

## SUSTAINING MEMBERS

HUNTINGTON INGALLS - NEWPORT  
NEWS SHIPBUILDING



NONLINEAR ENGINEERING, LLC



## IMPORTANT NOTICE:

To continue to receive your chapter's event notifications, please be sure to keep your email and postal addresses up to date on the ASM web site:

**[www.asminternational.org](http://www.asminternational.org)**

We will continue to send the hard copy to members who do not have email or have requested email not be sent.

**Be sure to visit the new chapter website at:**  
**<http://www.asminternational.org/portal/site/easternva/>**



Eastern VA Chapter ASM  
C/O Steven J. Gentz  
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# Eastern Virginia Chapter

**Newsletter**  
**A Joint Event With the**  
**Central Virginia Section ASME**

**Technical Seminar**  
**Finite Element Methods (FEMs)**  
**and Real World Engineering**

Dr. Jeffrey Wiese

**Thursday, January 23, 2014**

**Center Street Grill**  
5101 Center Street  
Williamsburg, Virginia 23188  
757-220-4600  
[www.centerstreetgrill.com](http://www.centerstreetgrill.com)

5:30 – 6:00	Social
6:00 – 7:00	Dinner
7:00 – 8:00	Presentation by Dr. Jeffrey Wiese

**Cost for Dinner:** Attendees are free to order off the regular menu.

**Reservations:** Please notify Jeff Wiese at 804-421-7897 or [wiese@nleng.com](mailto:wiese@nleng.com) by **Tuesday, January 21** on your planned attendance, and if you are interested in carpooling from the Richmond area. Everyone is welcome.

## Chairman's Message:

This month's presentation is the first of three technical talks jointly sponsored by our chapter and the Central Virginia Section of ASME, the other two being "Plastics in Medicine" to be held in March in Richmond, and "Ceramic Materials" to be held in the Williamsburg or Newport News area in April. All three of these technical presentations are educational in nature and will be worth one (1) Professional Development Hour (PDH) each toward a Virginia Professional Engineer license. 16 PDHs are required during each two year license renewal period in Virginia, and three of those could be covered by these technical talks at no cost to the attendee.

Please note that everyone is welcome to this event, and we hope to see you there.

On another note, the chapter is holding its first annual CO<sub>2</sub> Dragster Contest at the Science Museum of Virginia in Richmond on Sunday, Feb. 23 during the Celebrating Engineering Day (Career Day). This is a competition for students of all ages to test their skill at building and racing small, CO<sub>2</sub> jet powered model dragsters. See the chapter web site for the rules and more information.

Jeff Wiese

## About the Presentation:

The objective of the talk will be to give the attendee a conceptual understanding of the finite element method (FEM) rather than a detailed description of the mathematical underpinnings. Some of the questions to be answered are:

- How is the finite element method different from other forms of mathematical modeling?
- What is finite about the elements?
- Why do we need elements?
- When is the use of the FEM appropriate?
- What are some of the different flavors of FEM?
- What are the responsibilities of the finite element analyst?

This talk will be valuable to practicing engineers who are curious about the FEM, managers who would like some understanding of the method to better allocate resources, students who might be interested in studying the subject, or anyone else who might be curious.

## About the Speaker:

Jeffrey Wiese received his doctorate in Mechanical and Industrial Engineering from the University of Illinois at Urbana-Champaign. He was in research and development with Reynolds Metals Company in the Richmond area for 12 years. In 2000 he founded Nonlinear Engineering, an engineering consulting firm, and has worked with companies both large and small in the United States and Europe. His areas of interest include product and process simulation, optimization, and design, typically using highly nonlinear numerical tools such as the finite element code LS-DYNA.

## Parking:

There is limited parking available on the street, but there is a large lot directly behind the restaurant with entrances from Courthouse St. and New Town Ave.

## Upcoming Events:

- Feb.:** Engineers' Week Programs and Banquets (RJEC and PEC)
- Feb. 23:** Engineering Ingenuity Day - CO<sub>2</sub> Dragster Contest
- Mar. 27:** Technical Talk – Plastics in Medicine (Tom Haas)
- Apr.:** Technical Talk – Ceramic Materials (Jim Hurst)
- May:** Spring Social – Colonial Shooting Academy
- July:** ASM Camp for teachers – Princess Ann High School in Virginia Beach, and Highland Springs High School in Richmond

## Chapter Officers:

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