

The Florida West Coast Section of the IEEE

Serving over 2,300 members in Charlotte,
Citrus, DeSoto, Hardee, Hernando,
Hillsborough, Lee, Manatee, Pasco, Pinellas,
Polk, and Sarasota Counties



THE

SUNCOAST

SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

<http://www.ieee.org/fwcs>

Volume 49 - No. 3

March 2006

Inside this Signal...

Page 2

Editor's Column
LightningMaster
EEs in Management

Page 3

Power Markets Seminar
Custom Graphics
Student Chap BBQ
Engineering Education
Infrastructure

Page 4

ISI
Teacher In-Service
IEEE Education Ptnrs

Page 5

IEEE-USA Leadership
Workshop

Page 6

The UL Listing Meeting
Top 10 Ways...
Seminole Electric
Generating Plant

Page 7

Brain Teaser Challenge
Siliconexion, Inc.
Coming Events:
PES/IAS FWCS
Life Members—Commodore?



Fault Calculations and Selection of Protective Equipment

Date: Wednesday, March 22, 2006

Time: Registration & Breakfast: 8:00AM – 8:45AM

Seminar: 9:00AM – 3:00PM

Speaker: Dr. Ralph E. Fehr III, Instructor – Power and Energy Systems, University of South Florida

Location: Seminole Electric, 16313 North Dale Mabry Hwy, Tampa, FL 33618

Cost: **\$150 Members, \$225 Non-Members,
\$100 Students Includes Breakfast, Lunch,
& seminar text, "INDUSTRIAL POWER DISTRIBUTION" (a \$75 value)**

RSVP: Online at: <http://www.ewh.ieee.org/r3/floridawc/>
(Select Reservations)

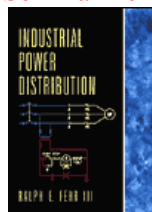
Make checks payable to: IEEE FWCS. Send checks to: Ralph Painter, IEEE FWCS
Treasurer
648 Timber Pond Drive
Brandon, FL 33510-2937

Space limited to the first 50 registrants!!!

Questions: Tom Blair at 813-228-1111, ext 34407 or thblair@tecoenergy.com

PDH Credits: 5 professional development hours will be awarded. Be sure to enter you name and PE number on the signup website as it appears on your license. Florida exempt provider #00015.

Seminar Text



A \$75 Value

Your local IEEE PES/IAS Chapter is offering this 5 hour seminar on Fault Calculations and Selection of Protective Equipment by Dr. Ralph E. Fehr III

This training session will be devoted to the calculation of fault currents and the sizing of protective equipment such as circuit breakers and fuses. The method of symmetrical components will be used to analyze unbalanced fault conditions. The text for the training will be "Industrial Power Distribution" written by Dr. Fehr. A copy of the text is included in the training costs.
—See **Fault** p. 4

