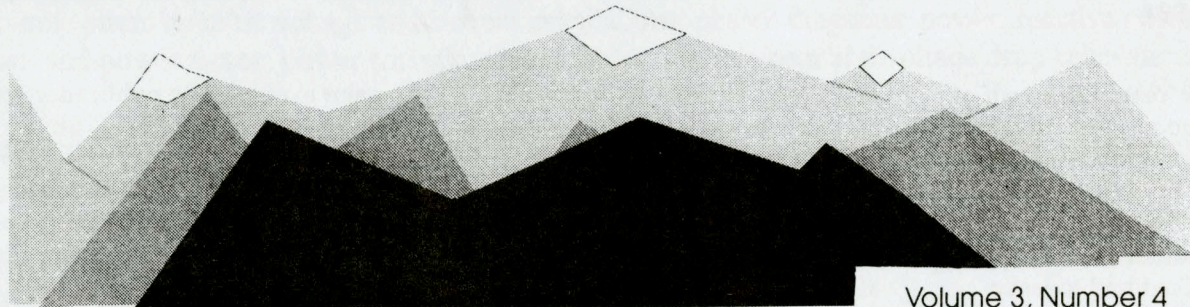


RockIEEE Overlook



Volume 3, Number 4 January 1998

Meetings

Magnetics Society

Wednesday, January 21, 1998
Refreshments: 5:00
Program 5:30

NIST, Building, Room 1103
325 Broadway
Boulder, CO

Speaker

Romney Katti
MKE-Quantum

*"Data Storage Using Bloch Lines in
Domain Walls"*

Contact Peter Hopkins @ 604-
5401, 5558 (T,F), email hopkins@
qntm.com for more information.

Lasers & Electro-Optics

LEOS Meetings are generally held
on the third Thursday of the month
at NIST, 325 Broadway, Boulder, CO.
Refreshments are served at 7:00 p.m.,
with the speaker starting at 7:30 p.m.

Joint Antenna & Propagation/Microwave Theory & Technology, Geoscience & Remote Sensing Chapter

Thursday, January 29, 1998
4:00 - 5:00 p.m.
NIST, Room 1107
325 Broadway, Boulder, CO

Speaker

Dr. David W. Fahey
NOAA Aeronomy Laboratory

*"Addressing Global Photochemistry
and Transport in the Lower
Stratosphere with In-Situ Aircraft
Measurements"*

The NASA high-altitude ER-2 aircraft has afforded observations of a wide range of long-lived and reactive gases, aerosols, and radiation throughout the lower stratosphere over the past decade. These measurements have been used extensively to identify processes and to constrain photochemical and transport models designed to address changes in stratospheric ozone that could result from anthropogenic activities such as aircraft operations. A description of the ER-2 and its payload will be included along with several examples of interpretive efforts based on ER-2 data sets.

Contact Richard Geyer at 497-5852
if you have any questions.

Reliability Society

Thursday, February 19, 1998
6:30 p.m.

Department of Commerce (NIST)
Building Room, room 0113
325 Broadway
Boulder, CO

(there will be signs on the door of
building 2 to direct us).

Speaker

Fred Fickett, Group Leader of
Materials Reliability Divisions

*"NIST Research in Electronic
Packaging"*

Program includes a tour of their
facilities.

Contact Kirk Gray, 666-7692 for
more information.

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P.O. Box 4626, Englewood, CO 80155-4626
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Sitting in the Chair

by Ron Delyser

Happy New Year! On behalf of the Denver Section Executive Board, the Executive Committee, all of the Society Chapter Officers and the members of the Denver Section, I would like to thank Fred Jones for a job well done. Fred had to leave Denver this summer for a new position at NASA Ames Research Center in San Jose, CA. He has held positions on the Executive Board for the last five years. We send him our best wishes for continued success.

I am glad to report that the Denver Section remains healthy compared to most sections across the country. Our membership continues to be stable at approximately 4500 members, including students and affiliates. We presently have 11 Chapters representing 16 Technical Societies. However, four of those (Joint Vehicular Technology and Communications; Engineering in Medicine and Biology, Joint Computer and Information Theory;

and Components, Packaging, and Manufacturing Technology) are inactive and in danger of losing their charter. Volunteers need to lead and revitalize those chapters are desperately needed. Contact John Tsucalas at (303) 798-5769 if you would like to help.

We have two subsection is the northern part of the Section - Black Hills and Centennial. Dr. James W. Cote, Jr. of South Dakota School of Mines and Technology has assumed the position of Chair of the Black Hills subsection. The Centennial subsection, however, is inactive and is in danger of losing its charter. If anyone in the Centennial subsection is interested in taking the helm, please contact me.

