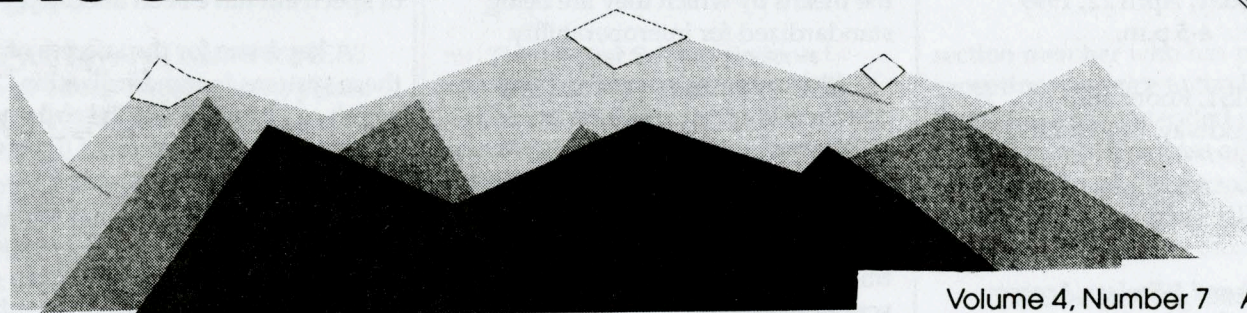


RockIEEE Overlook



Volume 4, Number 7 April, 1999

Visit the IEEE Denver Section Home Page at www.engr.du.edu/ieee/densec.html

Society Chapters

EMC

Wednesday, April 21, 1999
12:30 p.m. - 5:00 p.m.
Storage Tek, Building 4
Please see our web site
(www.ewh.ieee.org/r5/denver/rockymountainemc/)

Speaker

Mark Montrose

"PCB Design Techniques for Signal Integrity & EMC Compliance"

Lunch (Pizza) is included. Please contact Chas Grasso by April 19 for reservations or more information at (303) 673-2908 or chasgrasso@ieee.org

NOTE: The officers of the Rocky Mountain EMC Society are trying to reach out to the electronics community with a program that will provide value to engineers and manufacturers alike. As a flavor of what we are trying to put on, please check out our website at www.ewh.ieee.org/r5/denver/rockymountainemc.

Computer Society

All members interested in participating in the Computer Society of Denver, please contact Jim West @ 303-218-5658 or j.west@computer.org.

PES/IAS

Thursday, April 15, 1999
6:00 p.m.
Brooklyn's, 644 W. Colfax

Speaker

JoAnn Joselyn, NOAA Space Environment Center

*"SPACE WEATHER
The Other Y2K Problem"*

Please call Barbara Linton at Peterson Company for reservations, (303) 388-6322

The National Oceanic and Atmospheric Administration's Space Environment Center in Boulder is the Nation's official source of space weather alerts and warnings, and leads the world in providing such services. Space weather storms include severe fluctuations in Earth's magnetic field that induce corrosive currents in pipelines and damaging bias currents in power utility transformers. These extraneous currents led to a 9-hour blackout in Quebec, Canada in March 1989. Extreme space weather has a seasonal pattern - the seasons being those of the 10-11 year solar cycle. The sunspot cycle is now on the rise, and is expected to peak in the year 2000 at an amplitude similar to the previous cycle. But since the last peak, technol-

ogy has become more refined, and our vulnerability to space weather has increased. The Space Environment Center is pursuing an aggressive plan to improve data sources and space weather services for the new millennium, thereby helping ensure the Nation's economic security.

Engineering in Medicine and Biology

The next meeting of the EMB Society will be held at 7:30pm on May 21 at NIST. This meeting will again be a joint meeting with the LEOS society. Please contact Kathleen Meehan (kmeehan@du.edu or 303-871-2833) if you are interested in receiving further notices about the upcoming EMB meetings. Anyone interested in becoming an officer or assisting in organizing the EMB meetings should also contact Kathleen Meehan.

RockIEEE Overlook
Official Publication of the
IEEE Denver Section
P.O. Box 4626, Englewood, CO 80155-4626
Published
January - May, September - November

Joint APS, MTTs, GRSS Meeting

Thursday, April 22, 1999
4-5 p.m.

NIST, Room 4075
325 Broadway, Boulder, CO

Speaker
Dr. Roger Marks, NIST
"Broadband Wireless Access Standards"

Contact Richard G. Geyer, (303) 497-5852 for more information.

This talk will discuss broadband wireless access (BWA) systems and

the means by which they are being standardized for interoperability.

BWA systems are being developed worldwide to address the critical "last mile" problem of connecting business and residential users to high-speed networks. Wired alternatives for broadband access including fiber, cable modems, and digital subscriber lines, have limitations and often require tedious infrastructure reconstruction. Alternatively, cellular BWA systems are being developed worldwide. Much of the interest is around 30 GHz, where large blocks

of spectrum have been allocated.

