

ELECTRON

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THE IEEE CHARLOTTE SECTION NEWSLETTER

April 1997

CHARLOTTE SECTION MEETING WJZY TV STATION STUDIO TOUR

The April Charlotte Section Meeting will be a tour of the WJZY TV studio. This will be an informative and fun tour of the station studios by Communications Engineer Mr. Ed McKay. Please make your plans now to attend the WJZY Studio Tour on Thursday, April 24.

WHEN: Thursday, April 24
7:00 p.m.

WHERE: WJZY Channel 46 and 55 studio
near I-85 and Sam Wilson Rd.

DIRECTIONS: Take I-85 to the west side of
Charlotte, exit at Sam Wilson Rd.
(Exit 29), turn to the north
(away from the airport), go past
Stingers Restaurant on Sam Wilson,
take the next left onto Performance
Rd., and turn left at the WJZY sign.

MEAL: We are on our own for the 6:00 p.m.
meal. However, we would like to get
together at Stingers Restaurant (Steaks
and Burgers) at 2627 Sam Wilson Rd.
before the meeting. You all come!

Call John Tannery at 382- 9867 or Cathy Hope at 382-8560 if you have questions.

CHARLOTTE SECTION MEETINGS

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

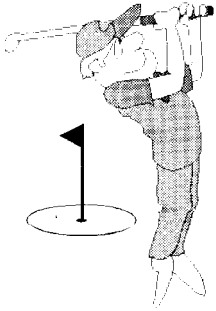
Communications Society Meeting
Tuesday, October 21

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



Spring is in the air! For me, that means dusting off my golf clubs, changing to soft spikes, and heading to the driving range. Trying to fit work, family, school, and IEEE into my life makes for an "interesting" daily schedule. I'm sure that members of the Executive Committee and the Section would agree that free time is at a premium these days. With that in mind, I'd like to thank all of you who attended our meetings on Transmission Access and MMX Technology, participated in judging of science fairs and Odyssey of the Mind competitions, celebrated National Engineers week, and attended our planning meetings. The Executive committee appreciates your support and your enthusiasm. Thanks to all the Section and Chapter officers who made those meetings possible!

One event that is heavily supported by our membership is the Odyssey of the Mind Tournament. The purpose of this competition is to nurture and reward creativity in technical areas. A special thanks to all professionals and students who participated in this year's regional tournament. The state tournament will be held at TC Roberson High School in Asheville, NC on April 12.

In addition to judging and planning future meetings, the Section officers succeeded in fulfilling an annual goal. Each year, the Charlotte Section Annual Report, including meetings and financial reports, must be submitted to IEEE Headquarters by a target deadline. If we submit the reports earlier than the deadline, the Section receives an additional bonus rebate. This responsibility falls on the previous year's secretary and treasurer. Thanks to John Tannery and Kale Meade for completing the reports on time and meeting the deadline!

Coming up this month is the UNCC Senior Projects and a tour of WJZY TV. Please note that the senior project presentations will be held on April 22, 1997. UNCC needs judges for this all day event so give John Tannery or me a call if you are interested. On April 24, the Section has planned a TV station tour. (See announcements on page one.) Hope to see you at either of these events...or both!

Cathy Hope
Charlotte Section Chair

UNCC SENIOR PROJECTS PRESENTATION JUDGES NEEDED!!

UNCC Electrical Engineering Senior Projects will be presented on April 22, 1997. As usual you can expect to see a mix of creativity and technology from the best and brightest electrical engineering students at UNCC.

Judges are needed! If you would like to be a judge for the presentation on, call Cathy Hope (382-8560) or John Tannery (382- 9867).

SPECIAL RECOGNITION

Thanks to the following members for their continued support of Odyssey of the Mind Tournaments!

| | |
|------------------|---------------|
| Chris Clippinger | Lisa Reed |
| Randy Groves | Paul Smith |
| Jim Herrington | Bill Whitlock |
| Carol Mullis | |

IEEE SOUTHEASTCON '97

"Engineering the New Century"

Professional & Student Conferences
and Region 3 Meetings

APRIL 12 - 14

at

Virginia Tech and State University
Blacksburg, VA.