Our budget is approximately 35,000 again this year, much as it has been for the past few years. A large part of our income in the past has come from conferences held locally. We have enjoyed

more than our fair share of conferences in Denver over the past few years. However, we are expecting a decline in conference income which will definitely hurt us financially. We believe we can manage this loss of income successfully by reducing our

major expense, the publication and distribution of the RockIEEE Overlook newsletter. We have made the Overlook available on the Denver Section Web Page to those who prefer an electronic copy rather than a hard copy. In the near future, we will be improving our Web Page and hope that we can begin to replace mailing of the RockIEEE Overlook newsletter with that electronic version.

I think the health and stability of the Denver Section is primarily due to the hard work and strong leadership of the many volunteers who have preceded me. Conferences don't just come to Denver because we are a nice city, and speakers don't just show up at technical society meetings hoping that someone will ask them to talk. It takes a few people willing to put in a few hours of their time to "make it happen." Only you, the Denver Section Members, can keep us healthy and stable in the future by stepping up and volunteering a few hours of your time each month to help "make it happen."


If you think you can squeeze a few extra hours out of your busy schedule each month, contact me, or contact any of the Section Officers listed on the back of the Overlook. In addition to the positions identified above, we have some important positions at the Section level that need your leadership. These positions are Secretary and Pre-college Student Activities Committee Chair.

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Engineering Economics: Knowledge of the "time value of money" and its application to engineering projects is important to all practicing engineers. This short course provides a discussion on simple, compound and continuously compounding interest rates; present worth values of single payments; present worth values of a series of payments; annual costs; salvage values; future costs; straight line depreciation; cost comparisons of alternative projects; and special topics as time permits.

Power Transformers and Rotating Machines (Induction, Synchronous and DC): This short course presents the basics of power transformers, motors and generators. The course will cover voltage-current relationship; equivalent circuits and modelling; performance evaluation; losses and efficiency; and application oriented problems.

Symmetrical Components: The understanding and use of symmetrical components is a valuable tool for the practicing engineer. The positive, negative and zero sequence components are first defined and illustrated; sequence networks are defined and illustrated using multiple one line diagrams and different fault conditions; power system protection is defined; ANSI device numbers are shown; and simple protection schemes are developed for feeder, bus, transformers and generators.

Power System Analysis: This short course combines the basics of the previous four courses and the tools are used to analyze commercial, industrial and utility power systems. The course covers per-unit calculations; equivalent circuits, modelling of power systems and impedance diagrams; fault calculations; percentage voltage drop and voltage regulation calculations; short transmission line, impedance calculations; and motor starting voltage drop calculations.

National Electrical Code: Knowledge of the National Electrical Code (NFPA 70) is essential for the practicing engineer. This short course provides an overview of the NEC and its proper use it. In particular, grounding, wiring, overcurrent protection, transformers, motors, hazardous locations, emergency systems and standby systems will be discussed along with other areas of interests of the attendees.

Instructors:

Professor P.K. Sen, P.E., PhD, Sr. Member IEEE - Professor of Electrical Engineering, University of Colorado at Denver. Professor Sen has over 30 years of power engineering teaching and industry experience with emphasis on electric machinery and power system applications and design.

John P. Nelson, P.E., MSEE, Fellow IEEE - President of NEI Electric Power Engineering, Inc. Mr. Nelson has 28 years of power engineering experience with emphasis on utility and industrial power system projects involving generation, transmission, distribution and utilization of electricity.

John Ake, P.E., BSEE, Member IEEE - Electrical Consultant. Mr. Ake has over 40 years of power engineering experience with emphasis on utility, commercial and industrial power systems; system grounding; forensic engineering; and NEC interpretations.

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- Symmetrical Components - March 28
- Power Systems Analysis - April 4
- National Electrical Code - April 11

INSTRUCTORS: Professor P.K. Sen, P.E., John P. Nelson, P.E. and John Ake, P.E.

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IEEE-USA Launches Initiative to Assist Older Professionals

Washington, Nov. 21, 1997 - the IEEE's U.S.-activities division announced that it will develop a set of new and expanded programs to address the special career and employment needs of older U.S. electrotechnology workers. according to IEEE-USA, these professionals increasingly struggle with the challenges created by the accelerating pace of technological change and shifts in corporate culture that favor younger, often cheaper high-tech workers recently trained in skills and technologies in high demand by U.S. industry.

"Many senior professionals are telling us that they are having trouble getting and keeping good jobs in this supposedly tight labor market," said Paul J. Kostek, chair of the IEEE-USA Career Policy Council. "Our own studies bear this out, showing that involuntary retirement is at record

levels, a disturbing percentage of older members say they have been subject to age discrimination in their organizations, and advancing age has a significant effect in increasing the term of unemployment for jobless workers."