A key issue for the success of these systems is standardization, which can bring down the cost and thereby extend the reach of these networks to lower-volume users. Industry has recognized the need for standardization and has begun the process through the Broadband Wireless Access Study Group within the IEEE "802" LAN/MAN Standards Committee, the world's leading standards-developing body for computer networks. For details, see (<http://nwest.nist.gov>).

Sitting in the Chair

by Cliff Alston

The Denver Section is preparing for the 1999 Region 5 Conference, to be held in Bossier City, Louisiana on April 16-18. The program includes student contests and presentations, distinguished keynote speakers, TechCon '99, and IEEE Region 5 awards. The keyword in these awards is 'outstanding', thus only one section can receive a specific award; nevertheless, our Executive Board is working to ensure that the accomplishments of our section members and organizations are submitted and considered for recognition by the Region.

Such recognition is a known, effective way to improve an organization's performance. Recent articles in IEEE publications (including this one) have also stressed mechanisms of continuous improvement which borrow heavily from Malcolm Baldrige, ISO 9000, and Deming's Laws. The past issue of Spectrum's The Institute featured a discussion of 'learning organizations' as defined in Peter Senge's The Fifth Discipline. Senge described several system archetypes which can be used to model business/organization problems, along with the associated management solution(s) to the problem.

The archetype structure defined as "Balancing Process with Delay" is of particular interest to our evolving organization in Denver. Here, we have dedicated members and groups acting toward goals, and subsequently adjusting their behavior in response to delayed process feedback. Control system engineers can easily describe the system instability caused by such feedback time delay (or phase shift). The management solution is to either avoid aggressive system inputs, or make the system more responsive (increase bandwidth.)

Our section management path is clear - increase system responsiveness. Past articles allude to efforts to establish 21st century communications, but more is needed. Our membership must be prepared to process, and respond to, increasing levels and more dynamic forms of data. With this in mind, the section Executive Committee is expanding its effort to bring membership email addresses up to date. Throughout the year, Jim West (Chair-Elect) will be encouraging all members to update their personal information and further exploit Internet capabilities. We shall be guided in this effort by IEEE principles and practices, but this is undiscovered territory for us; therefore, we shall also be guided by the wisdom of those who have already mastered this level of increased system responsiveness - wherever we may find them . . . at the next Executive Board/Committee meeting . . . the next Chapter/Society meeting . . . the next Region 5 conference. With such wisdom, our many, diverse principles and practices will begin to converge as we begin to learn more, faster, longer, better.

Raytheon Engineers & Constructors

Serving Colorado and the World

■ Power	■ Pharmaceuticals
■ Mining & Metals	■ Hazardous Waste Management
■ Petroleum & Petrochemicals	■ Food & Consumer Products
■ Aerospace & Defense	■ Airports/Infrastructure
■ Biotechnology	■ Environmental

P.O. Box 5888
Denver, CO 80217

(303) 843-2000
FAX: (303) 843-2208

Stop in and Visit

If you have not visited the IEEE Chapter Home Page recently, please stop by! It is in the process of being modified to include listings of Chapter locations and contacts, a forum for announcing Chapter meetings, and guidelines for the development of new Chapters. Once complete, Chapter development reports will be updated twice a year.

Future plans for the site will include links to and from Society and/or Chapter home pages and the student programs and services listing.

You can visit us at www.ieee.org/tab/ciaindex.html. Comments and suggestions are always welcome and encouraged. They can be submitted to Linda La Motta in the Technical Activities Department.

Denver Section Awards

by David Richmond, Denver Section Awards Chair

The Denver Section presents awards at its May meeting to recognize outstanding achievements of persons and organizations working in or near the Denver Section. The awards committee requests input from all Denver Section members, and nominations for award candidates are welcome from individuals, Chapters, or Professional Societies. Four awards are presented based on the following criteria:

The John Peebles Professional Award is presented in the name of John Peebles to an individual who has demonstrated outstanding service and exceptional leadership and influence in the engineering profession. This award is made based on nominations solicited from the Denver section and other professional societies in the Denver Section geographic area. The recipient of this award receives an engraved walnut and bronze plaque. This award is not necessarily presented each year.

The Section Service Award is presented annually to a Denver

section member who has provided exceptional service to the Denver Section over an extended number of years (usually in excess of 10 years). The recipient of this award receives a check in the amount of \$100 and an engraved walnut and bronze plaque.

The Outstanding Chapter and Outstanding Student Branch awards are presented annually to the Society Chapter and Student Branch which have demonstrated exceptional outreach to their member, including number and quality of technical meetings and tutorials, membership increase, student paper contest participation and quality and timeliness of meeting reports. Each of these annual winners receives a check in the amount of \$100 and an engraved plaque.

If you would like to nominate a candidate for any of these awards, contact the Awards Committee Chair, David Richmond, at the phone or email address on the back of the Overlook.

Denver Electronic Mailing List

from Jim West, IEEE Denver Chair Elect

The IEEE Denver Section maintains an electronic mailing list. This list is managed by the Denver Executive board. The IEEE executive board uses this service to send email about IEEE events, training opportunities, or any other events of interest to IEEE members.

IEEE members can send announcements to be included to j.west@computer.org.

