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Cedar Rapids Section - Institute of Electrical and Electronic Engineers
Serving Engineering Professionals in Eastern Iowa

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2010 March 19

13th Annual Cedar Rapids Professional Development Conference

ProCon 2010



Creating

Exceptional Value

with Leadership and Project Management Tracks

Tuesday, April 27, 2010

Marriott Hotel and Conference Center
1200 Collins Rd. NE, Cedar Rapids

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The IEEE Cedar Rapids Section

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ProCon 2010 has an exciting lineup of half-day workshops.

This year's topics include:

- "Two Brains Are Better Than One: Right Brain Leadership for Projects" and "Geek in the Lead: Growing from Engineer to Manager", with **Dr. B Mike Aucoin** from Leading Edge Management.
- "The Innovator: Challenges & Rewards" and "Making Project Management Work," with **Gerard "Gus" Gaynor**, IEEE Life Fellow, IEEE Technology Management Council President and a two-time Fulbright Scholar.

Look inside for complete speaker bios and topic outlines.

Plan now to join us!

The **IEEE** believes that maintaining and improving basic technical skills, keeping up with advances in relevant technologies, developing business and personal skills, and becoming active in a professional society have positive long-term effects on engineering careers.

Plan to Attend the Conference!
Register now at

www.ProCon2010.org

ProCon 2010

Creating Exceptional Value



Program Presenter
Dr. B. Michael Aucoin, PE, PMP

Dr. Michael Aucoin, PE, PMP is an internationally recognized leader in innovative approaches to the challenges of the high velocity workplace. He is the founder of the firms Leading Edge Management, LLC, and Electrical Expert, Inc. in College Station, Texas. He provides training and consulting in electrical engineering, project management and engineering management, drawing upon his extensive experience in diverse technology projects. He is the author of the books, *Right-Brain Project Management*, and, *From Engineer to Manager: Mastering the Transition*.

He has received the IEEE Third Millennium Medal, and projects he has worked on have been recognized with the R&D 100 Award and the Outstanding Engineering Achievement Award. He is a Registered Professional Engineer in Texas, and he has earned the Project Management Professional certification. Dr. Aucoin has served on the Board of Governors of the IEEE Engineering Management Society and also served as their Vice President of Education. He has served as a member of the B-241 Mishap Investigation Board with the NASA Johnson Space Center.

Dr. B. Michael Aucoin

Geek in the Lead: Growing from Engineer to Manager

Increasingly, organizations rely for success on individuals who can successfully lead and manage technical teams. Most engineers spend the majority of their careers in management, but lack the necessary education or training. Many find the transition from engineer to manager difficult and frustrating but it need not be. The solution is a program to quickly gain the necessary attitudes and skills.

Join us for "Geek in the Lead: Growing from Engineer to Manager", an entertaining and informative workshop on the most important development in the career of an engineer. Learn tips that you can apply immediately to be effective in management, and build a solid foundation for a successful and rewarding career as a leader.

Two Brains Are Better Than One: Right-Brain Leadership for Projects

The future of work is project work! But individuals and organizations struggle with how to manage projects successfully – nearly two-thirds of workplace projects fail to meet their targets or must be terminated. In contrast, studies of projects that have performed phenomenally well attribute much of their success to the right brain – a powerful processing juggernaut that is often misunderstood and whose potential is scarcely used.

Join us for "Two Brains Are Better Than One: Right-Brain Leadership for Projects", an innovative workshop on the important career skill of managing and leading projects. In this workshop, you will learn techniques that you can apply immediately to master the challenges of projects, and help everyone in your organization build a solid foundation for successful and rewarding project.



Gerard "Gus" Gaynor

Gus Gaynor brings broad-based technical and management expertise in managing engineering, technology, and innovation. After many years of work in upper atmosphere research, development of process control systems, and as an entrepreneur, he began a 25-year career at 3M where innovation was not a matter of choice but an expectation.

At 3M, Gaynor held positions in engineering, research, product and process development, and general business management. These positions included managing the activities of multi-disciplinary technical groups; developing strategic technology directions related to new product innovation; auditing innovation, product, and technology programs and their management; proposing and obtaining approval for major product related investments; integrating technology requirements for a multiplicity of product lines for 3M divisions; and meeting the technology expectations from a business operational perspective.

