



THE INSTITUTE OF  
ELECTRICAL AND  
ELECTRONICS  
ENGINEERS, INC.

# RockIEEE Overlook

DENVER SECTION

FEBRUARY 1989

## Society Chapter Meetings

Joint Boulder-Denver AP/MTT/GRS  
Antennas and Propagation, Microwave Theory  
and Techniques, Geoscience and Remote Sensing

Date: Thursday, February 16, 1989  
Place: National Bureau of Standards,  
325 Broadway, Boulder, Room 1103  
Time: 4:00 - 5:00 pm  
Speaker: Dr. George Ludwig  
Sr. Research Associate  
Laboratory for Atmospheric and Space  
Physics, University of Colorado -  
Boulder, Colorado  
Topic: The First Explorers and The  
Discovery of the Van Allen Belts"  
Explorer I (the first U.S. satel-  
lite) and its close cousin Explorer  
III, were launched atop the Army's  
Jupiter-C vehicle in early 1958, and  
their data resulted in the discovery  
of the Van Allen Radiation Belts.  
The primary instruments in those  
satellites were originally designed  
at the University of Iowa to conduct  
a totally different scientific  
experiment and for launch on a dif-  
ferent launch vehicle. This lecture  
traces the development, launch, and  
use of a family of early Explorer  
instruments and their role in the  
most important discovery of the  
International Geophysical year.  
This work was done during the  
thrilling and heady era when it was  
still possible for a graduate  
student to carry not just one, but  
many satellite payloads from concept  
to fruition during his period of  
graduate study.

Contact: Bob Seeley, 986-6790.

Joint PES/IAS - Power Engineering/Industry  
Applications

Date: Thursday, February 16, 1989  
Place: Brooklyn's, 2644 W. Colfax Ave.  
Time: 6:00 pm Social  
7:00 pm Dinner (optional @ \$10.00)  
8:00 pm Meeting  
Speaker: Al Horne, Chief Electrical Engineer  
City of Denver  
Topic: Electrical Code Changes  
Discussion of recent changes to the  
National electric Code (NEC) and  
pending changes to Denver's Uniform  
Building Code (UBC).  
Contact: Barbara, Peterson Company, 388-6322,  
by Monday, February 13, 1989

Joint VTS/COMSOC - Vehicular Technology/  
Communications Societies

Date: Tuesday, February 7, 1989  
Place: Mission Trujillo, 181 Ridge Road,  
Littleton (at Broadway, 794-5364)  
Time: 6:30 Dinner (order from the menu)  
Program follows.  
Speaker: Bob Lovisone, State of Colorado  
Department of Telecommunications.  
Contact: John Hardzinski, 977-2224, or see  
the February Overlook for more  
information.

EMC - Electro-magnetic Compatibility

Date: Tuesday, February 21, 1989  
Place: Honeywell, 4800 E. Dry Creek Rd.  
Time: 7:00 pm  
Contact: Bill Bryant, 977-6578, for more  
information.

Please cancel your reservations if you are unable to attend a meeting. No-shows will be responsible for the cost (if any) of dinner.



Chairman's Message

by Keith Henderson

Are you promoting your engineering profession to high school and college students? Do your own kids, and the kids of friends know about your own job and personal satisfaction? How do you sell the "tougher road" in education? How do you feel about the thought of superior foreign technical competence? What are you doing about it? How many kids know that John Sununu, the new White House Chief of Staff, came from an engineering background?

Take a look at the activities of Engineer's Week. Come and join the IEEE at the Legislative Breakfast Wednesday, February 22, 7:30 - 9:00 am, and meet your representatives. Have dinner with us at the IEE table at the Colorado Engineer's Dinner on Friday, February 24, at the Regency. Governor Roy Romer will be the dinner speaker.

Engineers work to enhance the quality of life for all people. Pat yourself on the back, and blow your own horn! The Denver Section of the IEEE salutes YOU!

Oh! Yes! A meeting a month is all we ask.

NATIONAL ENGINEERS WEEK

February 19-25, 1989

Colorado Society of Engineers  
Engineers Week Dinner  
Regency Hotel, Downtown Denver  
February 24, 1989  
Contact: Warren Andrews, 279-1277

Colorado Eng. Council Legislative Breakfast  
Colorado State Capital  
February 22, 1989  
Contact: Paul Cheng, CEC Pres., 977-1356

Consulting Engineers Council of Colorado  
Annual Awards Banquet  
Denver Athletic Club  
February 21, 1989  
Contact: Sandy Donnell, 237-6978

Ute Chapter Professional Engineers of Colo.  
Joint Dinner Meeting with AIME  
Grand Junction Hilton Hotel  
Grand Junction, Colorado  
February 25, 1989  
Contact: John Cunningham, NSPE, 800-228-8163  
John Wright, AIME, 241-6619

PEC Bridge Building Contest  
Bureau of Reclamation Testing Lab  
Denver Federal Center  
March 4, 1989  
Contact: Jim Higerd, 667-4675