2005 IEEE EXECUTIVE COMMITTEE FLORIDA WEST COAST SECTION

CHAIR: Angela Alexander
Honeywell, 727-539-2331
Angela.alexander@ieee.org
VICE CHAIR: Jim Anderson
813-417-8854
jim.anderson@ieee.org
SECRETARY: Jules Joslow,
ElectroMark, Inc. (800) 274-2383
jjoslowemi@aol.com
TREASURER: Ralph Painter,
Tampa Electric Co. (813) 228-4685
rdpainter@ieee.org
SIGNAL EDITOR: Dr. Paul Schnitzler,
PS&A (813)-994-2297 paulschn@ieee.org
AWARDS: Richard Beatie, PE
r.beatie@ieee.org
BYLAWS: Richard Beatie, PE, Consultant
(813)-289-0252 r.beatie@ieee.org
EDUCATION: Dr. Rudolf E. Henning and Zhen Tong
(813) 974-4782 or (727) 328-8777 (Ext: 333)
henning@eng.usf.edu or tong@ieee.org
PACE: Scott Haynes, Honeywell
(727)-539-3358, scott.haynes@ieee.org
Richard Martino, Consultant
(727) 536-1776, richard@richardmartino.com
MEMBERSHIP: Tom Blair, TECO Energy,
813-228-1111 (ext: 34407) tom_blair@ieee.org
STUDENT BRANCH CO-ADVISORS:
Dr. Rudy Schlaf, USF (813) 974-8463
schlaf@eng.usf.edu
Dr. Srinivas Katkoori, USF, (813)-974-5737
katkoori@ieee.org
STUDENT BRANCH MENTOR: Jim Howard
Lakeland Electric (863) 834-6506
j.howard@ieee.org (H) (813) 876-1748
STUDENT BRANCH:
Aaron Meltzer, IEEE, runner_25@yahoo.com
Upavan Gupta, IEEECS
(813)-974-1348, ugupta@csee.usf.edu
PES/IAS CHAPTER: Ghaff Khazami
(813) 960-0990 gkhazami@megaway.com
MTT/AP/ED CHAPTER: Ken A. O' Connor
Raytheon Systems Co. 727-302-2357
Kenneth_A_O'Connor@raytheon.com
COMP/AESS CHAPTER: James S. Lumia
(813) 832-3501, jlumia@ieee.org
SP/COMM CHAPTER: Hüseyin Arslan
USF (813) 974-3940
arslan@eng.usf.edu
LIFE MEMBER AFFINITY GROUP: Jules Joslow
ElectroMark, Inc. (800) 274-2383
jjoslowemi@aol.com
GOLD: Kristy Baksh, knbaksh@gmail.com
Dennis Trask, d.trask@ieee.org (813) 366-4201
WEB PAGE: <http://www.ieee.org/fwcs>
WEB MASTER: Jim Anderson, jim.anderson@ieee.org
THE SUNCOAST SIGNAL is published monthly by the Florida West Coast Section (FWCS) of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). THE SUNCOAST SIGNAL is sent each month to members of the IEEE on Florida's West Coast. Annual subscription is included in the IEEE membership dues. The opinions expressed, as well as the technical accuracy of authors, advertisers or speakers published in this newsletter are those of the individual authors, advertisers, and speakers. Therefore, no endorsement by the IEEE, its officers, or its members is made or implied.
All material for THE SUNCOAST SIGNAL is due in electronic form by 1st Friday after the 1st Tuesday of the month preceding the issue month.
Address all correspondence to:
Dr. Paul Schnitzler, P S & A
30612 Nickerson Loop, Wesley Chapel, FL 33543
Telephone: (813) 994-2297
E-MAIL: paulschn@ieee.org
The Signal, Copyright 2005

Editor's Column—It's Your Time!

I had the pleasure to moderate a panel of professionals on the subject of career development for a collection of bright, interesting engineering seniors. As it happens they were Industrial Engineering students, but never mind.

And it occurred to me that here is an opportunity for these young people to begin their personal "Old Boy Network." Remember how graduates of Harvard "B" School or Yale or... came away with a Rolodex™ of the best and the brightest? Did anyone ever suggest to you to create your own "Old Boy Network" when you were in college? I doubt it.

These students were rubbing shoulders with the people who will be the leaders in their field. They need to get to know each other and maintain that connection.

Our IEEE student members can do this right now. They can connect with their peers in college. Our student leaders attend leadership conferences with their peers at regional and national meetings. All of these contacts can be their future Old Boy/Girl Network.

Well how about us? It's not too late to start. Remember the Sections Congress? How many new contacts did you meet there?

BTW, see Jim Anderson's continuing column on How to Screw up Your Career on p. 6. —PS





Richard E. Beatie, P.E.
Regional Sales Manager

1351 N. Arcturus Ave. (33765) (800) 749-6800 Voice
Post Office Box 6017 (727) 580-3598 Cell
Clearwater, FL 33758-6017 (727) 499-0138 Fax
www.lightningmaster.com
RBeatie@LightningMaster.com



EEs in Management?

This might be the right degree for you: USF offers a Master of Science in Engineering Management. It offers a solid program in management with the focus on engineering. If you are also seeking your Electrical Engineering masters, a dual-degree option is available.—you can get your MSEE and MSEM together. There will be an information session on this program 3 to 5 pm, March 29 at the University.

This open house session will include a presentation on "The Art of Networking for Career Development" by our own Paul Schnitzler!

For more information email imse@eng.usf.edu

(Paid Advertisement)



Economic Reliability of Power Markets: Concepts, Design & Assessment

The University of South Florida College of Engineering presents the seminar, "Economic Reliability of Power Markets: Concepts, Design & Assessment" March 13th to March 16th on the USF Tampa campus. Registrations are being accepted through the APEX website, <http://apex.eng.usf.edu>.

