

RockIEEE Overlook

April 1991

Newsletter of



**The Institute of Electrical and Electronics Engineers
Denver Section**

IEEE Section/Chapters Meeting

On Wednesday, April 17, the Denver Section will join with its technical chapters in presenting the Annual Denver IEEE Section/Chapters Spin Out Meeting. This year the event will be held at the Writers' Manor, 1730 S. Colorado Boulevard.

Our featured speaker is Dr. Al Rosa, the distinguished head of the Department of Engineering at the University of Denver. He will be speaking on "The Need for Continuing Education for Engineers." With rapidly advancing technologies, continuing education is becoming a necessity rather than an option for most engineers. This education can occur in many forms.

Participating chapters may have their own speakers. Those programs will begin at 8:00 p.m. the same evening. Information on those topics will be found elsewhere in the RockIEEE Overlook.

The schedule for the meeting is:

6:00 - 6:30 p.m.

6:30 - 7:30 p.m.

7:30 - 8:00 p.m.

8:00 - 9:30 p.m.

Social Time

Dinner by reservation

Featured speaker

Chapter meetings

The cost of the meal is \$15.00. Reservations should be made by noon, Monday, April 15. Students are very welcome as this is an excellent time to meet engineers in commerce and industry. Reservations for the dinner may be made by calling Anita Wanberg at 220-8042.

THANK-YOU to John Tierney at Public Service Company of Colorado for his effort in working with the Denver Section membership database.

Society Chapter Meetings and Information

EMC

Electromagnetic Compatability Society

Tuesday, April 9, 1991

Public Service Company of Colorado
Training Center, Classroom #1
938 Bannock St., Denver, Colorado
7:00 p.m.

(open parking in front and rear of building)

Speaker

Robert Pearson, Ph.D.
Public Service Company
EMF Group Vice Chairman
Radiation Studies Task Force of the
Electric Power Research Institute (EPRI)

"Level of Activity & Status of Current EMF Research"

Theories on biological effects of low frequency magnetic fields will be explained. Studies will be presented including epidemiology cases involving childhood cancers brought on by the proximity of power lines.

Everyone is welcome. For more information please call an IEEE officer below.

Chairman Mark Lapchak (303) 773-4626
Vice Chairman Bill Bryant (303) 977-6578
Secretary/Treasurer Ev Evans (303) 761-9447

Congratulations to Mark Lapchak, Bill Bryant and Ev Evans, The Rocky Mountain Chapter officers for another year.

Magnetics Society

Thursday, April 18, 1991

Storage Technology Corporation
Kaizen Conference Room
Louisville, Colorado
6:00 - 7:00 p.m.

Please call Dr. Subrata Dey, 673-6494
for further information.

Joint PES/IAS

Power Engineering/Industry Applications

Wednesday, April 17, 1991

PES/IAS will not meet in April other than during the Section Meeting at Writers Manor. See the front page of the newsletter for further details on that meeting.

Reliability Society Front Range Software Quality Committee

Friday, April 26, 1991

Storage Technology
Louisville, Colorado
2:00 - 4:00 p.m.

Speakers

Dr. Richard Fairley
Software Engineering Management Associates

"Systems Engineering of Software"

Systems Engineering is concerned with analysis, design, and implementation of systems composed of complex and diverse types of components. Many of the techniques used by systems engineers can be adapted to software engineering. Some software engineering techniques are useful in wider system contexts.

On April 26th, 1991, Dr. Fairley of Software Engineering Management Associates, will focus on applications of systems engineering techniques to the analysis and design of software systems, and on identifying and controlling system risks during software development.

Please call Rick Karcich, 673-6223 for information.

VTS/COMSOC

*** Notice ***

Nominations for the positions of Chairman, Vice Chairman, and Treasurer of VTS/COMSOC for 1991-1992 may be submitted to John Hardizinski at 977-2224 (W) or 693-2198 (H).

Joint AP/MTT/GRS

Antennas and Propagation, Microwave Theory and Techniques, Geoscience and Remote Sensing

Thursday, April 18, 1991

Martin Marietta Plant
South Wadsworth Boulevard
4:00 - 5:00 p.m.

