

# RockIEEE Overlook

Newsletter of



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

February 1992

## Chairman's Corner Chapter Relations

by Paul Meisel

The chapters within a particular section exist because members have a need for the technical expertise which the chapter can bring to the members. When the need diminishes or disappears because no one attends the meetings, the chapter is eliminated. Each chapter must have a minimum of two meetings per year and an attendance of at least ten (10). If this does not happen, the chapter is put on probation and finally disbanded if no correction is made.

The Denver Section has a few chapters in this predicament due to lack of support. If you haven't been to a meeting in a while or haven't seen a meeting scheduled, please give the chapter chairman a call to discuss your needs and offer your help.

The societies support the chapters at arms length. Some societies are better than others in giving this support, but the direct relationship is through the section. If there is a technical chapter not represented in Denver, and you feel that there would be sufficient need and support, call the Societies Chapter Chairman and volunteer to create and circulate a petition for the formation of the chapter. Section help will be forthcoming.

Attending chapter meetings is the least expensive means of obtaining your continuing education and maintaining your technical worth. Consider the alternative of attending conferences, short courses, or college classes. All of them cost more and are more time consumptive.

## Thank You

*IEEE Denver Section would like to sincerely thank the advertisers whose ads have been published in the RockIEEE Overlook. We appreciate your participation!*



# Society Chapter Meetings and Information

## Joint PES/IAS

Power Engineering/  
Industry Applications

Thursday, February 20, 1992

### Tour

General Electric Apparatus Service Center  
4900 Kingston

No Dinner is planned in connection with this meeting.

Please arrive between 5:45 and 6:00 p.m.; allow about an hour for the tour.

The GE Apparatus Service Center provides electrical, laboratory and mechanical services including, but not limited to: transformer, motor and generator rewind and repair; vacuum pressure impregnation; PCB detection; VOC testing; gas-in-oil analysis; rebuild and repair of fans, pumps, compressors and centrifuges; and steam turbine repair.

The GE Apparatus Service Center is located in the Montbello Business Park. Take the Havana Street exit north from I-70. From northbound Havana St., turn right (east) on East 48th Ave. to Kingston; turn left (north). The shop is on the east side of Kingston.

Please contact Barbara at Peterson Company, 388-6322, by Monday, February 17, 1992.

## EMBS

Engineering in Medicine and Biology

Wednesday, February 26, 1992

7:30 p.m.

University Hospital  
9th Ave. and Colorado Blvd.  
Denver, Colorado  
Glaser Auditorium, First Floor

### Speaker

Julian Goldman, M.D.  
Department of Anesthesiology  
CU School of Medicine

### "Introduction to Artificial Neural Networks and their Application in Physiological Signal Processing"

A presentation of basic principles and a discussion of applications in capnogram waveform analysis (measurement of carbon dioxide in respiration) and arterial blood pressure waveform analysis.

Parking is available in the lot to the east of the hospital (\$1.50 with validation at the Information Desk). Free parking may be available on the side streets near the hospital (two hour limit).

**Reservations are recommended**  
Please call Matt Baretich at 270-8351.

## M E T R U M

INFORMATION STORAGE

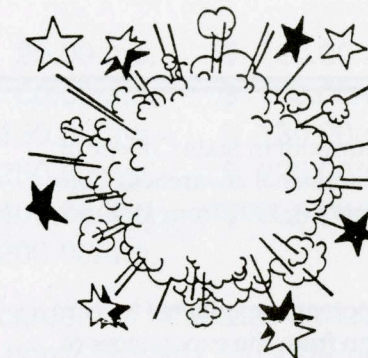
Testing Services  
Littleton, CO

FCC/VDE/CISPR EMI  
Vibration ESD UL/CSA Safety  
Temperature Humidity Altitude

Mark Lapchak  
(303) 773-4626

Carlos Ortiz  
(303) 773-4566

## Twelfth Annual Colorado Engineer's Dinner February 21, 1992



**Program:** Space Science with the Goddard High Resolution Spectrograph (GHRS) on the Hubble Space Telescope  
(Note: Be prepared to experience history and the future at the same time.)  
Brandt's \$47 million GHRS is working fine and is generating significant discoveries about the origin of the universe.

