

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



IEEE

THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 66—No. 4 April 2020

IN THIS SIGNAL:

Page 2

- ◆ [PE Corner— Engineering By Any Other Name Is Still Engineering](#)

Page 3

- ◆ [The Slate Twins: Caught in the Currents](#)

Page 4

- ◆ [Advertising—Digital Voice Systems](#)
- ◆ [Advertising—Powell](#)

Page 5

- ◆ [Advertising](#)

Page 6

- ◆ [Calendar](#)



It is amazing what you can learn apprenticed to someone who knows how to teach and mentor.

Author Harry T.

Roman's father loved

to solve problems, and invent things on the spot. And in IEEE-USA's new, free audio book for members: **Valuable Career Lessons I Learned in Dad's Workshop — Vol.1: Be Creative; Plan Ahead** — Roman pays tribute to his father by gathering vignettes from more than 40+ years of these lessons. He demonstrates how they are very relevant to modern day engineering.

Always inspiring and often humorous, in Volume 1 of this two-volume series, Roman concentrates on what he learned from his father about creativity and planning. Describing his boyhood as his "wonder years," the author relates, with both admiration and insights, how he learned valuable career lessons while helping his father in the large basement workshop of their home. His dad, a master of what Roman calls "unstructured problem-solving," discarded almost nothing. At the same time, his father always found new, repurposed uses for the most

CORONAVIRUS

In light of the Coronavirus and everyone on stay-at-home safety, we will not have any meetings or social events during the month of April. We hope you all have a safe month.

Please consult the Section and FWCS web pages for details of programs as they are rescheduled.

Continued from column on left:

Roman explains that his father honed his skills during World War II — making repairs with whatever was on hand. His naval detachment in the South Pacific jungles fixed anything the enemy had blown up, and the military wanted fixed. Before enlisting, the elder Roman had grown up on a farm, where he learned to repair broken farm equipment with what was readily available.

In a humorous anecdote, illustrating the need for thinking creatively, the author relates an incident when his father repaired an old toaster that his mother wanted to replace. Roman's dad spot-welded the connection back to the heating element — using two carbon rods that he had scavenged from old batteries.

The elder Roman also taught his son that having the right tools on hand to perform a job, was necessary for planning for a successful outcome. For example, when preparing to work on the family car, Roman's dad insisted on laying out all the necessary tools and parts the night before.

"The penalty for not having the right tools was always the same," Roman says, "If I caused the work to stop for want of a tool, I had to put all the tools back in the tool box, lug it all the way back to the workshop, get the right tool, and lug everything all the way back again."

He notes, "Learning to have the right tools stayed with me my entire engineering career." That particular lesson taught him to plan and organize well. He points out that if his planning and organization skills had been sub-par, he would not have survived, or thrived, in his chosen profession.

Such skills maximize scarce corporate resources, and demonstrate to senior management an appreciation for taking care of the company's property.

"In 36 years on the job, I never overran a budget," he says. "I attribute that to my dad, and the lessons I learned in the old basement workshop."

IEEE members can download their free audio book in MP3 format, by going to: <https://ieeeusa.org/shop/audiobooks/>.

Just follow the instructions for your free download — no promo code is required! Don't miss this great free gift from IEEE-USA — a \$2.99 value — to add to your personal listening resource library.

2020 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION

CHAIR: Claude Pitts - claudie.pitts@ieee.org

VICE CHAIR: Paul Belussi - paul_belussi@selinc.com

SECRETARY: Sean Denny - venner20@ieee.org, (727) 678-0183

TREASURER: Jim Howard - jhoward@ieee.org, (863) 834-6585

SIGNAL EDITORS: Donna Howard - amberdon3133@gmail.com

AWARDS & BYLAWS: Richard Beatie, PE - r.beatie@ieee.org

MEMBERSHIP: Jim Howard - j.howard@ieee.org, (863) 834-6585

TEACHER IN-SERVICE: Sean Denny - venner20@ieee.org, (727) 678-0183

Computer / Aerospace & Electronic Systems (**COMP/AESS**) Joint Chapter:
Jim Anderson—jim.anderson@ieee.org (813) 425-2467

Engineering in Medicine & Biology (**EMBS**) Chapter: Sylvia Thomas - sylvia@usf.edu

