SFPE MO/KAN CHAPTER

Will be hosting an upcoming training course on "Introduction to Fire Dynamics Simulator and Smokeview".

When: August 20th thru 22nd
8am to 5pm

Location: Henderson Engineers, Inc.
8345 Lenexa Drive, Suite 300
Lenexa, KS 66214

Cost: $695 MO/KAN Chapter Members
$795 Non-Members

Hint: Annual dues for the MO/KAN Chapter are ONLY $20!!! Sign up and pay your dues to get the discounted price!!! You can even pay online at www.mokansfpe.org!

Lunch and all learning materials will be provided. Registrants will need to bring their own laptops!!! Please see the course description for further information regarding computer requirements.

SPACE IS LIMTED TO THE FIRST 20 REGISTRANTS!!! DON'T WAIT TO REGISTER OR YOU COULD MISS OUT!!!

To register, please visit www.mokansfpe.org and fill in the registration form. You can also pay online thru the website. Or you may register by filling out the attached form and returning it to info@mokansfpe.org. If choosing to pay by check, please mail to:

MO/KAN SFPE
c/o Simplex Grinnell
Attn: Jeff Mudge
11019 Strang Line Rd
Lenexa, KS 66215

Earn Valuable CEUs: The Society of Fire Protection Engineers will award 1.75 Continuing Education Units for attending the entire seminar.

Course Description:
Introduction to Fire Dynamics Simulator and Smokeview
Instructors: David Sheppard, Ph.D., P.E., Morgan Hurley, P.E., FSFPE

This two and a half day course is intended for engineers with a strong background in fluid dynamics and fire dynamics.

The Fire Dynamics Simulator is the newest and most versatile of the fire models developed by NIST. The Fire Dynamics Simulator has been used for many types of problems, like sprinkler activation in warehouse fires, tenability in residential fires, and smoke concentration in outdoor pool fires.

The NIST Fire Dynamics Simulator consists of two programs - FDS and Smokeview. The NIST Fire Dynamics Simulator predicts smoke and/or air flow movement caused by fire, wind, ventilation systems etc. Smokeview visualizes the predictions generated by FDS.

FDS, a computational fluid dynamics (CFD) model, solves a form of the Navier-Stokes equations appropriate for low-speed, thermally-driven flows of smoke and hot gases generated in a fire. FDS has integrated sub models that calculate many fire related phenomena such as radiative and convective heat transfer, sprinkler activation and sprinkler sprays, mixture fraction combustion model, and many others.

Outline:
- Introduction
- Computational Fluid Dynamics Overview
    - Fluid Flow Theory
    - Conservation Equations
    - Turbulence Modeling: K-Epsilon, DNS, LES
    - Grid Generation and Solvers
- Introduction to FDS
    - Input File
    - Running FDS
    - Output File
- Introduction to Smokeview
- Defined Fires

This is a hands-on seminar, if the software does not run on your computer then you will not fully benefit from the class. Attendees must bring a laptop computer with a minimum 1 GHz Pentium processor, 256 MB of RAM and 2GB of free hard disk space. The computer should have a spreadsheet program for analyzing data and Adobe Acrobat for reading the documentation. The attendees should also make sure that they have sufficient security privileges on their computers to allow the software to be installed during class.

Before coming to class, attendees should download the most recent version of FDS and Smokeview software from the NIST website and make sure the programs run on their computer. The NIST website is http://www.bfrl.nist.gov. Follow the links for software, fire simulation software, and the NIST Fire Dynamics Simulator and Smokeview.

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<u>Registration</u>

First Name: _____

Last Name: _____

Company: _____

Address: _____

_____

Email: _____

Phone: _____

MO/KAN Member?:   YES   NO   **(Circle One)**

If you have any questions please send an email to info@mokansfpe.org