This mailing list is controlled using email messages. One of the following commands should be sent in the BODY of an email message to "majordomo@majordomo.ieee.org".

If you would like to subscribe, please send the following command:

subscribe denver-section [your email address]

If you are already a subscriber and you do not wish to receive these messages, please send the following command:

unsubscribe denver-section [your email address]

IEEE Email Alias

The Denver Section encourages you to get an IEEE email alias. This alias can be a permanent way to maintain an email address while switching providers. For more information: <http://elecomm.ieee.org/>

New IEEE Web Site Features Virtual Reading Room

PISCATAWAY, NJ, 3 March 1999 - The IEEE Educational Activities Department announces the release of its Online Education Reading Room at <http://www.ieee.org/eab>.

Once inside the virtual room, viewers can click on any book in the best-selling IEEE Selected Readings series or Engineers' Guides To Business Series, and "flip through" the full text of its pages. Titles up for browsing include Cellular Radio And Personal Communications, Smart Antennas, Recent Developments in Power Electronics, Marketing for Engineers, Working In A Global Environment, Writing For Career Growth, and more!

- Logical and user-friendly in its design, the reading room features:
- Keyword, title, and author search options
- Full table-of-contents displays for each title
- Navigation tools that enable viewers to move from page to page and section to section, and to zoom in for a closer look at diagrams and formulas
- Online ordering options.

"Having a reading room on the Internet gives visitors the opportunity to browse through books before buying them, just as they would in a traditional bookstore," says Alan Trembly, Business Development Manager for IEEE Educational Activities. "A distribution medium such as this really enhances the IEEE's image as practitioner of the technology of the future."

For more information about the reading room contact Alan Trembly at a.trembly@ieee.org.

Article from: Christy Bouziotis
c.bouziotis@ieee.org (732) 562.6526.

Region 5

UPCOMING EVENTS

April 12-13 Emerging Technologies Symposium, Dallas. Region 5 and Dallas bring together experts in emerging technologies in Wireless Communications and Systems. www.ieeedallas-ets.org.

April 13 Joint Railroad Conference, Dallas. Sponsored by IEEE VTS and the Rail transportation Division of the ASME. Contact Judy Hong, jhong@ltk.com.

April 16-18 TECHCON and Region 5 Meeting, Shreveport. The 1999 Region 5 Meeting will be hosted by the Shreveport Section at the Holiday Inn in Bossier City. www.ewh.ieee.org/reg/5/99conf/.

April 22 Metrocon '99, Fort Worth. "Showcasing the Metroplex" technologies telecommunications, OptoElectroMechanical (nano), and the Internet. www.ieee.org/conference/metrocon/.

The complete Calendar of Events is located on the Region Website, <http://www.ieee.org/regional/r5>. Send inputs for the calendar to j.eason@ieee.org.

IEEE USA

PRIORITIES FOR 106TH CONGRESS (1999-2000)

The IEEE-USA Board of Directors approved a set of priorities for government relations activities in the 106th Congress (1999-2000) after a six-month review process that included a surveys of members and volunteers. The eleven priorities are:

CAREERS

*** Retirement Security:** Improve the portability of health and pension benefits and expand tax-favored savings opportunities for mobile engineers and scientists.

*** Immigration Reform:** Support improvements in the US immigration system, including reforms to employment-based immigration programs such as the H-1B temporary visa, to ensure efficient utilization of the high-tech workforce and promote rewarding careers for US engineers and scientists.

*** Educational Assistance:** Permanently extend the Section 127 income tax exclusion for employer-provided educational assistance and expand eligibility to include the cost of graduate education and training.

*** Contract Engineers:** Restore equity and fairness to the tax treatment of engineers and computer specialists working as independent contractors through repeal of Section 1706 of the Internal Revenue Code and restoration of the Section 530 safe harbor.

INTELLECTUAL PROPERTY

*** Useful Articles:** Provide low cost and timely

continued on

page 6

Which degree is better? A master's in engineering. Or a master's in business.

If you really want to be successful, the answer is both. After all, the best jobs are interdisciplinary, so you need to be, too. Not only do you need to know your professional area well, you also need a great deal of expertise in business management. That's why the Daniels College of Business offers an interdisciplinary Master of Science in Management program.

Others may offer both degree programs, but they can't offer the strength in both disciplines that the University of Denver can.

With advisors from both your specialty and business management areas working with you, you'll enhance your command of the field you're passionate about and—at the same time—you'll earn a master's in business management. (Our students even develop strategic plans for themselves!)

Contact us to find out more about this win-win degree program.

MASTER OF SCIENCE IN MANAGEMENT

We offer concentrations and joint degrees in the following professional areas and the flexibility to customize your own concentration:
Education, Engineering,
Cable/Telecommunication, Communication,
Healthcare Systems Management,
Legal Administration,
Organizational Training & Development,
Public Health, and Sport Management.