Mr. Gaynor is an IEEE Life Fellow and has been an active volunteer for 15 years. He has served double three-year terms on Products Services and Publications Board (PSPB) and the Technical Activities Society Review Committee; two terms on the IEEE New Initiatives Committee, Chair of the IEEE Career Services Committee, and EAB Lifelong Learning Committee. Gaynor's other principal IEEE activities included, Founding Editor of *Today's Engineer* magazine, EMS President, EMS VP of Publications, EMS Newsletter editor; Chair EMS FinCom, President of the IEEE Technology Management Council, and many other committee activities.

Fulbright Scholar on two occasions, teaching Innovation, Management of Technology, Innovation, and Entrepreneurship.

Gerard "Gus" Gaynor

Innovators: Challenges and Rewards

Innovation drives economic progress and improved organizational performance. The academic, business, and public press dedicate many pages on promoting innovation but the status quo remains. Too often innovation becomes commingled with the great idea, research, and invention. Innovation involves invention plus commercialization or implementation: it deals with ideas and developing them into products and services that provide economic and/or social value. ***Innovators: Challenges and Rewards*** consider:

- Precursors to Innovation – from idea, to concept, to invention, to innovation
- Adopting an Appropriate Innovation Process – when innovation stops and project management begins
- Promoting a Culture that Supports Innovation – it's more than mission, vision, and values
- Putting on the Innovator Hat – the challenge and the reward

Making Project Management Work

Project management drives engineering performance but studies show that meeting project requirements, cost, and schedule seldom meet expectations. Projects come in many different types and sizes, are staffed with diverse and varying levels of competence, are executed in cultures that vary in approval requirements and processes, meet different customer requirements, and receive various levels of interest from management. Managing projects involves thinking; the tools are secondary. ***Making Project Management Work*** provides some guidelines for thinking about what it takes to execute projects effectively.

- The up-front work – asking the tough questions
- Decision to proceed – the decisions that follow determine success
- Roles of project manager and team – project success, a two-way street
- Project process – the process must fit the project and the organization's project management principles
- Multi-disciplinary and multi-functional projects – making the tradeoffs and reaching agreement
- Managing projects across cultures – how many times do you ask the question
- Strategic project management – project management involves more than meeting requirements, schedule, and cost
- Reinventing project management – a new model for managing projects

2010 Future City Competition activities by Gary Bishop

The Future City Competition is an activity for junior high school teams, and is sponsored by the IEEE and many other professional engineering organizations. Each team is made up of two or three students, a teacher, and an engineering mentor. The competition is structured to develop and enhance student problem-solving skills, promote team work, provide practice and improvement of their research and presentation skills, provide an opportunity to apply practical math and science concepts, and promote computer skills.

The competition has five main elements. Each team must perform and submit results for judging or scoring, in the following areas:

- 1.** Playing a video-game style simulation of a city, called Sim City. This is harder than it sounds, because the simulation is very realistic. There are interactions between such things as residential housing, budgets, pollution, water resources, infrastructure aging and replacements, waste disposal, transportation and the like.
- 2.** Writing a 750 word essay describing the desirable features of their city, while addressing a rubric of scoring criteria.
- 3.** Writing a synopsis of their city, similar to an advertisement copy or travel brochure, of 150 words or less.
- 4.** Building a model city on a two by three foot base, using mostly recycled materials and on a limited budget. The model must have a moving part and at least one light. Considerable creativity and innovative thinking are applied to the models.
- 5.** Making an oral presentation about their city to judges, and answering questions about features and benefits of their particular city.

I was able to be the mentor for eight local teams at Harding Middle School, with four of those teams moving on to a regional competition at the Prairie Center complex in late January.

I was able to be the mentor for eight local teams at Harding Middle School, with four of those teams moving on to a regional competition at the Prairie Center complex in late January.

The winner of this year's regional competition at Prairie was a city called Paxana, created by students at Clear Creek-Amana. This regional winning team, along with its teacher DeAnna Kellenberger and mentor Creig Dunlap then went on to compete in Washington, DC during National Engineering Week.

This is an all-expenses paid trip, funded by the Future City organization. In between competition elements, there is time for sight-seeing in the nation's capital. The Future City organizers realize attendance at the national competition is a reward, as well as an award. Team Paxana finished 7th overall at the national finals, out of 39 teams, which is a very impressive ranking. The team also received a special award for "Best Use of Innovative Construction Materials and Techniques" from engineers representing the American Society for Quality - Design and Construction Division.