This seminar analyzes the economic viability of power markets. Daily topics include power market concepts, system and economic reliability, understanding energy and transmission markets, bidding strategies for power markets, and bidding in the transmission market. The seminar will also hold computer simulations of power markets and will host a panel session with industry experts. The lead presenters are distinguished USF faculty members Dr. Tapas K. Das and Dr. Ralph E. Fehr.

Professional development hours (PDHs) will be awarded and may be used toward professional engineering licensure. The seminar will be archived online for remote attendance. URL www.eng.usf.edu/~das/short_course.htm provides a complete course outline. For more information, please call the APEX offices at 813-974-3783 or Jennifer Janda (813) 974-0951, jjanda@eng.usf.edu

**We Don't Want Your Printing Business
"We want to earn it"**



**Custom Graphics
of Tampa**

(813) 234-1050

6610 78th st. • Suite A • Riverview, FL 33560



USF Student Chapter Picnic/BBQ

Hey! This IEEE Promotion Day will show students what IEEE has to offer. You, our working members, can see what a great group of students are coming along and can share what your careers are like.

PLACE: Outside Kopp Building and Hall of Flags Tampa campus.

DATE: March 2, 2006 at 10:30—2:30 Food will begin at 11:00

Building Engineering Education Infrastructure in Florida— Sharing What Works

On April 28, 2006, the University of Central Florida's (UCF) College of Engineering and Computer Science (CECS) will be hosting this pre-college engineering education conference. The one-day conference will showcase pre-college programs that are successfully reaching young students in and outside of the classroom. UCF is working with the College of Engineering at the University of South Florida, O-Force, the IEEE West Coast Section, Project Lead the Way, and numerous schools and industry organizations to identify speakers for two panel sessions in the morning and two additional panel sessions in the afternoon. Additional details may be viewed at <http://partner.cecs.ucf.edu/EEC06/>.

Key to the success of the conference will be attendance by K12 administrators/educators and engineers. Practicing and retired engineers are especially invited to attend as they are the subject matter experts who are capable of helping teachers and other educators incorporate engineering concepts into the curricula. They further have the ability to assist educators and their students via mentoring in the classroom (and on-line), presenting what engineering is and what engineers do and connecting engineering to science, math and technology courses. In a recent "Why Engineering Survey" conducted by UCF-CECS in coordination with ASME members nationally, 84% of the engineers surveyed indicated they did not interact with a scientist or engineer as part of any classroom activity. Of the 16% who had the benefit of an engineer in the classroom, over 90% indicated it directly contributed to their pursuit of engineering as a career. Practicing and retired engineers have the ability to make an enormous impact on students and can forever change their career aspirations.

Please join with UCF-CECS and our partners to recognize what works in engineering education. You will learn about programs such as the Teacher In-Service Program (TISP) that "features IEEE Section volunteers sharing their technical acumen through the development and demonstration of technologically oriented subject matter to local pre-university educators in an in-service or professional development setting." Mr. Sean Denny with IEEE West Coast Section will be presenting the program and you can learn more about becoming involved.

Persons interested in attending the conference may sign up to be kept abreast of new developments by completing some basic contact information at <http://partner.cecs.ucf.edu/EEC06/StayInformed/New/>. Please address any questions or comments about the upcoming conference to Mr. Bruce Furino at UCF-CECS at bfurino@mail.ucf.edu.

Fault—cont.

Dr. Ralph Fehr earned his B.S. degree in electrical engineering from the Pennsylvania State University in 1983, his M.E. degree in electrical engineering (power) from the University of Colorado at Boulder in 1987, and his doctorate in electrical engineering from the University of South Florida in 2005. He has worked in the generation engineering field designing power distribution and control systems for nuclear and fossil-fired power plants. Dr. Fehr also has worked for electric utilities for over 15 years in the operations, planning, and design areas, including transmission, distribution, and substation engineering.

Dr. Fehr has taught courses ranging from computer operating systems to mathematics to power system analysis for several institutions, including the University of New Mexico at Albuquerque, the Pennsylvania State University, the University of Colorado at Boulder, St. Petersburg [Florida] Junior College, and the University of South Florida at Tampa. He has also taught review courses for candidates for the professional engineer examination through the Florida Engineering Society for ten years.

