



# ELECTRON

Institute Of Electrical & Electronics Engineers, Inc.

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THE IEEE CHARLOTTE SECTION NEWSLETTER

February 1997

## NATIONAL ENGINEERS WEEK 1997 CELEBRATION

National Engineers Week 1997 will be February 16-22. With the purpose of encouraging young people to consider engineering as a viable and interesting career option, various organizations and educational institutions are joining together to host a series of events at the Discovery Place Science Museum in Charlotte. The events will offer students at all grade levels an opportunity to compete in technical competitions, to meet engineering professionals, to learn about educational opportunities, and to observe engineering demonstrations and exhibits. The events are:

Monday, Feb. 17	Technical Drawings Contest Awards (Grades 9-12) Educational Opportunities: UNC-Charlotte Engineering Program JC Smith University Dual Degree Program CPCC Engineering Technology Program
Tuesday, Feb. 18	(to be announced)
Wednesday, Feb. 19	Paper Cup Skyscraper Contest (Grades 6-8) Professional Engineers Day - Demonstrations Provided
Thursday, Feb. 20	Paper Airplane Contest (Grades 4-5) Women in Engineering Day - Demonstrations Provided
Friday, Feb. 21	LEGO Building Contest (Grades 0-3)
Saturday, Feb. 22	Minorities in Engineering Day - Demonstrations Provided

For more information, contact: Henry Whitmire 704-376-6423  
John Tannery 704-382-9867

### CHARLOTTE SECTION MEETINGS

Executive Committee Meeting  
Wednesday, February 12

Executive Committee Meeting  
Wednesday, March 12

Computer Society Meeting  
Monday, March 17

Executive Committee Meeting  
Wednesday, April 16

UNCC Student Paper Contest  
Thursday, April 24

Executive Committee Meeting  
Wednesday, May 14

Communications Society Meeting  
Tuesday, May 20

Executive Committee Meeting  
Wednesday, June 11

Power Engineering Society  
Annual Field Trip  
Thursday, June 19

Executive Committee Meeting  
Wednesday, August 13

Charlotte Section Annual Picnic  
Thursday, August 21

Executive Committee Meeting  
Wednesday, September 17

Computer Society Meeting  
Monday, September 22

Executive Committee Meeting  
Wednesday, October 15

Communications Society Meeting  
Tuesday, October 21

Executive Committee Meeting  
Wednesday, November 12

Charlotte Section Annual Banquet  
Thursday, November 20

Executive Committee Meeting  
Annual Planning Meeting  
Wednesday, December 10

## CATHY'S CHATS



Well, my first month as your Chair has flown by and I am once again faced with the dreaded blank page for my "chats." I hope that as you read January's issue you noticed some slight differences. We are trying several new ideas to make the newsletter "fun" to read. Our goal is to have you waiting for the postman to see "What's new this month?" Don't worry. You can still expect the important dates and information to be included. If you have any suggestions or ideas for articles, please give Paul Colaiani or me a call.

Now, close your eyes. What do you think of when you hear "February"? If your first thought is of red hearts, candy, and flowers...READ ON! While some may think of Valentine's Day, others of snow skiing (my choice), and others are just biding their time until Easter holidays or Spring break, a hard working team of engineers is busy finalizing details for our celebration of Engineers Week. This team is comprised of engineers from all disciplines and many different companies. This year *National Engineers Week* is February 16-22. It will focus on encouraging young people in the Charlotte area to consider engineering as a career option. The week of programs will show students different aspects of engineering from local educational opportunities to meeting with professionals. It promises to be an exciting and wonderful

### FUN FEBRUARY FACTS

Baseball's National League founded.....1876

Bruce McCandless becomes first free-flying human in space (untethered "space-walk" from Challenger shuttle....1984

Mary, Queen of Scots beheaded.....1587

First digital computer (ENIAC) dedicated....1946

week of learning. I encourage all professionals to get involved and attend as many events as possible to help our students learn more about our profession. Details are given on the front page.