Some selected middle school students joined President Obama in a talk with the International Space Station. I'll bet they will remember that talk for quite a while! What bragging rights.

Future City Competition is a high profile attempt to stimulate science and engineering concepts, teamwork and downright hard work amongst middle scholars. From my experience and observations, we are growing a fine crop of next-generation scientists, engineers, and technologists.

Message from the Section Chair Shana Fliginger

This year marks over 125 years of IEEE! We are extremely excited about building an enthusiastic team of section officers encompassing both experienced and new members and offering our members a dynamic and engaging program of events for 2010. In the past year we have revitalized the Microwave Theory and Techniques (MTT) Society -thank you Manas Roy, kicked-off a series of technical workshops headed toward a technical conference, worked to further our ties with our student branches and students at Kirkwood Community College and congratulated our members who were elevated to Senior status – thank you Murray Marple for organizing the Senior Membership Rodeo. Recently, IEEE-USA honored former Chair Gary Bishop as the Outstanding Member for Region 4 for his efforts in pre-college and college areas. Last year our Life Member Affinity group was recognized as one of the most active Life Member Affinity groups in the USA.

Our section continues to focus on enabling our members to meet their interests. In January our section welcomed its own branch of the Communications Society and its founding Chair Ben Loeschke. Thank you Ben. Since several volunteers have expressed interest in forming a Women In Engineering (WIE) Affinity group, we are collecting signatures to realize that need. IEEE-USA President Evelyn Hirt has offered to speak at one of our early meetings. We plan to have a nationally recognized speaker, Tarek Lahdhiri, hold a career development workshop which was also at the request of our

members. Again this year Vickie Ozburn spearheaded a team of volunteers and organized our annual professional skills conference, ProCon 2010, on April 27, which also has achieved national recognition. Thank you, Vickie. Our membership and our volunteers are our life blood. You and your interests do make a difference. Join us at one of next events or meetings. Contact one of officers with your suggestions or just volunteer. We look forward to serving you.

Senior Membership Rodeo Are you Interested?

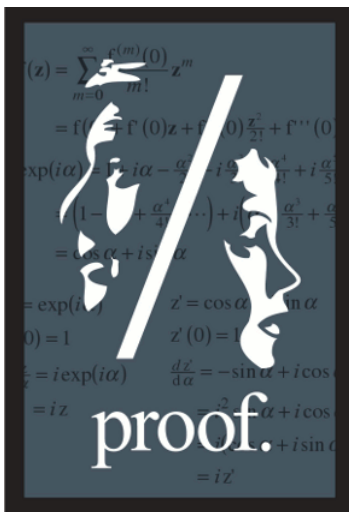
Contact Murray Marple

No, it does not involve old cowboys or horses; it is an opportunity for members who qualify for Senior Membership status to apply for a membership upgrade all in one day. A Rodeo is an event where we get some senior members and some computers all in one location and allow for fast processing of your Senior Membership application.

Senior Membership recognizes members with 10 years of practice, not years of membership, three of those years can be earned via a bachelors degree. See attached link:

<http://www.ieee.org/web/membership/senior-members/index.html>

Cedar Rapids Section Awards Dinner and Social Evening



Date: **April 17, 2010** Saturday
 Time: 05:00PM to 10:00PM (5 hours)
 Place: Dinner at Cooper's Mill Restaurant (100 F Ave., NW) then Theatre Cedar Rapids

Reservations for the dinner at the Cooper's Mill and the play 'proof' at Theatre Cedar Rapids are prepay by April 3, 2010.

Send a check or money order for \$25 per person payable to:

Cedar Rapids Section of the IEEE
 P.O. Box 451
 Marion IA 52302

Reservations:

Go to the Section's web site at
<http://www.ieee-cr-section.org/>

Click on the 'Award Meeting' hyperlink in the '**Upcoming Events**' box and then the "more detail" hyperlink and finally the Registration hyperlink; or contact Tim Schoenfelder (319) 775-0520, email: TimSchoenfelder@ieee.org

If you can attend only one event, please contact Shana Fliginger at 319-389-4634

Join fellow IEEE section members in honoring three section members who have received National Awards and appreciating section volunteers at the Cooper's Mill. Following the awards go to the Theatre Cedar Rapids to see the play "**proof**".