Dr. Fehr is a Senior Member of IEEE and is a registered professional engineer in New Mexico and Florida. His biography is published in Who's Who in Science and Engineering and Who's Who in American Education.



Teacher In-Service Program

This exciting program for high school teachers has been gaining steam. A program on a Motor Controller Laboratory is scheduled for April 18th at Northeast High School in Pinellas County. Ten days later, Sean Denny will present at the University of Central Florida's conference: Building Engineering Education Infrastructure in Florida. (See this Signal p. 3.)

Sean has also been in contact with the Science Supervisors of both Hillsborough and Pinellas counties who have expressed interest in using the TISP in their districts.



(Advertisement)



Satendra "SP" Singh
Registered Representative
Investment Advisor Representative

(727) 448-0040
(801) 469-8043 Fax
(727) 515-3439 Mobile
ssingh@isimail.com

Branch Office: 611 Druid Rd. East, Suite #103, Clearwater, FL 33756 (727) 450-1625
Member NASD, SIPC and Registered Investment Advisor

Call me
for your retirement planning and investment needs.

ISI can help with

- 401K's
- IRA's
- Roth IRA's
- college funding 529 Plans
- life insurance

to meet group and individual needs. My engineering background of over 30 years qualifies me to understand engineers and to help them with their financial planning and investment needs. Note, health insurance is not a service of ISI. IEEE member since 1969.

Compliance approval # LD20552-01/06



New IEEE Education Partners

The IEEE Education Partners Program (IEEE-EPP) has added four new members. All IEEE education partners are universities and corporations that have been reviewed and approved by IEEE volunteers to ensure IEEE members receive the most effective learning resources available. IEEE-EPP offers online degree programs, certifications and courses at up to a 10 percent discount to members. Through IEEE-EPP, IEEE members have access to more than 6,000 courses from 15 providers to help them meet their continuing education needs.

The new IEEE-EPP members are: Kelley School of Business, Learning Tree, RFID, and Thomson NETg.

For a full listing of IEEE Education Partners and more information on the Partners program, visit:
<http://boldfish.ieee.org:80/u/1793/>



2006 Leadership Workshop

3 -5 March 2006

Hyatt Regency St. Louis at Union Station

One St. Louis Union Station, St. Louis MO 63103
Phone: +1 314 231 1234/Fax: +1 314 923 3970

Who Should Attend?

- Section/Chapter PACE Chairs
- Section/Chapter Chairs
- PACE Coordinators and Society PACE Chairs
- Region and Division Directors and their Society Presidents.
- IEEE-USA Committee Chairs & Committee Members

Why Should I Attend?

The 2006 IEEE-USA Leadership Workshop will:

- Help you to gain a better understanding of IEEE and IEEE-USA missions, visions and goals.
- Increase your understanding of the roles and activities of the IEEE-USA committees and volunteers in order to help you do your job better.
- Train volunteers how to develop new and innovative Professional Activities Project plans to be implemented within your local section, chapter or society.
- Provide participants with information on the IEEE-USA's current legislative priorities, and information on how to develop an effective grassroots lobbying network.
- Provide skills and tools for your own professional development, job search and networking as well as your members at home.
- Teach you new ways to improve dissemination of information, products and services to members through local sections and chapters through the PACE Network.

What Do I Need to Know?

The IEEE-USA Leadership Workshop will open on Friday, 3 March 2006 with the PACE Leader's Training from 1:00pm - 3:00pm. All attendees are invited and encouraged to attend the training. Following the training, all participants will meet with their home regions (1-6) for discussion and to prepare for the upcoming day of programs and individual workshops. The official Welcome Reception will begin at 6:00 pm with a dinner and an IEEE President's Forum. After the reception, there will be a networking exercise and free time to network.

We will resume on Saturday, 4 March 2006 at 8:00 am, following breakfast (served from 6:30 am-7:45 am). That evening, you are invited to attend the [IEEE-USA Awards Banquet and Ceremony](#) at 7:00 pm.

The Workshop continues with breakfast on Sunday, 5 March 2006 at 6:30 am. The entire workshop will end by 12 noon to allow you to catch your flight home that day.