2020 South Race Street,
Denver, CO 80208
(303) 871-3416
(800) 622-4723
www.dcb.du.edu



THE CORNERSTONE
OF ACHIEVEMENT

Gain EXPOsure at the RMTECH EXPO '99

Who Attends:

By job function:

- Administration / Management
- Design engineering
- Marketing / Sales
- Packaging production / Manufacturing
- Purchasing / Research / Development
- Testing / Quality control

Dates:

April 21 & 22, 1999

Wednesday & Thursday

Location:

Colorado Convention Center
Denver, Colorado



ISA, the international society
for measurement and control,
Denver Section



Rocky Mountain Electronics
Representatives Association



Economic Development
Association of Longmont

RMTECHEXPO'99 is presented by the Rocky Mountain Electronics Representatives Association, and by the ISA, Denver Section in association with the Economic Development Association of Longmont.

The Rocky Mountain Region's Premier Event.

CAD, CAM, CAE • Computer Peripherals, Software • Consulting, Fabrication Services • Controls • Electro-mechanical • Electronic Packaging • Instrument, Test Equipment • Measurement Systems • Production Equipment, Materials • RE, Microwave • Test, Inspection Equipment

Name Recognition! Product Awareness! Leads!

Trade Shows Work!

NOTHING BEATS MEETING REAL PEOPLE IN REAL-TIME

Join industry leaders reaching key customers and prospects.

Your Customers Will Be Here!

Can You Afford To Miss This EXPO?

www.rmtechexpo.com

303-756-5120

email: showmgr@rmtechexpo.com



ROCKY MOUNTAIN

TECHNOLOGY EXPO

A P R I L 2 1 & 2 2 , 1 9 9 9

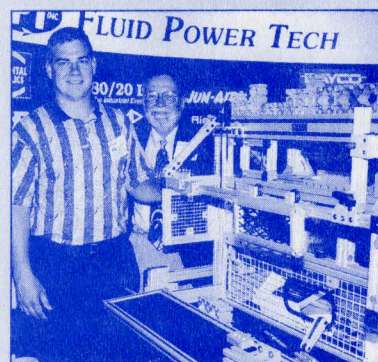


Colorado Convention Center
14th & Welton • Downtown Denver

Rocky Mountain Technology EXPO

WEDNESDAY, APRIL 21
8:00am - 5:00pm

THURSDAY, APRIL 22
8:00am - 5:00pm



STAYING INFORMED
a constant necessity
in advance technology!

Gain **FAST** access to solutions
at the technical sessions
during the Rocky Mountain
Technology EXPO.
No better place to learn!

Compliments Of

FREE EXHIBIT ADMISSION FORM (SAVE \$10 ON AT-DOOR ADMISSION FEE)

FILL ME IN! Your competition will be there! Can you afford to miss this expo?

First Name* _____ Last Name _____

Company _____ Title _____

Address _____ Dept./MS _____

City _____ State _____ Zip _____

Phone (____) _____ Fax (____) _____ Email _____

*No one under 16 years of age admitted to the show.

AFTER APRIL 10TH, BRING REGISTRATION FORM DIRECTLY TO THE EXPO.

COMPANY/ORGANIZATION

CLASSIFICATION

- ☐ A Aerospace
☐ B Communications
☐ C Computers
☐ D Consumer/Entertainment
☐ E Electronic Components/Devices
☐ F Government/Military
☐ G Medical
☐ H Test Equipment
☐ I Other _____

COMPANY SIZE

- ☐ 5-50 ☐ 51-250
☐ 251-500 ☐ over 500

PRIMARY JOB FUNCTION

- ☐ A Administration/Management
☐ B Consulting
☐ C Design
☐ E Engineering
☐ F Manufactures' Rep./Sales
☐ G Marketing
☐ H Packaging
☐ I Production/Manufacturing
☐ J Research/Development
☐ K Student
☐ L Test/QC/QA
☐ M Other _____

SIC Code

PRODUCT INTEREST

- ☐ A Aerospace
☐ B Automation
☐ C Biotechnology
☐ D CAD/CAM/CAE
☐ E Computer Peripherals/Software
☐ F Controls
☐ G Data Management
☐ H Design Tools Components
☐ I Electro-Mechanical Components
☐ J Electronic Packaging
☐ K Fabrication Materials/Outsourcing
☐ L Government
☐ M Instrumentation/Controls
☐ N Machine Tools
☐ O Manufacturer
☐ P Measurement Products
☐ Q Medical Products
☐ R Metrology
☐ S Microelectronics
☐ T Motion control
☐ U Operations/Maintenance
☐ V Plastics
☐ W Production Equipment/Materials
☐ X RF and Microwave Products
☐ Y Remote Sensing
☐ Z Research & Development
☐ AA Robotics
☐ BB Telecommunications
☐ CC Test/Inspection Equipment
☐ DD Testing
☐ EE Transportation/Materials Handling
☐ FF Other _____

Sample of Seminar Topics — See website for updates.