Meeting Agenda:

- 5:00-** Meet your friends at the Cooper's Mill
- 5:15-** Dinner at Cooper's Mill (choice of 2 Entrées, vegetarian upon request) followed by Presentation from Don Bramlett Region 4 Director "IEEE's 125 years of History" and presentation of Awards.
- 7:00-** Transition to Theatre Cedar Rapids
- 7:30-** "**proof**"

Information about the Entrées and on line registration can also be found at the event page:
www.ieee-cr-section.org.

The social event accompanying this year's Awards Dinner centers involves the play '**proof**'.

On the eve of her twenty-fifth birthday, Catherine, a troubled young woman, has spent years caring for her brilliant but unstable father, a famous mathematician. Now, following his death, she must deal with her own volatile emotions; the arrival of her estranged sister and the attentions of Hal, a former student of her father's who hopes to find valuable work in the notebooks that he left behind. The discovery of a mysterious notebook draws Catherine into the most difficult problem of all: How much of her father's madness — or genius — will she inherit?

The hit Broadway play brings a powerful and dramatic tale to the TCR stage.

Official Formation of Cedar Rapids Communications Society Chapter

Cedar Rapids IEEE has met the requirements of the IEEE Member and Geographic Activities (MGA) Board Operations Manual; the IEEE Cedar Rapids Section Communications Society Chapter has been formed with an effective date of January 22nd, 2010. This has been accomplished through tremendous support by our local IEEE Communications Society members. Thank you to all members that support local IEEE Communications Society.

Cedar Rapids Communications Society is requesting your assistance in bringing value to the local chapter. There are many opportunities to be involved, so please contact Ben Loeschke, Chapter Chair, email: loeschke@ieee.org
Phone: 319.899.7414

Cedar Rapids Section to form a Women In Engineering (WIE) Affinity group By Vickie Ozburn, 2010 Vice-Chair

IEEE Women in Engineering (WIE) is the largest International professional organization dedicated to promoting women engineers and scientists.

The mission of IEEE WIE is to inspire, engage, encourage, and empower IEEE women worldwide.

IEEE WIE envisions a vibrant community of IEEE women and men innovating the world of tomorrow.

We will be submitting a petition to the IEEE Managing Director, Member and Geographic Activities (MGA) requesting approval to form the WIE affinity group, if you are interested in supporting the group and would like to sign the petition please contact Shana Fliginger (sefliginger@ieee.org) or Vickie Ozburn (vaozburn@rockwellcollins.com)

IEEE Cedar Rapids Section Website – Open for ideas!

Some of you may have realized that our new website has some new functionality over our previous site. We've now got forums for discussion on recent meetings, suggestion areas for the website and the chapter in general, and are soon going to be adding a restaurant and meeting location section for suggestions on where to hold future section meetings. In addition, job postings that are sent to the section are posted in the forums as well.

To participate more fully in the section, be sure to create an account next time you're on the site! You'll gain access to additional areas of the site, and can set your Corona mailing preferences. You'll gain the ability to post in the forums and make site and other suggestions. If you're a section volunteer, you'll also gain additional site access. Sign up today!

UPCOMING EVENTS

So, You Want to Build an Electric Car? Thursday, March 25th

Speakers: RJ Jordan, owner/proprietor of Marion IA based RJ Construction. RJ is a member of several alternative energy associations such as I-Renew, ASES, COSC, BBB and NFIB. Recently he became a member of Association of Electrical Inspectors in Iowa and **David Mosher, Senior Electronics Technician at Rockwell Collins**, with a specialization in calibration and repair of AC and DC power supplies, both large and small for the last 25 years.

Where: Metro Buffet, 2745 Blairs Ferry Rd NE in Cedar Rapids

When: 5:30 PM Social; 6:00 PM Dinner;
6:30 PM to ~8:00 PM Presentation/Q&A

Price: No charge for the presentation only (Dinner price includes Buffet, Drink, Tax, and Gratuity)

IEEE Members and one guest: \$14

IEEE Student Members: \$10;

Non-Members \$16

Tarek Lahdhiri – Career Development Workshop Saturday, March 27th

Workshop Overview

This Career Workshop provides practical strategies to maximize your career talents presented in a positive and entertaining way. The workshop will discuss the following topics: Resume development, Job interview, Effective writing skills, and Today's Engineering Workspace and How can IEEE Help.