Southern Chapter Professional Engineers of CO  
A slide show presentation to middle school students on engineering careers.  
Twelve Middle Schools in Southern Colorado  
Begins in February and runs during the school year.  
Contact: Jim Higerd, 667-4675

National Engineers Week Banquet

The main Consulting Engineers Council of Colorado (CECC) event during National Engineers Week has traditionally been the CECC Engineering Awards Banquet, a formal, black-tie optional, dinner at the Denver Athletic Club. Usual attendance is 150-200 persons. In addition to presenting awards to the most outstanding projects in five or six categories, CECC presents its prestigious General Palmer award to the "outstanding engineer in the industry." Last years winner was George Wallace, P.E., founder of the Denver Tech Center. The CECC scholarships are also presented at the Banquet. For information, call Richard Weingardt, 292-5722.

PES/IAS Tentative Meeting Schedule

March 16, 1989 - Co-Generation Panel Discussion  
April 12, 1989 - Motor Starting, Jackson Fuller (Joint with Denver Section)  
May 18, 1989 - Micro-Processor Based Distance Relaying

Tutorial, February 11 & 18

Transformer/Induction Motors, Pankaj Sen

Transformer & Induction Motor Tutorial

Again this year, the Joint PES/IAS Chapter is sponsoring a tutorial on Electrical Power Theory and Applications. Dr. Pankaj K. Sen, P.E., Associate Professor, EE & CS Dept., University of Colorado-Denver will present the tutorial. This year's topics are Transformers and Induction Motors.

Sessions will include 1) Theory of Operation and Construction; 2) Equivalent Circuit and Performance Evaluation; 3) IEEE Methods of Testing; 4) Specification writing and 5) Fundamentals of Design.

Each topic will be covered in a four hour session held on consecutive Friday afternoons and Saturday mornings.

Transformers  
Friday, February 10, 1989, 12:30-4:30 pm  
Saturday, February 11, 1989, 8:00-12:00 noon

Induction Motors  
Friday, February 17 1989, 12:30-4:30 pm  
Saturday, February 19, 1989, 8:00-12:00 noon

All sessions will be held at the Public Service company 38th Avenue Training Center. Cost for the tutorial will be \$45 for individual sessions and \$85 for both sessions. Please register as soon as possible on the form provided in this issue. Enrollment will be limited to 15 minimum and 45 maximum participants.

For further information, call Bob Saint at 659-0551.

1989 IEEE Aerospace Applications Conference

February 5-10, 1989

Sponsor: IEEE Los Angeles, South Bay Section  
Place: Breckenridge, Colorado  
Topics: Systems Concept and Management  
Aerospace Electronics  
Satellite Applications  
Microwave and Millimeter Technology  
Computer Systems & Software  
Contact: Mr. Leo A. Mallette, Hughes Aircraft  
MS: Bldg R-10, A9026  
P.O. Box 92919, Los Angeles CA 90009  
(213) 334-2909

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Schedule of Conferences and Meetings

February 5-10, 1989	Breckenridge	Aerospace Applications	Leo Mallette (213) 334-2909
April 30-May 2, 1989	Colorado Spgs	Rural Electric Power Conf.	Leo Barrios (303) 452-6111
May 15-18, 1989	Denver	Cement Industry Conference	Randy Wiley (303) 534-4206
May 23-25, 1989	Denver	EMC Conference (EMC '89)	John Adams (303) 497-3328
May 31-June 2, 1989	Denver	Ultrasonics Ferroelectrics and Frequency Control Soc.	John Tary (303) 452-6111
June 17-21, 1990	Colorado Spgs.	Utilities Communications Council (UTC) Non-IEEE	George Stoll 571-2677



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Membership - **Herb Bass**, Herb Bass & Associates, 530-7509  
Educational Activities - **Pankaj K. Sen**, EE & CS Dept., University of Colorado Denver, 556-2872 or 556-2852  
Pre-College Student Activities - **Dan Michaels**, Ball Aerospace, 939-5139

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Joint Electro-magnetic Compatibility/Instrumentation Measurement - **Richard Groves**, Colorado School of Mines, 273-3677  
Joint Power Engineering/Industry Applications - **Bob Saint**, Union REA, 659-0551  
Start-up Chapter, Laser & Electro Optics Society - **Arun K. Majumdar**, University of Colorado Denver, 556-2715

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## THE MONTH AT A GLANCE

February 5-10  
Aerospace Applications Conference

February 7  
VTS/COMSOC Meeting

February 10-11, 17, 19  
PES/IAS Tutorial

February 16  
PES/IAS Meeting  
AP/MTT/GRS Meeting

February 19-25  
National Engineers Week

February 21  
EMC Meeting

February 22  
Section Executive Board Meeting

**RockIEEE Overlook**  
Official Publication of the  
**IEEE Denver Section**