TWO SPECIAL WORKSHOPS FOR MANUFACTURERS WHO USE REPS AS THEIR PROFESSIONAL FIELD SALES FORCE

- Rep Company Selection and Start-Up
- Building an Effective Rep-Principal Relationship

FREE TECHNICAL SEMINARS

- The Keithley Accurate Test & Measurement Seminar
- Integrity of Solder Joints from Lead-free Solder Paste
- LCD Product and Interface Technology
- Precision Profile Extrusion of High Performance
- Application Guidelines for High Capacitance
- High Speed Interconnection Solutions
- Precision Profile Extrusion of High Performance
- Field Bus Technology
- Radio Telemetry — SCADA

REGISTER TODAY — FREE TICKET!

THREE CONVENIENT WAYS TO REGISTER:

- On-line at www.rmtechexpo.com
- Mail a copy to this registration form to:
ERA
6740 E. Hampden Avenue
#306, Denver, CO 80224,
showmgr@rmtechexpo.com
ISA
P.O. Box 4056,
Englewood, CO 80155-4056
awanberg@aol.com
- Fax registration form to 303/756-5699 or 303/220-8042
- For more information, call 303/756-5120
(Outside Denver metro area 800/745-EXPO)

FREE parking at Six Flags Elitch Gardens (take Speer Blvd.
exit South, enter on Elitch Circle)

FREE continuous shuttles (7am to 5:30pm, Last bus picks up at 5:30pm)

1999 IEEE EMERGING TECHNOLOGIES SYMPOSIUM on WIRELESS COMMUNICATIONS and SYSTEMS

April 12th & 13th, 1999

Clarion Hotel, Richardson, Texas



SESSION TOPICS INCLUDE:

Smart Antennas

Digital Signal
Processing

Local Multipoint
Distribution Services

RF Propagation

Wireless Planning &
Management

Mobile 911

Global Positioning
Systems

Wireless Services

Mobile Computing

Wireless Systems
Infrastructure

SATCOM

*The IEEE Region 5 and Dallas Section Bring Together
Experts in a Two-day Conference on Emerging
Technologies in Wireless Communications and Systems*

HEAR FROM LEADING INDUSTRY EXPERTS

Keynote Address:

Krish Pabhu, CEO, Alcatel USA

Plenary Speakers:

Arogyaswami J. Paulraj, Professor of Electrical Engineering,
Information Systems Lab, Stanford University

Ted Rappaport, Professor of Electrical Engineering, Virginia Tech

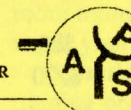
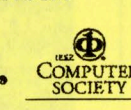
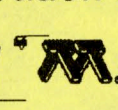
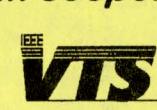
And over 40 more distinguished speakers!

PLUS - Two Half Day Tutorials

LMDS System Overview
and Design

Digital Wireless
Transceiver Designs

In cooperation with



ADVANCED TECHNICAL SESSIONS

Monday, April 12, 1999

Session 1

SMART ANTENNAS

- ☐ Applications in wireless communications systems
- ☐ Multiple schemes for hardware and software

Session 2

DIGITAL SIGNAL PROCESSING (DSP)

- ☐ Software Radio
- ☐ Spread spectrum and coding theory

Session 3

LOCAL MULTIPOINT DISTRIBUTION SERVICE (LMDS)

- ☐ Market update
- ☐ North American field tests and band plans

Session 4

RADIO FREQUENCY PROPAGATION

- ☐ Indoor propagation and performance
- ☐ HALO™ Systems

Session 5

WIRELESS NETWORK PLANNING & MANAGEMENT

- ☐ Design and maintenance challenges
- ☐ Technical and business solutions

Tutorial

LMDS System Overview in parallel to Sessions 1 & 2

Tuesday, April 13, 1999

Session 6

ADVANCEMENTS IN MOBILE 911 & GPS Technologies

- ☐ Regulatory and standards issues
- ☐ Enhanced GPS and TDOA technologies

Session 7

WIRELESS STANDARDS AND SERVICES

- ☐ 3GCDMA and TDMA technologies
- ☐ Real-time multi-media applications

Session 8

MOBILE COMPUTING

- ☐ Multi-hop networks
- ☐ Distributed network algorithms and protocols

Session 9

WIRELESS INFRASTRUCTURE

- ☐ GaAs, MMICs and receiver modules for LMDS radios
- ☐ Processed technologies for emerging air interfaces

Session 10

SATCOM SYSTEMS

- ☐ LEOS-based systems
- ☐ Satellite user terminals

Tutorial

Digital Wireless Transceiver Designs in parallel to Sessions 6, 7 & 8

1999 IEEE EMERGING TECHNOLOGIES SYMPOSIUM

Registration Form - Please Print

Name _____

Company/Organization _____ Department _____

Address _____ Room #/M.S. _____

City/State _____ Zip Code _____ Country _____

Daytime Phone (very important) _____ Facsimile _____

E-Mail _____

I would like to register for:

- ☐ Two-Day Conference Package
- ☐ One-Day Conference Package ☐ April 12, 1999 ☐ April 13, 1999

Total Amount of Order \$ _____

- ☐ Check enclosed* ☐ Visa ☐ Master Card

Credit Card Number _____

Exp. Date _____

IEEE Member ID _____

*Conference package includes technical sessions, tutorials, lunch, refreshments, and conference digest.