Where: Da Vinci Conference Room at Rockwell Collins Building 193, (Former Kay's Merchandise building), 1120 Collins Road, Cedar Rapids, IA

When: 7:30 check-in, workshop 8:00 – 12:00

Price: Students and Unemployed: \$15

IEEE Members \$25

Non-Members \$35

PDU/PDH Credit Certificates available

Communication System Simulation Thursday, April 8th

As an integral part of model-based engineering, simulation offers benefits in the development of increasingly complex systems on cost- and/or time-constrained programs.

This talk examines the techniques and tools of communication system simulation. The topics of physical layer, networking layer and system-level simulation are individually addressed. Several means of increasing the execution speed of communication system simulation are also discussed, including "in-the-loop" processing and parallel computing.

Where: Metro Buffet, 2745 Blairs Ferry Rd NE in Cedar Rapids

When: 5:30 PM Social; 6:00 PM Dinner;
6:30 PM to ~8:00 PM Presentation/Q&A

Price: No charge for the presentation only (Dinner price includes Buffet, Drink, Tax, and Gratuity)
IEEE Members and one guest: \$11
IEEE Student Members: \$7;
Non-Members \$13

Independent Consulting and Entrepreneurship Thursday, July 15th

At a point where you are considering a 'change of scene'?

Independent Consulting?

Entrepreneurship?

Job Shopping?

Direct Employment?

Curious about which may be best for you?

Bob, an Independent Consultant, will describe [Independent Consulting](#) and how it differs from Entrepreneurship, Job Shopping, and direct employment and how to determine which may be best for you.

His presentation will also outline the Alliance of IEEE Consultants' Networks (AICN) and how it can benefit your independent consulting career.

Where: Metro Buffet, 2745 Blairs Ferry Rd NE in Cedar Rapids

When: 5:30 PM Social; 6:00 PM Dinner;
6:30 PM to ~8:00 PM Presentation/Q&A

Price: No charge for the presentation only (Dinner price includes Buffet, Drink, Tax, and Gratuity)
IEEE Members and one guest: \$14
IEEE Student Members: \$10;
Non-Members \$16

IEEE Graduates Of Last Decade (GOLD) Happy Hour

IEEE GOLD welcomes you to attend GOLD Happy Hour on the first Monday of each month. This is an informal gathering that will provide an opportunity to relax, exchange ideas, and network. You do not have to be a member of GOLD to attend, and GOLD Happy Hour is open to members and non-members alike.

GOLD Happy Hour will begin May 3rd, 2010. The venue will be Dublin City Pub, 415 1st ST SE, Cedar Rapids and will start at 5:00pm Monday, May 3rd, 2010. Dublin City Pub offers a pub/bar atmosphere with an excellent food menu.

Future events watch for more details

Communications Chapter

- Thermal analysis
- RF Pin Diode]

Computer Society

- June 10th iPhone Application Development

MTT Chapter

- May 17th Professor Anh-Vu Pahm, Professor at the University of California, Department of Electrical and Computer Engineering will be speaking on "Liquid Crystal Polymer for Microwave and mm-wave Multi-Layer Packages and Modules"

Section events

- Bob White - "World Wide Wild Energy Projects"
- National Instruments Workshop

Reservations for all scheduled events can be made at:

<http://www.ieee-cr-section.org/index.php/events>.

Check under upcoming events in the right column for a link to vTools and more event information.



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Cedar Rapids Section
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Phone: 800.678.4333

Non-members may contact the Corona Editor at:

E-mail: Corona-Editor@iee-cr-section.org

Mail: Cedar Rapids Section, IEEE, Attention:
Corona Editor, P.O. Box 451, Marion, IA 52302

Include your full name, old and new address.

Upcoming Events

- Mar 25 Thur Electric Car Conversion
Mar 27 Sat Career Workshop
April 8 Thurs Communications Chapter meeting
April 17 Sat Awards Dinner
April 19 Mon Executive Comm Meeting (open to all members)
Apr 27 Tue ProCon 2010 "Creating Exceptional Value"
May 3 Mon GOLD Happy Hour
May 17 Mon MTT Chapter meeting
July 15 Thurs Independent Consulting and Entrepreneurship

Also check the Website for Upcoming Events.
Guests are always welcome.



IEEE Membership



If you are not an IEEE member, please consider IEEE membership. For information on membership and its benefits, visit the IEEE Web Site at www.ieee.org/membership