accelerated solvers, and much more.

10:00AM Coffee Break

10:15AM Minicourses

CFD and Heat Transfer

Get a quick overview of using the CFD Module and Heat Transfer Module within the COMSOL® software environment.

Low-Frequency Electromagnetics

Explore the capabilities of COMSOL Multiphysics® for electromagnetics in the static and low-frequency regime with a focus on the AC/DC Module.

11:00AM Coffee Break

11:15AM Minicourses

High-Frequency Electromagnetics

Learn about modeling high-frequency electromagnetic waves using the RF Module, Wave Optics Module, and Ray Optics Module.

Structural Mechanics

Get a brief overview of using the Structural Mechanics Module and its add-on modules within the COMSOL® software environment.

12:00PM Break for Lunch

1:00PM Panel Discussions

Acoustics Modeling

Acoustics simulations are widely used in the design of sensors, actuators, loudspeakers, noise control devices, and musical instruments, to name a few. In this session, a panel of users from industry and COMSOL will share their experiences working with modeling and simulation and answer technical questions related to the use of the COMSOL Multiphysics® software.

Electromagnetics

Electromagnetics simulations are widely used to design and optimize electromagnetic devices that work at low and high frequencies. In this session, a panel of users from industry and COMSOL will share their experiences working with modeling and simulation, as well as answer technical questions related to the use of COMSOL Multiphysics®.

1:45PM Coffee Break

2:00PM Minicourses

Optimization

Learn to use gradient-based optimization techniques and constraint equations to define and solve problems in shape, parameter, and topology optimization, as well as inverse modeling. The techniques shown are applicable for almost all types of models.

Acoustics

Get a brief overview of using the Acoustics Module within the COMSOL® software environment.

2:45PM Coffee Break

3:00PM

Solvers Minicourse

Learn the fundamental numerical techniques and underlying algorithms related to linear and nonlinear multiphysics simulations. We will cover the difference between iterative and direct solvers as well as the different study types including stationary, transient, and eigenfrequency analysis.

3:45PM Q&A

Contact:

James Christopher, jamesc@comsol.com