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## Substation Integration and Automation

### An IEEE Distinguished Lecturer Program

Sponsored by PES/IAS Chapter

**Date/Time:** Tuesday, August 20, 2002, 11:30 AM  
(Please note early start time)

**Speaker:** John D. McDonald, P.E., Senior Principal Consultant, KEMA Consulting

**Location:** TECO Hall, TECO Plaza, 702 N. Franklin Street, Tampa, FL

**RSVP:** **Deadline is Friday, August 16!**  
IEEE/ASME Members \$10, Non-members \$15, Students \$5 includes lunch  
Register on line at <http://www.ewh.ieee.org/r3/floridawc/>  
Or call John Stankowich at 727-796-8012

John D. McDonald, P.E., is Senior Principal Consultant and Manager of Automation, Reliability and Asset Management for KEMA Consulting. In his over 28 years of experience in the electric utility industry, John has developed power application software for both Energy Management System (EMS) and Distribution Management System (DMS) applications, developed distribution automation and load management systems, managed EMS and DMS projects, and assisted Intelligent Electronic Device (IED) suppliers in the automation of their IEDs. John is currently assisting electric utilities in substation automation, distribution SCADA, communication protocols and Distribution Management Systems. John received his B.S.E.E. and M.S.E.E. (Power Engineering) degrees from Purdue University, and an M.B.A. (Finance) degree from the University of California-Berkeley. John is a member of Eta Kappa Nu and Tau Beta Pi, is a Senior Member of IEEE, and was awarded the IEEE Millennium Medal in 2000 and the IEEE PES Award for Excellence in Power Distribution Engineering in 2002.



### Free Admission to Exhibit

Wednesday, March 19

10 am – 4 pm

Thursday, March 20

10 am – 4 pm

For more information, visit  
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SIGNAL EDITOR: Quang Tang  
Seminole Electric (813) 739-1222  
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STUDENT BRANCH CO-ADVISORS:  
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STUDENT BRANCH CHAPTERS: Jemery Baksh  
(813) 974-4776  
[jeremy.baksh@ieee.org](mailto:jeremy.baksh@ieee.org)

PES/IAS CHAPTER: Arthur L. Nordlinger, PE  
813-508-2952  
[a.nordlinger@ieee.org](mailto:a.nordlinger@ieee.org)

MTT/AP/ED CHAPTER: Shawn K O'Brien  
Raytheon Systems Co.  
[Shawn\\_K\\_O'Brien@raytheon.com](mailto:Shawn_K_O'Brien@raytheon.com)

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ElectroMark, Inc. (800) 274-2383  
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GOLD: Dennis Trask  
[d.trask@ieee.org](mailto:d.trask@ieee.org)

WEB PAGE <http://ewh.ieee.org/r3/floridawc>

WEB MASTER: Richard Beatie, PE  
[r.beatie@ieee.org](mailto:r.beatie@ieee.org)

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**Quang Tang - Seminole Electric Cooperative, Inc.**  
P.O. Box 272000, Tampa, Florida 33688-2000  
Voice: (813) 739-1222 Fax: (813) 264-7906  
E-MAIL: [q.tang@ieee.org](mailto:q.tang@ieee.org)  
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## Chair's Comment

By Quang Tang

We were again in the "*The Institute*" July 2002 issue featuring our Teacher In-Service Program. Our next program will be in Sarasota on Friday, October 18<sup>th</sup>. We have proposed to present three programs at the Florida Association of Science Teachers (FAST). If you would like to be part of this programs, please let any of the Executive Committee members know.

I have been receiving comments regarding to our hardcopy version of the newsletter from local members and comments from members throughout Region 3. I am so impressed with all the compliments I received about our newsletter such as outstanding Section, consistent newsletters, great work, and of course excellent Brain Teasers Challenge Column (thanks to Mr. Butch Shadwell for his monthly contribution). Because of these great compliments and concern of the number of our Life Members without computers to access electronics version, we have decided to continue both versions of our newsletter. I would like to thank everyone for their input.

## What's New @ IEEE For Members

John Platt [j.platt@ieee.org](mailto:j.platt@ieee.org)

Adrienne Hahn [a.hahn@ieee.org](mailto:a.hahn@ieee.org)

### Selling Your Ideas to Management

You've got a great idea that will cut production time in half and save your boss a mint. But if you can't sell it to management, it'll never get past the drawing board. The art of selling is one requisite skill from which engineers are not exempt. Paul Kostek has some advice for engineers who hope to see their own ideas take flight. From IEEE-USA Today's Engineer:

<http://www.todaysengineer.org/June02/selling.htm>

### IEEE Introduces New Careers Website

IEEE has announced the creation of a new careers website for IEEE Members. IEEE Spectrum's team of careers experts will provide the site with original and professional content on a weekly basis, with attributes including a "job of the month" and a featured employer. The site is an enhanced conduit for employers and job seekers to get the information they're looking for and provides links to other valuable IEEE career aids such as the IEEE Salary Calculator. Visit the new website at:

<http://www.spectrum.ieee.org/careers>

An HTML version of WHAT'S NEW @ IEEE FOR MEMBERS can be viewed on our online archive at <http://www.ieee.org/products/whats-new/wnmem0702.htm>

# Microwave Filters - A Survey of Current Applications, Realizations And Design Techniques

## MTT/AP/ED September Meeting

**WHEN:** Thursday, September 12, 2002 6:00 pm

**SPEAKER:** Tim Reeves, TRAK Microwave Corporation, Tampa, FL

### ABSTRACT:

A general overview of today's microwave filter applications, realizations and design techniques is given. As with all technologies, the technology application drives the technology realization methodology and the subsequent design technique for that realization. To begin with, a broad survey is made of today's microwave filter applications including military, satellite, basestation, handset and optical communication systems. Resulting from each of these differing applications, many novel filter realizations have been developed. Each realization addresses application specific electrical, mechanical, manufacturing and costing requirements. Finally, a review of today's microwave filter design techniques is undertaken with particular attention being paid to filter synthesis, optimization and three-dimensional electromagnetic analyses.