Martin Marietta Near-Field Facility Tour

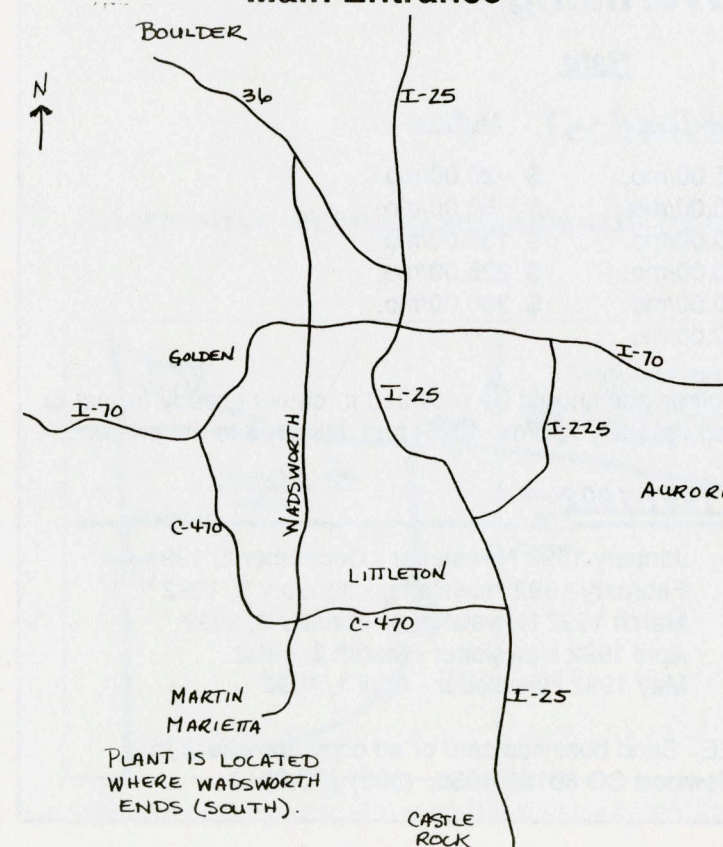
A Tour of the Martin Marietta Near-field facility will be given by Tom Cencich. This facility, built in 1978, is the largest near-field scanner in the world. Antennas up to 54 feet in diameter can be measured from 1 to 18 GHz. The tour will include examples of several antennas measured at the facility. Near field diagnostic techniques used to optimize antenna performance will also be discussed.

Reservations are required.

If you plan to attend this tour, please call Katie MacReynolds at 497-3471 to give your name and citizenship status before April 15th, 1991.

The Martin Marietta plant is located at the end of south Wadsworth. Please call for more complete directions.

Map to Martin Marietta Facility Main Entrance



Ninth Annual Software Reliability Symposium

Advance Registration Form
(Advance Registration ends 22 April, 1991)

Please complete this registration form,
make your check payable to:
Denver Chapter-IEEE Reliability Society

return registration and check to:
Richard Karcich, Conference Chair
Ninth Annual Software Reliability Symposium
c/o Storage Technology Corporation
2270 S. 88th St.; MS 5219
Louisville CO 80028
(303) 673-6223

Conference Registration (includes copy of proceedings)

Name

Company/Academic Affiliation

Mailing Address

City/State

Zip/Country

Phone

Amount Enclosed

IEEE Member No.

Conference Registration Information

Advance Registration

\$50 Member
\$60 Non Member

On-Site Registration

\$55 Member
\$65 Non Member

Students

\$10 Advance
\$15 On-Site

Chairman's Message

by Gary Petersen

What is IEEE?

At a recent meeting of Denver Section and Chapter officers, there was much discussion about "What is IEEE" -- the organization, its membership and its objectives. This message is a brief overview of the IEEE organization as a whole. In future articles we will discuss some of the activities in more detail.