Microwave Theory & Techniques/Antennas & Propagation/Electron Devices
(**MTT/AP/ED**) Joint Chapter: Jing Wang - jingw@usf.edu

Power & Energy / Industry Applications (**PES/IAS**) Joint Chapter:
Serge Beazile - serge.beazile@ieee.org, (863) 834-6511

Robotics & Automation (**RAS**) Chapter: Sean Denny - venner20@ieee.org,
(727) 678-0183

Signal Processing / Communications (**SP/COMM**) Joint Chapter: Paul Belussi -
paul.belussi.us@ieee.org

WOMEN IN ENGINEERING Affinity Group: Diana Aristizabal —
@dianaaristizabal08@gmail.com

LIFE MEMBER Affinity Group: Richard Beatie, PE - r.beatie@ieee.org

YOUNG PROFESSIONALS: T.J. Ross - a.j.ross@ieee.org, (505) 620-7734

PACE: Jim Anderson - jim.anderson@ieee.org, (813) 425-2467

CONSULTANTS NETWORK: Herman Amaya - hamaya@tampabay.rr.com

STUDENT BRANCH MENTOR: Jim Howard - jhoward@ieee.org, (863) 834-6585

USF STUDENT BRANCH ADVISORS:

Dr. Chung Seop Jeong - Student Branch Co-Advisor - jeong@usf.edu

Dr. Andrew Hoff - Student Branch Co-Advisor - hoff@usf.edu

Dr. Srinivas Katkoori—CS Chapter Advisor— katkoori@mail.usf.edu

Dr. Jing Wang—MTT Chapter Advisor—jingw@mail.usf.edu

STUDENT BRANCH / CHAPTERS:

USF Student Branch, Chair - Thomas DeCanio - tdecanio@mail.usf.edu

USF Computer Society Chapter - Vishalini Laguduva Ramnath - vishalini@mail.usf.edu

USF Microwave Theory & Techniques Chapter - Enrique Gonzalez -
enriquegonza@mail.usf.edu

USF Power & Energy / Industry Applications Chapter - Joe Ghisu - jghisu@mail.usf.edu

CONFERENCES: Richard Beatie, PE - r.beatie@ieee.org

WEB PAGE: <http://sites.ieee.org/fwcs/>

WEB MASTER: T.J. Ross - a.j.ross@ieee.org, (505) 620-7734

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 Sunday after the 1st Tuesday of the month preceding the issue month.

Address all correspondence to:

Donna Howard

3133 W Paris Street Tampa, FL 33614-5964

Home Phone: (813) 876-1748 E-mail: amberdon3133@gmail.com

The Signal, Copyright © 2020

Useful links:

<http://www.ieee.org/benefits> Global Benefits Finder

<http://www.ieee.org/discounts> Discounts Page

PE Corner

Art Nordlinger, PE, Senior Member

Engineering By Any Other Name Is Still Engineering

This article is excerpted from one by Scott R. Drury, PE, FBPE Board member, in the January 2020 FBPE Connections Newsletter <https://fbpe.org/>

William Shakespeare penned in the tragedy *Romeo and Juliet*:

*What's in a name? That which we call a rose
By any other name would smell as sweet.*

So, how does this apply to engineering? Engineering is our “rose.” Engineering work is engineering work, period. You can try to call it something different, but the smell test will reveal that it is engineering.

There is a common misconception among professionals who hold multiple licenses that an individual can choose which license or certification will be used for a particular project. In fact, any work performed in Florida that falls under the definition of engineering as defined in Section 471.005(7), Florida Statutes, is considered to be engineering, and all of the rules, including signing and sealing of plans, are applicable to the project.

A disciplinary case recently heard by the Board addressed this issue directly. An individual who was both a licensed contractor and a PE in Florida submitted plans to a local jurisdiction for a permit. The size of the job was small enough that a PE's services were not required by statute. The plans submitted by the individual were not signed and sealed, even though the work constituted Engineering as defined by statute. The individual explained that for that job, he was working under his contractor's license and not under his PE license since a PE was not required based on the size of the job. Unfortunately for him, that's not how the rules work.