** Make checks payable to IEEE; registrations postmarked on or before March 16 are eligible for pre-registered discount.

	IEEE Member	Non- Member	Student/Life Member
2-Day Conference Package*			
Before or on March 16, 1999	\$295	\$330	\$75
After March 16, 1999	\$330	\$380	\$330
1-Day Conference Package*			
Before or on March 16, 1999	\$195	\$230	\$50
After March 16, 1999	\$220	\$280	\$220

To register with credit card on-line: www.ieeedallas-ets.org

Fax form to: 972/952-3773

Send check to: PO BOX 850365, Richardson, TX 75085-0365

Call 972/952-4190 for more information



The IEEE Educational Activities Board Seeks Nominations for Annual Awards

PISCATAWAY, NJ, 8 February, 1999 - The Educational Activities Board (EAB) of the IEEE is currently accepting nominations for the 1999 EAB Awards. The deadline for nominations is 30 April, 1999. In June, the EAB Awards and Recognition Committee will review all nominees and decide upon recipients for the following awards:

Meritorious Achievement Award in Accreditation Activities - recognizes IEEE members for outstanding contributions in accreditation of engineering, engineering technology, and computer science programs.

Meritorious Achievement Award in Continuing Education - recognizes IEEE members for the design, delivery, or management of continuing education activities for IEEE members.

Major Educational Innovation Award - recognizes IEEE members for outstanding innovation in an educational field appropriate to the mission of the IEEE.

Meritorious Service Citation - recognizes IEEE members for outstanding and sustained service to the aims and objectives of the Educational Activities Board.

Employer Professional Development Award - recognizes organizations employing IEEE members for contributions to employee continuing education and professional development

Nomination packets must include the following materials:

- A nomination letter that details the achievements of the nominee

- A complete vita of the nominee (except for the Employer Professional Development Award)

- A cover sheet listing the name of the EAB award being sought for the nominee, and the name, address (both postal and e-mail), and telephone and fax numbers of both the nominator and nominee

- Up to three letters of endorsement and not more than five pages of materials support-

ing the claims of contributions or achievements.

NOTE: For the Employer Professional Development Award, letters of endorsement must include at least one from an employee who is an IEEE member, and one from the director of an IEEE region in which the organization's contributions were made.

Recipients of these awards will be announced at the Frontiers in Education Conference in November 1999.

Nomination materials should be sent to Rae Toscano, Manager, EAB Administration, via e-mail, r.toscano@ieee.org, or post: IEEE Educational Activities, 445 Hoes Lane, Piscataway, NJ, USA, 08855-1331. For more information, nominees should contact Rae by e-mail, phone (732) 562-5482, or fax (732) 981.1686.

Looking to the Future

Would you like to be part of an ongoing effort to ensure future leadership within the Societies? We would love your help! The Technical Activities Society Chapter Coordinator is collecting information about the benefits and programs offered by Societies and Chapters to their student members.

Submissions will be posted on the IEEE Chapter Home Page web site, where they can be shared with other Societies and Chapters as part of a centralized listing for the benefit of student members. Societies and Chapters are urged to take part in this important project.

If you would like to be involved in this project or would like to submit program information to be included on this site, please contact:

Linda LaMotta
IEEE Technical Activities Department
(732) 562-3846
l.lamotta@ieee.org

Do Your Electronics Technicians Need More Training?

You'll find the training program at Arapahoe Community College, Littleton, to be affordable, efficient and effective. The three-year associate degree evening program is paced to accommodate a full-time work schedule. Day-time self-paced courses provide the flexibility to combine school with work and family. Well equipped labs and faculty with years of experience in industry assure that graduates will possess the knowledge and skills necessary to become a productive team member. Technicians are trained to build, test, troubleshoot and repair circuits and systems.

ACC can also partner with you in training your electronics technicians through our certified industrial apprenticeship training program. Apprentices receive their classroom training through the college and get on-the-job training at your location.

If you'd like more information about the electronics training options call:

(303) 797-5799

Arapahoe Community College

Speakers Sought

WASHINGTON, Feb. 18, 1999 -- The IEEE-USA Student Professional Awareness Committee is recruiting speakers to join the national Student Professional Awareness Conference (S-PAC) speakers bureau.

According to Committee Chair Julie Gaevert, "We're specifically looking for speakers who can talk to engineering students about the pros, cons and how-tos of starting a business or becoming a consultant." The committee reimburses the travel expenses of S-PAC speakers.

S-PACs are student-planned and -executed conferences on nontechnical, career-related subjects not usually covered in the standard engineering curriculum.

Those interested in sharing their wisdom and experience on entrepreneurship topics should contact IEEE-USA's Ann Hartfiel at a.hartfiel@ieee.org or (202) 785-0017, x341.

Y2K Countdown

The last day of December 1999 and the first day of January 2000 are probably the most important dates in the Y2K computer problem equation, but are you aware of the other dates that require attention in the Y2K test lab as well? They are:

- 3 January: The first business day of 2000
- 28 and 29 February and 2 March: The days surrounding the leap-year date.
- 31 October: The first two-digit day and month of 2000.
- 1 January 2001: The first day of the 21st century (the first day of the third millennium).