Other related events in February are the Odyssey-of-the-Mind Competition and the Mecklenburg County Science and Engineering Fair. Both provide students from elementary through high school a forum for using their creativity to solve technical problems. Local professionals are requested as judges. This provides a unique opportunity for engineers to promote our profession and serve the community. Please contact any Section officer for more information. I look forward to seeing you at these upcoming events.

*Cathy*

Cathy Hope  
Charlotte Section Chair

**MARCH 26 & 27, 1997**

**ADAM'S MARK HOTEL, CHARLOTTE, NORTH CAROLINA**

*"Working Together for Safety & Health"*

Featuring: Davis Layne, Regional Administrator, Region IV  
U.S. Department of Labor  
Occupational Safety and Health Administration

and Harry E. Payne, Jr.  
Commissioner  
N.C. Department of Labor

and Charles Jeffress  
Deputy Commissioner  
for Occupational Safety and Health  
N.C. Department of Labor

Cost: \$95 before March 14/\$110 after March 14

For more information contact the Bureau of Education, Training, & Technical Assistance at (919) 733-2486 or 1-800-LABOR-NC.

## THE FIRST INTERNATIONAL CONFERENCE ON AUTONOMOUS AGENTS — AGENTS '97

Dec. 18, 1996—Computer experts from around the world will gather in Los Angeles in early February to hear about autonomous agents — one of the most important software breakthroughs of the 1990s.

Agents are computer programs that can operate independently — something that computers have not been capable of since they were first developed, 50 years ago. "Software today must be constantly guided by a user," according to Pattie Maes, visionary faculty member of the influential MIT Media Lab, and co-organizer of the Agents '97 conference. "Agents are differ-

ent because they can take the initiative. They don't need to be continually told what to do."

Many agents are like personal assistants, which assist with tasks like reading e-mail and surfing the World Wide Web. They watch and learn about how you work, what your preferences are and what you are interested in, so they can help you by suggesting relevant information or automating some tasks.

"Agents will bring about a revolution," said Maes. "Right now, only a privileged few can afford the luxury of experts looking after their interests. But there is a

straight line from software we will see at the Agents '97 conference to agents that will give everyone this kind of specialist help." Just as machines extend our control of the physical world," suggested Maes, "so agents will give us greater control over the world of information, software and networks — the world of the 21<sup>st</sup> century." But agents are not just software secretaries. The same techniques are needed for factory control, Internet commerce and even ... computer games.

(Cont. next page)

## "BUT WHAT'S THE USE OF IT, MR. FARADAY?"— 1997 FARADAY LECTURE

The Educational Activities Board and the United States Activities Board of the Institute of Electrical and Electronics Engineers, Inc. (IEEE), in conjunction with the Institution of Electrical Engineers (IEE), will broadcast the 1997 Faraday Lecture on February 4, 1997. This lecture will be simulcast via satellite so that students around the world will be able to participate in this event.

The 1997 lecture titled, "But what's the use of it, Mr. Faraday?"—will demonstrate the concept of electromagnetism and show how it is used in a variety of ways in medicine, industry, commerce, and leisure. Engineers have built on Faraday's discovery to develop systems that influence our daily lives to an extent we seldom realize.

In 1831, Michael Faraday observed the principles of electromagnetic induction. Unlike the discovery that electricity has a magnetic effect, this new observation was not accidental but rather was the result of several years of dedicated and meticulous experimentation. Individual lectures in the series focus on specific aspects of Faraday's important discovery. Past Faraday

day Lectures on telecommunications, cellular communications, and the Eurotunnel have offered captivating looks at technological achievement in the field of electrical engineering.

The Faraday Lectures, begun in 1924, are designed to introduce young people to the field of electrical engineering through a lively hour-long program which combines background, demonstrations, experiments, and explanations of cutting-edge technology. Schools may receive the hour-long, free broadcast via a satellite downlink. The program will be simulcast live to both C-band and KU-band satellites. Teachers are given a workbook for duplication and distribution to students. Teachers may tape and retain this program indefinitely. Tapes of past broadcasts are also available for purchase.