Although the contractor is not required to submit signed, dated, and sealed documents for permitting in this case, if the work is done by a PE, the PE is required to sign and seal the plans. The exemption in this case is that the work was not required to be performed by an engineer. But since the work was performed by an engineer, all of the rules that apply to Engineering are in force, including signing and sealing the plans.

So, what does this all mean? A licensed engineer is always a licensed engineer, at least while they hold a valid license in Florida. As a licensed engineer, you cannot choose to be an engineer on one day and a contractor (if you have a contractor's license) another day. If you hold a valid engineering license and perform any work with the other license or certification that overlaps with the definition of engineering, the work is considered engineering and requires the seal of a Professional Engineer, as well as compliance with the responsibility rules and minimum standards of due care for the practice of engineering.

If you have any questions or concerns about the laws and rules regarding engineering, please contact FBPE's legal department at (850) 521-0500, or email board@fbpe.org.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trends in the profession, IEEE has seminars that will meet your needs. With renewal only 10 months away seminar demand is high. Sign up now!

Move over, Thor! Skedaddle, Spider-Woman! And take your psionic energy with you!

There's a new duo of superheroes in town, ready to battle the Forces of Evil, and they come from a long line of geniuses – one of them, quite conveniently, is one of the most prolific inventors and futurists in the history of engineering.

His identity – and how the present generation of his imaginary descendants manages to save the day – is just one of the compelling and action-packed aspects of the first IEEE-USA e-comic book with superheroes who are engineers.

Dedicated fittingly to “All engineers – and all engineers to come,” *The Slate Twins: Caught in the Currents* was created with several audiences in mind. According to Georgia Stelluto, IEEE-USA Publishing Manager and Manager/Editor, IEEE-USA E-BOOKS, “Getting kids – young and old – excited about engineering is our main goal. But we also wanted to put the fun back into engineering for Young Professionals, as well as for more experienced engineers.”

While seeking new approaches to meet the vital need for attracting more youngsters to STEM studies, Stelluto recognized a powerful medium to reach them – today's wildly popular superhero comic books. She saw that offering role models for younger readers – a comic book with superheroes, who are engineers, would also be very appropriate. The characters are intelligent and highly educated, yet amazingly cool. This is because their alter egos are often scientists, doctors and journalists. Knowledge is a very important part of a superhero's character, since their intelligence and powers of reasoning usually tend to rescue the situation – not their brute strength.

Stelluto's comic-book brainchild required nearly two years of planning and hard work to execute – with support and feedback from the entire IEEE-USA Communications team.

Unlike Tony Stark, aka Iron Man, the Slate Twins are neither billionaires nor geniuses who invented their own electromechanical suits of iron. But Nick and Tess Slate are bright, curious kids attracted to their engineer grandfather's home inventions, including an electronic arm he controls with his thoughts. By chance, the siblings discover the plans for Nikola Tesla's Philadelphia Experiment in his desk. This project was an actual effort, during the Second World War, to use an electromagnetically charged invisibility cloak. If it had been successful, the result would have made ships invisible to radar.

The Slate kids' story takes off from there – complete with death rays, circuit boards, miniaturization, bionic prosthetics, time travel – and much more.

All this technology – real and fantasy – is designed to help fuel imaginations and to stimulate readers' creativity, no matter their ages. Much like other superhero comic books, *The Slate Twins: Caught in the Currents*, also offers the benefits of stress reduction, social representation and intellectual stimulation – for all age groups.

To help bring this first-ever IEEE-USA digital and print comic book to reality, Stelluto enlisted the talents of Jeff Knurek, a nationally known graphic artist and award-winning toy and game inventor. Knurek, who illustrates the widely syndicated Jumble puzzle, had previously created two engineering-themed coloring e-books for IEEE-USA Publishing – one for adults, and another for children.

“I'm not the biggest follower of comic books, per se,” he admits, “but I watch a lot of superhero movies and TV shows.”

He's also been to several comic cons, the hugely popular comic book conventions for fans held in many cities. “These events blew me away, as I watched people's devotion and enthusiasm for the parallel fantasy worlds depicted in comic books, as well as the creative costumes you see at these events,” he says.

In addition, Knurek's longtime interest in Nikola Tesla was a big advantage for IEEE-USA's digital comic book project. “Tesla was a genius who was ignored throughout much of history,” says Knurek, who has a degree in industrial design from the University of Michigan. “He was more a visionary than an engineer, and most people don't realize how much he pushed the envelope.”