The first critical day before all of these is 9 September 1999 (9-9-99). In the early days of computer programming, a sequence of 9s was often

used to signal the end line of a program. It is possible that some computer systems may recognize this number as an "end" code rather than a date, and end the program.

Like most Y2K problems, the extent of this date problem is unknown.

As a result, the IEEE is doing extensive testing before 9 September. There are less than 350 days remaining to 2000. Are you ready? Be Prepared . . . Be Compliant.

Above article taken from IEEE-USA.

IEEE USA

continued from page 4

intellectual property protection of new and rapidly changing technologies, which often have limited (18-60 months) commercial lifetime.

RESEARCH & DEVELOPMENT

*** Federal R&D:** Support doubling of the federal investment in research and development over the next twelve years, including support for applied research, engineering and pre-competitive technology, as well as provisions to ensure that R&D funds are expended effectively.

*** Research and Experimentation Tax Credit:** Advocate permanent extension and expansion of the Research and Experimentation Tax Credit to encourage private sector R&D investment.

TECHNOLOGY

*** Space:** Support funding for a balanced civilian space program with increased emphasis on space commercialization to benefit the economy.

*** Energy Restructuring:** Support restructuring of the electric utility industry with a strong commitment to reliability and R&D of electric power systems.

*** Encryption:** Support relaxation of US export controls on encryption technologies.

*** Medical Records:** Establish principles to assure the protection and privacy of medical records and computerized health information.

EMC One-Day Symposium

The Rocky Mountain Chapter of the Institute of Electrical and Electronic Engineers (IEEE) Electromagnetic Compatibility (EMC) Society will hold its ninth-annual regional symposium

Tuesday, May 18, 1999

8:00 a.m. - 5:30 p.m.

Holiday Inn Northglenn (I-25 & 120th Ave.)

**Tutorials & Education
Numerous EMC vendors
(Local and Nationwide)**

Lunch Buffet (~\$15.00 per person)

Access the EMC web site for further information @
<http://www.ewh.ieee.org/r5/denver/rockymountainemc/>

Contact: Bob Reinert, Secretary,
Rocky Mountain Chapter, IEEE EMC Society

Call for Papers

The Chapter seeks informal papers on all aspects of EMC, including:

Printed Circuit Board Design
Grounding
Cabling
Shielding
Electromagnetic Interference
Radio-frequency Immunity
Electrostatic Discharge

Lightning
Powerline Disturbances
System-level EMC
Medical Electronics
Test Facilities
Instrumentation
Standards

Authors should submit a title by April 5, 1999 to:

Robert F. German, German Training and Consulting, LLC
1410 Moss Rock Place, Boulder, Colorado 80304
Email: gtr@ieee.org Telephone/Fax: 303-444-2472

Each presentation will be 20 minutes with an additional 10 minutes for questions. Written manuscripts are not required because a symposium record will not be published. Lunch will be provided for the speakers.

ROCKY MOUNTAIN CHAPTER of IEEE EMC SOCIETY
P.O. Box 399
Louisville, Colorado
80027-0399

Newsletter Deadlines and Advertising Information

Deadlines for the RockIEEE Overlook are as follows.

Newsletter	Deadline
January 1999	December 1, 1998
February 1999	January 1, 1999
March 1999	February 1, 1999
April 1999	March 1, 1999
May 1999	April 1, 1999

Send ads to Anita Wanberg, P.O. Box 4626, Englewood, CO 80155-4626 or call (303) 220-8042. Make checks payable to IEEE Denver Section.

Artwork should be submitted in camera-ready form (PMT). Please accompany all artwork with a check and a letter stating the number of times and dates the ad should be run. Ads should fit **within** the dimensions listed below.

Description	Dimensions	Single Rate	Multiple
Business Card	2.5" w x 1.5" h	\$ 25.00/mo.	\$ 20.00/mo.
1/8 page	3.5" w x 2" h	60.00/mo.	50.00/mo.
1/4 page	3.5" w x 4.5" h	150.00/mo.	130.00/mo.
1/2 page	7.5" w x 4.5" h	250.00/mo.	225.00/mo.
Full page	7.5" w x 9.5" h	400.00/mo.	360.00/mo.
Inserts	8-1/2" w x 11" h	250.00/pg.	200.00/pg.