Suggested attire for the workshop is casual with the exception of the Awards Banquet which will be business attire. We are looking forward to seeing you there.

All registrations must be received no later than 6 February 2006.





What Is A UL Listing And What Does It Involve?

Date: Friday, April 21, 2006

Time: Registration & Breakfast: 8:00AM – 8:45AM
Seminar: 9:00AM – 2:00PM

Location: Seminole Electric, 16313 North Dale
Mabry Hwy, Tampa, FL 33618

PDH Credits: 4 professional development hours will be awarded. Be sure to enter your name and PE number on the signup website as it appears on your license. Florida exempt provider #00015.

Cost: \$75 Members, \$125 Non-Members, \$15 Students—
Includes Breakfast & Lunch

RSVP: Online at: <http://www.ewh.ieee.org/r3/floridawc/>
(Select Reservations)
Make checks payable to: IEEE FWCS
Send checks to: Ralph Painter, IEEE FWCS Treasurer
648 Timber Pond Drive, Brandon, FL 33510-2937
Space limited to the first 50 registrants!!!

Questions: Tom Blair at 813-228-1111, ext 34407 or
thblair@tecoenergy.com



Do you know the difference between the UL markings shown above? If not, you will benefit from this training. Each UL Mark has its own specific meaning and significance. The UL Mark on a product means that UL has tested and evaluated representative samples of that product and determined that they meet UL's requirements. Under a variety of their programs, products are periodically checked by UL at the manufacturing facility to make sure they continue to meet UL requirements. This seminar will cover what the requirements are for a product to be UL Listed.



Top 10 Ways To Screw-Up Your Engineering Career

How is 2006 going for you so far? Hopefully this is shaping up to be your best year ever. Just in case it isn't going well and you've decided to end your career in a spectacular fashion, I've got a couple more suggestions for how you can accomplish this. Here are two more ways that engineers often take their future in their own hands and derail their careers:

#4: Let Your Work Speak For Yourself

Yet another fatal engineering personality flaw. The thinking goes something like this: "... if I create really clever code, process, design, etc, everyone will realize how important I am and will love me for it." Sorry, life does not work this way. You need to be able to communicate your ideas and solutions in order for people to realize your unique value. This requires high quality writing, drawing, and speaking skills. Quiz: what are the three most workplace important tools? Answer: Microsoft Word, Microsoft PowerPoint, and Microsoft Excel! Career tip: visit a Toastmasters meeting in your area (they are everywhere – www.toastmasters.org) and learn how the ability to do a good job of speaking in public can really help your career.

#3: Always Use Email For Everything

Email is a very 21st Century curse. Its value has almost been overwhelmed by abuse. I'm not even talking about spam; rather I'm referring to the volume of workplace email that you have to pick your way through just to uncover important the important stuff! Here's a career tip: these days you have 5 different ways to get in contact with people: phone, voicemail, email, Instant Messaging, and an in-person visit. Different techniques are appropriate for different situations. Pick the right method for the message. One more career tip: emails live forever! There are a bunch of folks at Enron who forgot this and now all of their emails are available on the web. Final point: Instant Messaging now gets recorded and they can live forever also. Think before you click on "Send".

I've been trying to give you the best ways to finish off your career. If none of my suggestions have been a good fit for you yet, hang on. I've saved the best two techniques for ending your career and I'll share them with you in next month's Signal! —JA



Brain Teaser Challenge Column

—By Butch Shadwell

February BTC Last month, we had a little archeological taste treat involving toast. The problem was “If a piece of petrified toast is perfectly rectangular, has no open pores, measures $\frac{1}{2}$ ” x 4” x 4”, and weighs 3 ounces, will it float in pure water at 4 degrees Celsius?”

Of course, in order to float, the density of the slice of toast must be lower than the density of water at 4 degrees Celsius, which happens to be 1 gram per cm^3 . So we can convert the mass and volume of our piece of toast to CGS units and we’re there. First, the mass of our stony slice is 3 ounces (AVDP) which equates to about 85 grams. (BTW, I know that the ounce is a unit of force, $\text{m} \cdot \text{g}$. Don’t ruin the flow!) If we convert the dimensions to centimeters and calculate the volume we get 131.1 cm^3 . Now we divide mass by volume to get density. So with a density of 0.65 grams per cm^3 , we’ve got a floater! But I bet you already knew that.