IEEE is a transnational, individual-member society which has been in existence more than 100 years. It is the world's largest technical professional organization with more than 300,000 members in over 130 countries. Its objectives are scientific, educational, professional and societal. It represents the technical interests of members through 36 technical societies (19 of these have active chapters in the Denver Section). IEEE authors and publications produce 20 percent of the world's literature on electro technology. IEEE has produced some 600 active standards used worldwide. Educational activities are available from IEEE in the form of tutorials, seminars, technical meetings, home-study and video conferencing. Professional activities for U.S. members are addressed through the United States Activities Board (USAB) with

such issues as economic, legislative, pensions, ethical and social concerns. IEEE also recognizes outstanding engineering innovation and excellence through an Awards and Recognitions program.

It is difficult to describe all that IEEE is -- it is a large organization that addresses the needs of its members in many different ways. In future articles, we will look in more detail at RAB, TAB, USAB, EAB, PACE and other boards that we hear about but may not be familiar with.

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Full Page	\$ 400.00/mo.	\$ 360.00/mo.
Insert 8-1/2 x 11	\$ 200.00/mo.	

Business card ads must be actual business cards. All other ads should be provided in camera-ready format or additional set-up charges may apply. Inserts must be provided (quantity approx. 4225) and delivered to the printer.

Deadlines for 1991-1992

May 1991 Newsletter - April 5, 1991

September 1991 Newsletter - August 5, 1991

October 1991 Newsletter - September 2, 1991

November 1991 Newsletter - October 4, 1991

(There will be no December 1991 issue)

January 1992 Newsletter - December 2, 1991

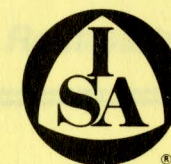
February 1992 Newsletter - January 3, 1992

March 1992 Newsletter - February 3, 1992

April 1992 Newsletter - March 2, 1992

May 1992 Newsletter - April 1, 1992

Please make checks payable to Denver Section IEEE. Send business card or ad copy and check to:
Anita Wanberg, AMW, P.O. Box 4056, Englewood CO 80155-4056, (303) 220-8042.



Denver Section

1991 Regional Exhibit

Instrumentation/Controls/Automation

sponsored by

Instrument Society of America

Denver Section

Exhibit

WHAT: 100 Booths with state-of-the-art instrumentation, control and automation products.

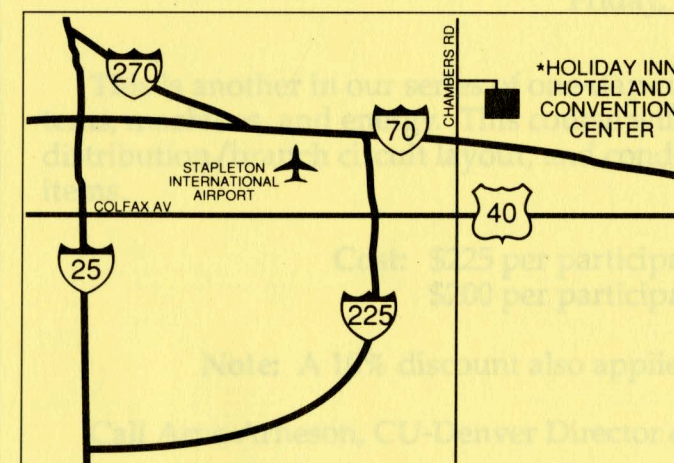
WHEN: May 1 & 2, 1991
Wednesday - 10:00 a.m. - 6:00 p.m.
Thursday - 8:30 a.m. - 2:00 p.m.

WHERE: Holiday Inn, I-70 and Chambers Rd.

Exhibit Admission Free !!

Technical Sessions

Informative technical sessions will be taking place throughout the exhibit hours.



Call **Anita Wanberg, 220-8042** for more information and for technical session and exhibit registration and pricing.

* Plenty of parking at the John Q. Hammons Trade Center, entrance on east side of hotel, 20 minutes from downtown, 20 minutes to Denver Tech Center. (303) 371-9494.

Short Course for Design Engineers

by the Reliability Society of IEEE

Basic Concepts in Reliability for Software and Hardware Designs

by Dr. Samuel Keene and John Adams

A one day course for Design Engineers to achieve better reliability in Software and Hardware designs.
Your management will thank you !

April 19, 1991

8:30 a.m. - 4:30 p.m.