The Institute of Electrical and Electronics Engineers - Denver Section

Visit the Denver Section Home Page at www.engr.du.edu/ieee/densec.html

Chair	Chair-elect	Sr. Vice Chair	Vice Chair Member Services	Vice Chair Student Activities	Secretary (Temporary)	Treasurer
Cliff Alston Lockheed-Martin 1307 E. Belleview Denver, CO 80121 (303) 971-9020 (303) 977-1907 Fax cj.alston@ieee.org	Jim West Carrier Access Corp. 5395 Pearl Pkwy. Boulder, CO 80301 (303) 218-5658 (303) 218-5629 Fax j.west@computer.org	Doron Kishoni Denver Research Inst. University of Denver Denver, CO 80208 (303) 690-9849 (303) 690-9895 Fax d.kishoni@ieee.org	Lisa Brookman Public Service 550 15th St., Ste. 600 Denver, CO 80202 (303) 571-7575 (303) 571-7866 Fax LBROOK@psco.com	Kathleen Meehan University of Denver 2390 S. York St. Denver, CO 80201 (303) 871-2833 (303) 871-4550 Fax k.meehan@ieee.org	Kathleen Meehan University of Denver 2390 S. York St. Denver, CO 80201 (303) 871-2833 (303) 871-4550 Fax k.meehan@ieee.org	Dan Maguire Cooper Advanced Tech. 700 Corporate Cir. Ste.O Golden, CO 80401 (303) 271-1946 x18 (303) 271-1793 Fax dmaguire@cat-envsys.com

Senior Past Chair - David Richmond, (303) 843-2465, d.richmond@ieee.org
 Junior Past Chair - Ron DeLyser, (303) 871-2034, (303) 871-4450 Fax, rdelyser@du.edu
 Society Chapters - Henry Rackley, (303) 690-1600
 Educational Activities - Francis Long, (303) 753-4677, flong@du.edu
 Pre-College Student Activities - Jamie Lujan
 Student Fund - Edward Pitchkolan, (303) 966-3707
 Student Branch Activities - Bob Whitman, (303) 871-3752, rwhitman@du.edu
 Professional Activities (PACE) - Bret Hammers, (303) 740-3886, hammers@ieee.org
 Professional/Industry Liaison - Jeff Wilson, (303) 388-6322, pcoden@interramp.com
 Membership - Fareed Hasan, (303) 843-2347, shasan@ccgate.ueci.com
 Historian - Charles R. Wright, (303) 233-5553, (303) 233-1292 Fax, c.r.wright@juno.com
 College Student Representative - Daniel Havens, (303) 273-5689, dhavens@mines.colorado.edu
 Programs - Bob Struthers, (303) 843-2235, r.struthers@ieee.org

Nominations - Ron DeLyser, (303) 871-2034, (303) 871-4450 Fax, rdelyser@du.edu
 Finance -
 Conference Activities - Paul Meisel, (303) 403-1769, (303) 403-1589 Fax, p.meisel@ieee.org
 Awards & Bylaws - Dave Richmond, (303) 843-2465, d.richmond@ieee.org
 Long Range Planning -
 Publicity -
 Publications - Pete Koloditch, (303) 843-2976, Fax (303) 843-3622, p.koloditch@ieee.org
 Publisher - Anita Wanberg, Phone/Fax: (303) 220-8042, awanberg@aol.com
 Communications Officer - Michael J. Foley, (303) 797-7125, m.foley@ieee.org
 Webmaster - Mike O'Relley
 Black Hills Subsection - Dr. James W. Cote, Jr., (605) 394-5196, jcote@silver.sdsmt.edu
 Centennial Subsection -
 Gold Representative - Michael Zinanti, (303) 533-7081, m.zinanti@ieee.org
 Audit Committee - Ron DeLyser, (303) 871-2034, (303) 871-4450 Fax, rdelyser@du.edu

Chapter Officers

Magnetics - Dr. Peter Hopkins, (303) 604-5401, hopkins@qntm.com
 Joint Vehicular Technology/Communications - Chuck Benevidas, (303) 770-8694
 Joint Power Engineering/Industry Applications - Trevor Pfaff, (303) 279-7607, tre4p@aol.com
 Reliability - Kirk Gray, (303) 666-7692, kirkgray@privatei.com
 Laser & Electro-Optics - Andrew Aust, (303) 497-3942, aust@boulder.nist.gov
 Engineering in Medicine & Biology - Scott Miller, (303) 449-9444 x105, millers@battelle.org

Electromagnetic Compatibility- Lyle Luttrell, (303) 664-8286, lluttrell@ieee.org
 Joint Computer/Information Theory - Dr. Steve Lucas, (303) 665-4007 x214, slucas@mathlogic.com
 Joint Antenna & Propagation/Microwave Theory & Techniques/Geoscience &
 Remote Sensing - Richard Geyer, (303) 497-5852, geyer@boulder.nist.gov
 Aerospace & Electronic Systems - John Tsucalas, (303) 798-5769, j.c.tsucalas@ieee.org
 Components, Packaging, Mfg. Tech- Sharon Estes, (970) 669-3050 x2774

Please notify IEEE headquarters of any changes to your address and/or phone number by calling 1-800-678-IEEE (4333) or via the IEEE Website at www.ieee.org. The Denver Section cannot change this information.



The Institute of Electrical and
Electronics Engineers
Denver Section
P.O. Box 4626
Englewood, CO 80155-4626

ISS#1 DENVER P&DC 15:02 02/27/93

Non Profit Org.
 U.S. Postage
PAID
 Denver CO
 Permit No. 1993

DAVID RICHMOND
2921 S SIDNEY CT
DENVER, CO 80231-6023