**Speaker:** Dr. John (Jack) Brandt, CU Astrophysicist, senior researcher at CU's Laboratory for Atmospheric and Space Physics

**Location:** Denver Hilton South  
7801 E. Orchard Rd. (NW Corner, I-25 and Orchard)

**Date & Time:** Friday, February 21, 1992  
Cocktails & Music 6:00 p.m.  
Dinner 7:00 p.m.  
Program 8:00 p.m.  
Music & Dancing 9:00 p.m.

**Cost:** Pre-Paid Reservations - \$27/person  
Call Dennis Edwardson, 671-4245 for reservations.  
Reservations are limited so a prompt response is recommended.

## National Engineer's Week February 16-22, 1992

Come join us for a delightful evening. Celebrate Engineer's Week, enjoy a fine social evening, win a door prize, renew friendships, and hear an excellent speaker on an exciting topic.

For additional information, telephone Chairman Roger Krempel, 1-493-7104.



# S-PAC at Metropolitan State College of Denver

by Doyle Ellerbruch

The Student Chapter at metropolitan State College of Denver is hosting a Student Professional Awareness Conference (S-PAC) Saturday, February 8, 1992 from 11:30 a.m. to 5:45 p.m.

This is an opportunity for potential engineers to learn about the engineering profession from the experiences of those successful in the field. Tentative guest speakers and their topics are:

Beth Moses, Hewlett Packard  
*"The Real World"*

Albert Rosa, University of Denver  
*"The Engineering Profession"*

James Watson, Watson Enterprises  
*"Polishing Your Professional Image"*

Charles Wright, retired from Public Service of CO  
*"Why You Need the IEEE"*

Engineering students and high school students who are contemplating an engineering career and want to learn more about engineering are invited to attend. For more information call (303) 556-2503.

## Schedule of Conferences and Meetings

February 2-7, 1992	Snowmass	Aerospace Application Conference	Richard Day	(714) 863-0350
March 6-8, 1992	Denver	News 4 Education Expo	Suzanne Thompson	(303) 988-3803
April 14-16, 1992	Denver	Telecommunications Assoc. Expo.	Diane Lindsay	(303) 397-2254
April 24, 1992	A.F. Acad.	CO-WY Jr. Academy of Science	John Tary	(303) 452-6111
April 22-24, 1992	Denver	EMC-ESD International	Mike Frisoni	(303) 220-0600
May 11-13, 1992	Denver	Vehicular Technology Conf. (VTC '92)	Jim Schroeder	(303) 871-3519
May 11-14, 1992	Denver	Power System Relaying (PES)	John Appleyard	(608) 364-5622
June 25-26, 1992	Denver	Software Reliability	Rick Karcich	(303) 673-6223
Sept./Oct. 1994	Denver	IAS Annual Meeting	Paul Meisel	(303) 761-6960
September 10-14, 1995	Denver	Petroleum & Chemical (PCIC)	John Nelson	(303) 431-7895
July 27-August 2 1996	Denver	PES Summer Meeting	Fred Jones	(303) 431-7895
1997	Denver	PES Joint Power Generation	Gary Petersen	(303) 329-1506
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) 1996  
ESMO 1996  
Sections Congress 1996  
Transmission & Distribution 1997  
ITC 2000  
ICC 1995-2000  
EMC 1995-2000

## Overlook Advertising

<u>Ad Size</u>	<u>Rate</u>	
	<u>One Time</u>	<u>Multiple</u>

Business Card	\$ 25.00/mo.	\$ 20.00/mo.
1/8 page	\$ 60.00/mo.	\$ 50.00/mo.
1/4 page	\$150.00/mo.	\$ 130.00/mo.
1/2 page	\$250.00/mo.	\$ 225.00/mo.
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

March 1992 Newsletter - January 27, 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.