Moreover, two recent films involving Tesla – the factually based *The Current War* (2017), and the thriller *The Prestige* (2006) – provided the illustrator-inventor with new insights and ideas about the often-enigmatic genius.

But Knurek says that he is not a comic-book creator by trade – and in the early stages of the project, he felt totally out of his comfort zone. He says that when Stelluto asked him to make the heroes look more like super heroes, he turned to Chad Frye, a fellow cartoonist and illustrator who has worked at Walt Disney Animation Studios on many films.

“Chad has an amazing talent for giving characters personality and traits, and I ran my initial pencil drawings past him,” he says. “He was brutally honest, and gave me great insights that helped me to enlarge and rewrite the story toward what we eventually achieved.”

IEEE-USA is promoting its first-ever superhero comic book through *InSight*, as well as elsewhere in other internal and external news outlets. A limited quantity of full-color, print copies are available for IEEE members to take to local elementary, middle and high schools, as well as colleges and universities. To obtain copies, contact Georgia Stelluto (g.stelluto@ieee.org) and Marnie James (m.c.james@ieee.org).

The Slate Twins: Caught in The Currents is available as an e-book at <https://ieeusa.org/shop/fun/the-slate-twins-caught-in-the-currents> for \$2.99 for members and \$4.99 for non-members.

A final word of caution to comic book fans: This one ends with a real cliffhanger that will leave you yearning to know what happens next. It's safe to predict that we haven't seen the last of those “Slate” kids!





steve.antman@powellind.com

POWELL

Powered by Safety®

www.powellind.com

Steve Antman
6985 McCoy Road
Orlando FL 32822
(813) 460-5434



Advertisement

Speech Research Development Engineer

Digital Voice Systems, Inc. (DVSI) is seeking a qualified Speech Research & Development Engineer at our new office in Clearwater, Florida. This is a great opportunity to join our team of world class engineers in designing high quality voice compression technology that is implemented in hundreds of millions of telecommunication systems world-wide.

The ideal candidate will play a key role in the research and development of DVSI's next generation of digital speech compression technology including speech analysis; speech modeling; model parameter estimation; quantization; speech synthesis; error correction and mitigation methods; as well as, echo cancellation and noise reduction.

Desired Qualifications

- Research and development experience in speech or audio
- Knowledge of programming languages, i.e. C/C++, Matlab etc.
- PhD (or equivalent) in Electrical Engineering or Software Engineering with an emphasis in Signal Processing
- U.S. Citizenship or Permanent Residency required

Compensation

- Competitive salary
- Benefits package
- Excellent working environment

For more information visit www.dvsinc.com or send resume to jobs@dvsinc.com

Advertising Section



863-425-2698

www.eesllcfl.com

ELECTRICAL ENGINEERING SERVICE
DESIGN/BUILD
INDUSTRIAL & COMMERCIAL
MAINTENANCE & CONSTRUCTION
INSTRUMENTATION & CONTROLS
ARC FLASH ASSESSMENTS & TRAINING
INFRARED TESTING
ELECTRICAL TESTING SERVICES



formerly **Leedy Electric East, LLC**



Suncoast Signal Advertising Rates

	One Month		6 Months		12 Months	
Size	Member	Non-Member	Member	Non-Member	Member	Non-Member
Business Card	\$25	\$33	\$120	\$150	\$210	\$252
¼ Page	\$40	\$52	\$190	\$238	\$335	\$402
½ Page	\$75	\$98	\$360	\$450	\$630	\$756
¾ Page	\$110	\$143	\$530	\$663	\$925	\$1,110
Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
Insert / Sheet	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400

Opportunity

for a

Forensic Electrical Engineer Expert Witness

The right person for this opportunity has a P.E. license and experience as an electrical engineer with an electric utility or related industry. This can be an ideal part time or contract position for someone that has recently retired.

J. B. Shepherd & Company, Inc.

offices in Plant City, FL and Bushnell, FL

Interested?

email your CV to cefalany@jbsco.com

www.jbsco.com

IEEE, Inc- FWCS, 3133 W. Paris St.
Tampa, FL 33614-5964



Florida West Coast Section, 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

April Calendar of Events (For more information see P. 1) in this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12 	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		