Holiday Inn Denver North, Denver, Colorado

(I-70 and I-25)

Cost

\$60.00 for IEEE members

\$90.00 for non-members with a 1/2 year complimentary IEEE membership
(Lunch and refreshments are included)

Register prior to April 12, 1991

Contact: J.R. Adams - IEEE Reliability Treasurer, (303) 530-6503.

University of Colorado at Denver

The Division of Extended Studies the Department of Electrical Engineering

presents a one day short course

Part II

Facilities Electrical Design and Practical NEC Applications

Friday, May 3, 1991

This is another in our series of one-day courses on selected topics in electrical power systems, machines, and energy. This course will cover overcurrent protection, distribution/branch circuit layout, and conductors/ raceways, in addition to other NEC items.

Cost: \$225 per participant

\$200 per participant for two or more from the same job site

Note: A 10% discount also applies for those who attended FED Part I).

Call Arne Arneson, CU-Denver Director of Corporate Programs, at (303) 893-8521 to

Chapter Representative Report

by Ray Jukkola

On Saturday March 2nd, the Denver Section hosted a Chapter Officers Training Session. This was the first time an official training session was held by the Section. The Chapter Chairmen, Vice Chairmen, and Secretary/Treasurers were invited to the training session. The meeting was very successful. Every chapter had at least one representative present.

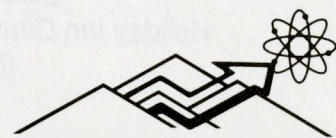
The meeting was divided into two major parts. The first part was an overview of the Denver Section duties and responsibilities to the Chapters. The second part was an overview of the Chapter Officers duties required to establish and maintain an active chapter for you, the individual member.

The Chapter officers now have information on chapter procedures, but they really need active involvement of the individuals within the chapter to maintain a successful chapter.

Your chapter officers took three and one-half hours out of their busy Saturday to learn how to help you. Would you now help them by becoming involved in the chapter in a small way.

Please volunteer to help your chapter officers with meeting topic suggestions, tour suggestions, or other items of interest to you, the chapter member.

Remember - the chapter can only be as active as the membership within the chapter. Call your Chapter Chairman with your ideas now !!



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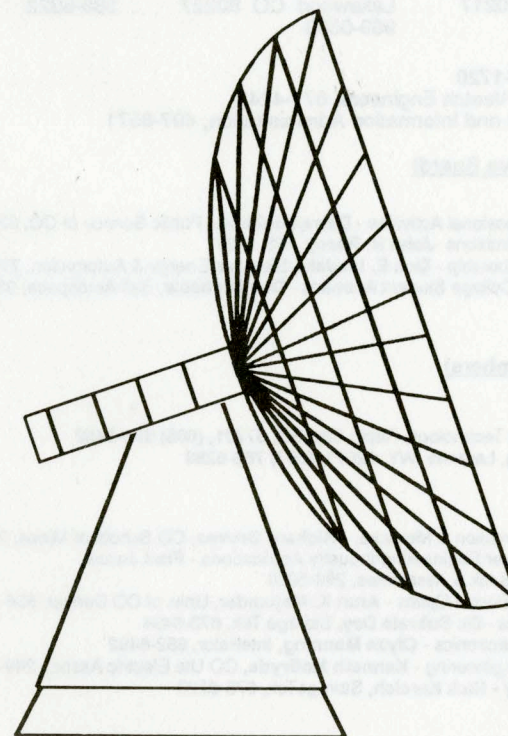
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<p>MICHAEL J. FOLEY</p> <p>FORENSIC ENGINEERING INC. Investigative Engineering Sciences 4530 South Decatur Englewood, Colorado 80110 (303) 730-7707</p> <p>SPECIALIZING IN E&O Investigations Equipment Failures Codes & Standards Expert Witness Testimony</p>	<p>AZTEC ENTERPRISES, INC. ELECTRONIC MANUFACTURERS REPRESENTATIVES FOR TEST AND MEASUREMENT EQUIPMENT</p> <p>JOHN HOWARD President</p> <p>9145 E. KENYON AVE., SUITE 101 DENVER, CO 80237</p> <p>PHONE (303) 779-5285 FAX (303) 779-5334</p>	<p>AB ALLEN-BRADLEY A ROCKWELL INTERNATIONAL COMPANY</p> <p>Industrial Automation Controls</p> <p>14828 West 6th Avenue Building B, Suite 1 Golden, CO 80401 Work 303/279-6444</p>

Satellite Communications

by Timothy Pratt



An exploration of the complete system--from spacecraft to discussion of the atmosphere through which signals pass.