Several IEEE-USA committees meeting at a special October summit to address the plight of older workers developed an action plan to enhance these professionals' lifelong employability. "What we came up with is a broad-based approach that we hope will help individual members with their multifaceted career challenges as well as induce employers to value and more effectively utilize their senior workforce," said Kostek. "Younger workers also can take advantage of these programs to improve their career planning and minimize problems later on," he added.

members with the transition to entrepreneurial careers, publishing a "care package" for displaced engineers, creating a best-practices list for employers. In addition, IEEE-USA will issue status reports on the new activities next year at its Tenth Biennial Careers Conference and 1998 Professional Activities Conference. Spearheading the programs will be IEEE-USA's Career Maintenance and Development, Workforce, Licensure and Registration, and Employment Assistance committees.

For more information on existing and future IEEE-USA career and employment resources, contact IEEE-USA at (202) 785-0017 or ieeeusa@ieee.org, or visit its Web site at URL <http://www.ieee.org/usab>.

IEEE-USA promotes the career and public-policy interests of nearly 220,000 IEEE members in the United States. The IEEE is the world's largest technical professional society, with a membership of nearly 320,000 electrical, electronics and computer engineers, and computer scientists, in approximately 150 countries.

The new initiatives include developing a career-planning standard for older workers, disseminating information necessary for long-term career planning, encouraging licensing and registration and life-long learning, assisting

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Denver Section Awards

by Dave 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. In 1997, awards were presented at the May 21, 1997 meeting. The speaker at the meeting was Dr. Kevin Trenberth of NCAR who discussed "Evidence for Human Influence on Climate". Two Denver Section members who were elected to the grade of fellow in 1997 were recognized, John P. Nelson, and Dr. Wade Cathy. Denver Section awards were presented to the following deserving recipients:

John D. Peebles Professional Award
Young K. Kim

Section Service Award
Gary Petersen

Outstanding Society Chapter
Joint Power Engineering/
Industry Applications

Outstanding Student Branch
South Dakota School of
Mines and Technology

On a National level, the Regional Activities Board in 1997, recognized a Denver Section member who has been a leader at all levels of IEEE, John E. Martin. John was awarded the RAB Leadership Award in recognition of outstanding leadership of the Sections Congress 96 Organizing Committee.

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 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.

Student Dinner

by Michael Zinanti

Students, Members, Society Chapters and Recruiters

Put Friday, March 6, 1998 on your calendars for the first annual

Student Networking/ Recruiting Dinner

at the University of Denver Ballroom,
7:00 - 10:00 p.m.

Students

Brush up on your networking while talking with the engineers who work in your field and the recruiters for area companies.

Society Chapters

Meet students interested in your field and get them involved with your chapters.

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South Dakota School of Mines
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IEEE ComSoc Agrees to Link '99 Wireless Conference to PCIA Event

NEW YORK, 1 December 1997 -- The IEEE Communications Society has signed an agreement with the Personal Communications Industry Association to hold the IEEE Wireless Communications and Networking Conference (WCNC) in conjunction with PCIA's Personal Communications Showcase '99 (PCS '99) in New Orleans, 22-27 Sept. 1999.

The official agreement was signed by IEEE Communications Society President Steve Weinstein; Tom Plevyak, president-elect; Jack Howell, executive director; and PCIA President Jay Kitchen. "The partnering provides a great opportunity for both the IEEE and the PCIA to broaden their reach," said Weinstein. "Together WNCN and PCS '99 provide a forum that will enable conference participants to draw from the full spectrum of information -- from technical development to product delivery -- required to maintain a competitive edge."

With the addition of WCNC's programming, technical depth is assured for show attendees according to technical program chair Jerry Gibson, Southern Methodist University EE department chair and well-known editor and author in the mobile communications field. "Our call for papers and tutorials will feature the following wireless topics: ATM, Internet, multimedia, networking, and standards. It also will cover smart antennas, channel assignment schemes, compression, handoff algorithms, mobility, modulation and coding, multiple access techniques, power control, security and field studies," said Gibson.

IEEE Communications Society technical committees to be directly involved are Personal Communications, Communications Theory, Computer Communications, Radio Communications, and Satellite

and Space Communication.

The Wireless Communications and Networking Conference (WCNC), an expanded format of the IEEE International Conference on Universal Personal Communication (UCUPC), is the world's foremost international technical conference for engineers and researchers at the forefront of development of digital cellular, PCS and the full spectrum of supporting wireless technologies.

The Personal Communications Showcase is the world's largest wireless exhibition and conference to date. Produced annual by PCIA, PCS offers an unmatched combination of quality educational programming and a cutting-edge exhibition.

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Newsletter Deadlines and Advertising Information

Deadlines for the RockIEEE Overlook are as follows.

Newsletter

December 1997
January 1998
February 1998
March 1998
April 1998
May 1998

Deadline

No Issue
November 28, 1997
December 26, 1997
January 30, 1998
February 27, 1998
March 27, 1998

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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

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