For registration information,
refer to Southeastcon '97 web page
(<http://www.vt.edu:10021/org/ieee/secon97>)

IEEE MEMBERS DESIGN HOME OF THE FUTURE IN NATIONAL ENGINEERS WEEK SURVEY

Electronic technology built into the future American home will improve the quality of life while stewarding the environment and conserving natural resources, according to U.S. IEEE members who participated in a National Engineers Week 1997 survey. The IEEE contingent consisted of professionals from all engineering disciplines in envisioning how current technology will make the home of the future more environmentally friendly.

Respondents were unanimous in predicting that computers would become an integral part of many home appliances and systems. "The home computer will be the brain of everything," said John K. Guidry of Lafayette, La. "Processors will be in every item in the house — appliances, books, notepads, clothes, and so on," added Stanford University's Parvati Dev. David J. Hlague of Jacksonville, Fla., extended the list to "automatic food preparation, help for the infirmed and sick care, voice response systems, baby sitting, reminder systems, and possibly robotics to handle housekeeping chores."

The proliferation of electronic applications in the home will have several important benefits, according to the IEEE respondents. Among these are improved energy efficiency, said Ted Kochanski, a Massachusetts consulting engineer: "Network operating systems will link together all of the home's appliances and service equipment. These systems, when combined with sophisticated energy management algorithms and the appropriate sensors, will make the home of the future more energy efficient by mixing the correct amount of ventilation with appropriate thermal and humidity management. In addition, all other appliances will do their job more effectively with reductions in energy required and effluent generation."

The home of the future will offer health benefits, as well, according to Dr. J. Michael Fitzmaurice, director of the Agency for Health Care Policy and Research's Center for Information Technology. "The home's info system will monitor the quality of the air and water, looking for bacteria harmful to humans," he said. "This system will also sample

human waste products for changes in health artifacts and will monitor vital signs as you relax — without your wearing a device," he added reassuringly.

Expanded communications capabilities will improve home life, according to several respondents. Families will use a "computer-driven monitor/module for TV entertainment and also for communications with family and friends," said George Washington University's Neil R. Helm. "The future will see communications replace transportation; thus, more of us will work from our home office, get more of our education at home, and visit our friends and relatives from home on our two-way video system," he predicted. This in turn will yield environmental savings: "Telecommuting can reduce travel requirements, and along with this reduce the use of fossil fuels," explained Jim Isaak, a New Hampshire computer engineer.

In addition to reduced overall energy consumption, the future home could feature greater reliance on non-polluting fuels such as solar energy. The University of Michigan's Marlin Ristenbatt predicted "more use of active solar panels for energy and possible development of windows whose transmission properties of solar energy would be controlled electrically so as to reduce the heating and cooling required."

Several IEEE respondents emphasized the capabilities of intelligent-control systems in the home. "'Smart' climate-control systems — based on CI technology like neural nets, fuzzy logic and genetic algorithms — will provide much smoother control of heat and humidity and save fuel, as well," said Samuel Biondo, an a Maryland engineer employed at the U.S. Department of Energy. Added Texas engineer Robert Powers: "'Fuzzy logic' built into all kinds of devices could make those devices easier to use and more efficient than they are now. Heating and cooling equipment could certainly be trained, via fuzzy logic, to save lots of dollars by working more efficiently, on the basis of detected movements of the residents. Surely, even burglar alarm systems could incorporate fuzzy logic ideas."

During National Engineers Week, celebrated Feb. 16-22, a "home of the future" design was unveiled to the news media, using ideas submitted by engineers who responded to the survey. If the contributions of these IEEE respondents are any indication, the work of electrical, electronics and computer engineers will be more evident than ever in the daily lives of all Americans. The future of engineering, it could be said, begins in the home.




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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 Colaanni, *ELECTRON* Editor

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