### BIOGRAPHY:

Mr. Tim Reeves is a senior engineer for TRAK Microwave Corp where he designs microwave-frequency filters for basestation and optical communication systems since February, 2001. Previously, he held the position of Filter Design Engineering Manager at Trilithic Incorporated in Indianapolis Indiana and was a Passive Designer with Com Dev Wireless in Canada. Mr. Reeves received his B. Sc. and M. Sc. degrees, both in Electrical Engineering from the University of Alberta in Edmonton Alberta Canada in 1995 and 1999 respectively.

He has also published a handful of refereed papers on the topic of direct synthesis of asymmetric attenuation poles producing networks. His particular areas of interest are synthesis of asymmetric cross-coupled cavity filters, realization of pseudo elliptic dielectric resonator filters and three dimensional electromagnetic analysis of low loss resonant structures.

### LOCATION:

TRAK Microwave Corporation, 4726 Eisenhower Blvd., Tampa, FL. For driving directions, contact Shawn O'Brien at (727) 302-3493.

### PLEASE RSVP:

Leave name & country of citizenship with Shawn O'Brien at (727) 302-3493. Email: [shawn\\_k\\_obrien@raytheon.com](mailto:shawn_k_obrien@raytheon.com). *Bring a guest; non-members welcome!*



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# Brain Teaser Challenge Column

By Butch Shadwell

## July BTC Solution

Last month's BTC was short, but satisfying. Kind of like a fresh Krispy Kreme doughnut. If you recall, the story started with a fellow on an all toast diet. Needing to replace the line cord on his toaster caused him to check on the current carrying capacity of wire. The question last month was which had the higher current carrying capacity, insulated or bare copper wire of the same gauge and composition? It might surprise some of you that bare wire is rated at a higher current capacity than similar wire with insulation. Since current capacity is based on the point at which the wire begins to soften, the rating is limited by the heat dissipation ability of the wire. Wire with insulation has a higher thermal resistance to the ambient air so it dissipates heat more slowly and so gets hotter faster. But I bet you already knew that.

## August BTC

Some of you who know me personally, are aware of my interest in theater. As it turns out, I have been in over 45 shows, including five musicals. Though I consider myself relatively normal, theater does attract some weirdoes. I also performed in comedy clubs for a couple of years. I think that's where I found the highest weirdness quotient.

One of these weirdoes at the comedy club came up to me after a set and asked if I knew a simple way to scale, rotate, and translate a vector representation of an image that is to be drawn on a CRT. I have to admit that I was a little startled at such a question coming from a fellow with a watermelon seed stuck to his forehead. But when I got over the shock, I said yes I do but I think I will get some other opinions first. So I am asking you good folks out there. What is the easy way to perform these operations on a vector representation? The same mathematical method could be used to translate the coordinate system in a robot's manipulation space.

Questions or comments to the Brain Teaser Challenge, please contact Butch Shadwell at 904-223-4465 (voice), 904-223-4510 (fax), [b.shadwell@ieee.org](mailto:b.shadwell@ieee.org) (email), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. <http://www.se.mediaone.net/~butchs/>

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### **2002 Review Seminars** **For** **PE Electrical and EIT/FE** **October 25 & 26 Examinations**

**Review seminars for the PE (Electrical) and Engineer In Training / Fundamentals of Engineering (EIT/FE) exams will be held:**

Mondays, July 29 thru October 7 for the EIT/FE Exam (No class Labor Day September 2) & Thursdays, August 1 thru October 3 for the EE Exam. Seminars are conducted from 7-10 P.M. (Monday or Thursday) for ten weeks. The registration fee is \$300 and includes text. The seminars will be held on the main USF campus in Tampa.

To register, contact: Alan M. Keith, P.E., PO Box 14042, (EC37), St Pete, FL 33733.

[Alan.M.Keith@pgnmail.com](mailto:Alan.M.Keith@pgnmail.com)

Phone (727) 384-7937, FAX (727) 384-7994  
Pinellas Chapter, Florida Engineering Society

## August 2002 Calendar of Events

| Sunday | Monday | Tuesday  | Wednesday | Thursday | Friday | Saturday |
|--------|--------|--|-----------|----------|--------|----------|
|        |        |  |           | 1        | 2      | 3        |
| 4      | 5      | 6 <i>EXCOM at<br/>TECO Plaza<br/>5:30pm-7:30pm<br/>Guest are always<br/>Welcome!</i>   | 7         | 8        | 9      | 10       |
| 11     | 12     | 13   | 14        | 15       | 16     | 17       |
| 18     | 19     | 20 <i>PES/IAS IEEE<br/>Distinguished<br/>Lecture Program<br/>TECO Hall<br/>11:30AM</i> | 21        | 22       | 23     | 24       |
| 25     | 26     | 27   | 28        | 29       | 30     | 31       |

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