The Faraday broadcast is intended to build a relationship between the IEEE and the precollege educational community, and teachers of science, technology, and math. This broadcast highlights the benefits of engineering as a career and the importance of society membership to the

engineer. IEEE Sections frequently volunteer engineers to be available in person following the broadcast to answer students' questions, thus introducing prospective engineering students to potential mentors. IEEE Sections can also help identify the availability of local satellite downlink sites.

For information on how to receive the Faraday broadcast, contact:

IEEE, 445 Hoes Lane, Piscataway,  
New Jersey 08855; (908)562-5485;  
faradayprogram@ieee.org.

### AGENT '97 (CONT.)

Examples of agents to be described at Agents '97 include:

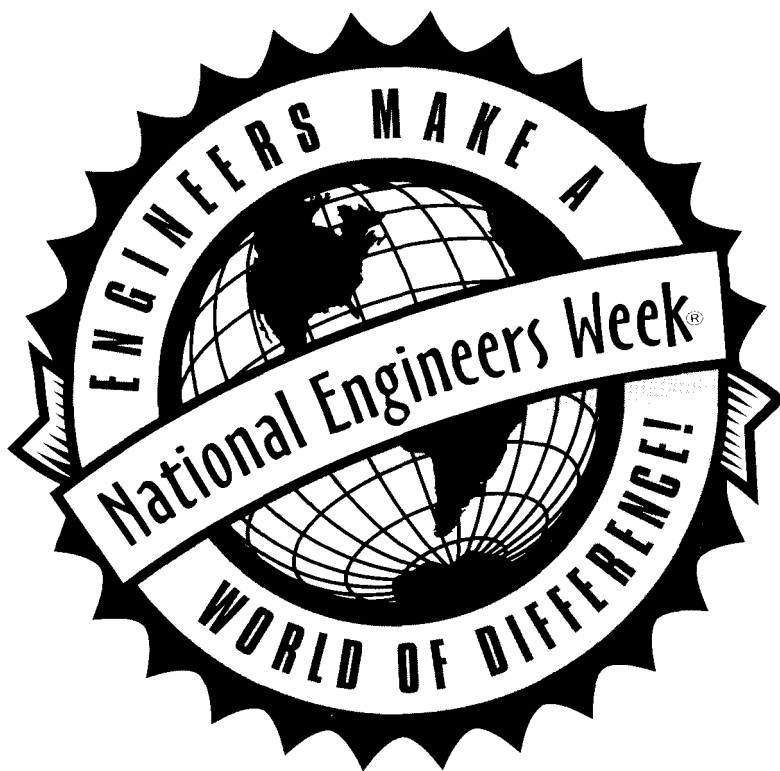
- an agent called ShopBot from the University of Washington, which can do comparison shopping on the Internet;
- software from Stanford University, which allows children to create animated characters for interactive stories;
- a space probe from NASA, which will be able to plan maneuvers and experiments without continual control from the ground;
- agents from Mitsubishi Electric that provide power tools for building and providing access to digital libraries; and
- an agent called STEVE from the University of Southern California, which acts as an instructor within a virtual reality training system. (The "angel" in the movie *Disclosure* helped inspire this work.)

Agents '97 will also include:

- a full program of technical presentations from scientists across the world;
- a day of tutorials, presented by renowned researchers and teachers, addressing hot topics in agent-based systems;
- software and robotics demonstrations, showcasing the latest applications and tools for building agent systems;
- panel sessions, with lively and informative debates on major issues in agent-based systems; and
- invited talks from internationally respected speakers.

The conference will be held in the Marriott Hotel, Marina del Rey (in Los Angeles near LAX) on Feb. 5-8, 1997. Contact:

David Scott Lewis, 310-577-4720.



February 16-22, 1997

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### ELECTRON ARTICLES & COMMENTS

Send articles for publication and newsletter comments and corrections to me at Duke Power Co.-EC12R, P.O. Box 1006, Charlotte NC 28201-1006, p.colaianni@ieee.org or 704/382-5632/-0368 Fax. —R.Paul Colaianni, *ELECTRON* Editor

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