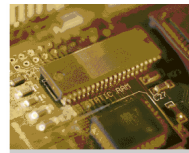
March BTC It is exciting to think that we may soon have commercial sub-orbital space flight available through Virgin Airlines. How many of you could have envisioned this eventuality just about 100 years from the first powered human flight. What would Orville and Wilber say? It’s not hard to imagine the next hundred years will have us colonizing the moon and even other planets in our solar system.

This has been called the electric age, meaning that advances in the understanding and utilization of electricity have been the dominant force in societal evolution. I wonder if the next century will introduce the next revolution in human ingenuity. Could there be some new technology that will lead us to inventions we can’t imagine in the context of today’s realm of understanding. Maybe the next step involves superconductors, or carbon Fullerenes, or nanotechnologies not even envisioned today.

Let’s say that in the year 2106 you are tooling down the road in your auto-drive car at 200 mph. Your exit is approaching and you need to slow down. If your computer driven car can regulate the braking force so the passengers feel a constant force due to deceleration, what force will a 200 lb passenger feel as the car decelerates from 200 mph to 20 mph in 1000 feet? I hope you have your seatbelt buckled..

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-223-4510 (fax), 904-223-4465 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328.

(<http://www.shadtechserv.com>) The names of correct respondents may be mentioned in the solution column.



Siliconexion, Inc.

FPGA Design and Verification Experts

Siliconexion offers robust, on-time electronic design consulting services by experienced senior level professionals.

Applications Include:

Telecommunications / Data Communications
Aerospace and Military
Embedded Computer Systems

Services Include:

FPGA / CPLD Design and Verification
ASIC to FPGA Conversions
Training for FPGA Design, VHDL, Test Benches
Digital and Analog Board-level Hardware Design
Embedded Systems Software Development
High Speed Signal Integrity Analysis

*Cost Effective sub-system or
turnkey product development*

Phone: 727 596-1990

E-mail: info@siliconexion.com

www.siliconexion.com



Watch for this Spring:

PES/IAS FWCS Meeting

PES/IAS FWCS will host a luncheon featuring George Matzke, VP Gulf Stream Gas Co. providing a Gulfstream Natural Gas System Update. Questions? Contact Ghaff Khazami, PE, (813) 960-0990, or gkhazami@ieee.org

Life Members—Commodore?

Remember the Commodore Computer? It’s coming back...or at least its story is. At the next LIFE MEMBER meeting in April 2006, Tom Hytlin will discuss The Rise and Demise of Commodore Computer. That will bring back memories!



March 2006 Calendar of Events (For more information see P. 1 *Inside this Signal...*)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2 <i>10:30 am:</i> <i>USF Stud. Chap</i> <i>BBQ, Tampa</i> <i>See p. 3</i>	3	4
					<i>IEEE-USA Annual Meeting</i> <i>St. Louis, MO See p. 4</i>	
5	6	7 <i>5:30PM:</i> <i>IEEE FWCS</i> <i>ExCom Meeting,</i> <i>TECO Hall,</i> <i>Tampa</i>	8	9	10	11
<i>IEEE-USA</i> <i>Annual Meeting</i>						
12	13	14	15	16	17,	18
	<i>Economic Reliability of Power Markets—USF Tampa</i> <i>See p. 3</i>					
19	20	21	22 <i>8 am Fault</i> <i>Calc & Protective</i> <i>Equipment</i> <i>Seminole Electric.</i> <i>Tampa See p. 1</i>	23	24	25
26	27	28	29 <i>3 pm EEs in</i> <i>Management USF</i> <i>Tampa See p. 2</i>	30	31	1

Institute of Electrical and
Electronics Engineers, Inc.
Florida West Coast Section
3133 W. Paris
Tampa, Florida 33614



IEEE/IAS Annual Meeting Oct. 2006 Tampa!

NON PROFIT
ORG
U.S. POSTAGE
PAID
TAMPA, FL.
PERMIT
No. 1197

DATE SENSITIVE MATERIAL. DO NOT DELAY

Change of address? IEEE Web Contact Update <http://www.ieee.org/membership/coa.html>

Or send address changes including your name, IEEE Member number and all pertinent information to:

IEEE, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331 or call (800) 678-4333

Or fax your address changes to (732) 562-5445