

**Editors note:**

This month we are coordinating with two other meetings this month, both are listed below (in chronological order):

## NEXT MEETING

### **“Integrated Engineering: Streamlining Plant Design Through Automated Software Systems”**

**Thursday, March 24, 2005**

Ashish Shah, Director, Automation, Process  
Technology, Energy & Chemicals, Fluor Corporation

**Abstract:** Overview of how a large globally diversified Engineering company is automating and integrating engineering design and how it benefits the plant owner/operators in the total life cycle cost of plants. The phases are conceptual design, front-end design, detailed design, construction, start-up, operations, maintenance and de-commissioning. The overview will consist of a presentation and demo of several key applications.

A structured approach to plant design automation has improved efficiency of the engineering project execution, starting with Front End and through Detailed Design, Procurement, Operations and Maintenance phases. All engineering data generated in the project engineering design lifecycle is stored in databases and accessed by various applications normally resulting in single data entry. In most cases commercially available software was acquired for individual applications which was configured and integrated with other applications to develop a total solution.

**Where:** Fluor Daniel Complex, Daniel Management Center

**When:** Thursday, March, 24, 5:30 to 8:30pm

**Cost:** \$15.00, make check payable to "IIE" ("heavy" ores devours and cash bar available)

**RSVP:** Amy at (864) 281-6238 or email: [amy.scholtes@fluor.com](mailto:amy.scholtes@fluor.com) a map is available online: <http://www.upstateiee.com/FluorMap.pdf>.

## NEXT MEETING

### **Are There Turbo Codes On Mars?**

**Wednesday, March 30, 2005**

Professor Robert McEliece  
California Institute of Technology

In July 1965, the Mariner 4 Spacecraft sped past Mars and returned 22 low-resolution photographs of the Red Planet to Earth, a distance of more than 180 million miles, at the memorable data rate of 8.33 bits per second. Fast forward to March 2006, just one year from now: The Mars Reconnaissance Orbiter will send high-resolution photos of Mars at more than 12,000,000 bits per second. In a lecture intended for a general audience, Professor McEliece will explain how the million-fold increase in telecommunications capability was achieved by physicists, engineers, and mathematicians, and he will describe the role of the astounding contributions of Claude Shannon (1916-2002), the father of information theory. The lecture will close with a musical tribute to Shannon, accompanied by Clemson Professor Stephen Hubbard on the piano.

**Where:** Clemson University, Tillman Hall Auditorium

**When:** Wednesday, March 30, 7:00 PM

No meal will be served.

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