Program includes a study guide with solutions manual, final exam, and textbook, *Satellite Communications*, by Timothy Pratt and Charles Bostian, John Wiley and Sons, 1986.

Satellite Communications is **IEEE member priced at \$199** (\$398 non-member). For a full description of the program and complete ordering information, call IEEE today at 1-201-562-5498....Telex: 833233....Fax: 1-201-981-1686.

Or write to:

IEEE Educational Activities
445 Hoes Lane
PO Box 1331
Piscataway, NJ 08855-1331

Schedule of Conferences and Meetings

April 12-14, 1991	Laramie	Region 5 Conference	Sadrul Ula	(307) 766-6268
April 28 - May 2, 1991	Boulder	PES Substation Com. Mtg.	George Flaig	(303) 452-6111
June 17-19, 1991	Boulder	49th Device Research Conference	Bart Von Zeghbroeck	(303) 492-2809
June 23 - 27, 1991	Denver	International Communications Conf.	Russ Johnson	(303) 796-9100
October 10-11, 1991	Denver	Careers Conference	Bill Whipkey	(303) 830-4713
May 11 - 13, 1992	Denver	Vehicular Technology Conf. (VTC '92)	Don Cottrell	(303) 871-3752
October 7-11, 1991	Boulder	Ant. Meas. Techniques Assoc.	Mike Francis	(303) 497-5873
Sept./Oct. 1994	Denver	IAS Annual Meeting	Paul Meisel	(303) 469-2161
September 10-14, 1995	Denver	Petroleum & Chemical (PCIC)	John Nelson	(303) 431-7895
July, 1996	Denver	PES Summer Meeting	John Barnick	(303) 969-0391
May 1997	Denver	MTT	Hussain Haddad	(303) 460-2114
			John Dunn	(303) 449-1055
			Claude Weil	(303) 497-5305

Proposed Conferences and Meetings

International Conference on Harmonics in Power Systems (ICHPS) 1994
PES Joint Power Generation 1994
ESMO 1996
Sections Congress 1996
Transmission & Distribution 1997
ITC 2000

The Institute of Electrical and Electronics Engineers - Denver Section

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Centennial - **Sadrul Ula**, Electrical Engineering Dept., University of Wyoming, Laramie WY 82071, (307) 766-6268

Society Chapter Chairmen

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Electromagnetic Compatibility - **Mark Lapchak**, Metrum Information Storage, 773-4626
Engineering in Medicine and Biology - **Jochen Edrich**, University of CO - Denver, 759-4002
Joint Antenna and Propagation/Microwave Theory & Techniques/Geoscience and Remote Sensing - **Katie MacReynolds**, National Institute of Standards & Technology, 497-3471
Joint Computer/Information Theory - **Rory Laiho**, IBM, 924-7534
Joint Vehicular Technology/Communications - **Ken Shugg**, Martin Marietta Information and Communications Systems, 397-7417

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Joint Power Engineering/Industry Applications - **Fred Jones**, R.W. Beck & Associates, 299-5266
Laser & Electro Optics - **Arun K. Majumdar**, Univ. of CO Denver, 556-2715
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Reliability - **Rick Karcich**, StorageTek, 673-6223

Senior Past Chairman **Keith Henderson**, Electric Power Testing, 650-2218

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The Institute of Electrical and Electronics Engineers



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The Month at a Glance

April 9, 1991
EMC Meeting

April 12-14
Region 5 Conference

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APP/MTT/GRS Meeting

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Short Course for Design Engineers

April 22, 1991
Reliability Sump. Advance Regis. ends

April 26, 1991
Reliability/FRSQC Meeting

April 28 - May 2, 1991
PES Substation Committee Meeting

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Official Publication of the
IEEE Denver Section