**\*\* Please note: Due to previous obligations, the deadline for the March Overlook has been changed to January 27, 1992. Please have all information for the newsletter to Anita at that time.**

<b>Rapley Engineering Services, Inc</b> Engineering Design  (303) 792-2211  Electrical Engineering and Design Process Control Design Instrumentation - Automation Plant Control System Upgrade/Retrofit Computer Applications/Software Develop. Commissioning/Calibration/Start-up CAD/Design/Drafting	Project Economic Analysis      Reliability/Availability Engineering Economics      Quality Assurance  <b>Ray M. Wainwright, P.E.</b> Engineering Consultant  3715 South Niagara Way Denver, Colorado 80237      (303) 758-2985	Advanced Scientific and Computational Software, Inc. 10902 W. Brittany Dr., Littleton, CO 80127  Super/Mini-super computer software conversion, formulation, algorithm development, numerical methods, I/O problems, general support
Serving Colorado and The World — Since 1885 —  • Power • Mining & Metals • Petroleum & Petrochemicals • Electronics • Aerospace & Defense • Biotechnology • Pharmaceuticals • Hazardous Waste Management  <b>United Engineers &amp; Constructors</b> A Raytheon Company Western Operations  P.O. Box 5888 Denver, CO 80217 (303) 843-2000	<b>engineering dynamics</b>  TESTING SERVICES • altitude • sand/dust/salt fog • temperature/humidity • shock/vibration/noise • seismic simulation • product certification  3925 s kalamath    englewood, co 80110 (303) 761-4367    FAX (303) 761-4379	<b>DENNIS A. EDWARDSON</b> Director, T&D Services  <b>Black &amp; Veatch</b> Engineers-Architects  1400 South Potomac Street, Suite 200 Aurora, Colorado 80012 (303) 671-4200



# The Institute of Electrical and Electronics Engineers - Denver Section

## Executive Board

Chairman  
**H. Paul Meisel**  
Hydrologics, Inc.  
3101 S. Platte River Dr.  
Englewood CO 80110  
(303) 761-6960

Sr. Vice Chairman  
**Lew Beck, Jr.**  
Peterson Company  
4949 Colorado Blvd.  
Denver CO 80216  
(303) 388-6322

Vice Chairman  
Members Services  
**Rory Laiho**  
IBM, Dept. J17102511  
P.O. Box 1900  
Boulder CO 80301  
(303) 924-7534

Vice Chairman  
Student Activities  
**Doyle Ellerbruch**  
Metro. State College  
P.O. Box 173362  
Denver CO 80217  
(303) 556-4007

Secretary  
**Tom Gibbs**  
Fichtner/Lee Wan  
2801 Youngfield St. #121  
Golden CO 80401  
(303) 238-7548

Treasurer  
**Diana Lindstrom**  
422-9374

Past Chairman - **Gary A. Petersen, 329-1506**  
Professional/Industrial Liason - **Tony Thomas**, General Electric, 753-2289  
Student Branch Activities - **Michael Meister**, National Telecommunications and Information Administration, 497-6571

## Executive Committee (Includes Executive Board)

### Standing Committee Chairmen

Society Chapters - **Ray Jukkola**, Waste-Tech Services, Inc., 273-7106  
Educational Activities - **Michael J. Meister**, National Telecommunications & Info. Admin., 497-6571  
Conferences - **John Tary**, Tri-State Generation and Transmission Association, 452-6111  
Awards - **John R. Reesey**, 755-1720  
Student Fund - **Dennis Edwardson**, Black & Veatch Engineers, 671-4245

Professional Activities - **Darrell Sabatka**, Public Service of CO, 329-1547  
Nominations - **Gary A. Petersen**, Public Service of CO, 329-1506  
Membership - **Don E. Lindahl**, Siemens Energy & Automation, 770-7907  
Pre-College Student Activities - **Michael Meister**, NTIA/ITS.NI, 497-6571  
Long Range Planning - **Gary Petersen**, Public Service Co., 329-1506

## Executive Committee (Ex-Officio Members)

### Subsection Chairmen

Black Hills - **R.D. McNeil**, Electrical Engineering Dept., South Dakota School of Mines & Technology, Rapid City, SD, 57701, (605) 394-2452  
Centennial - **Sadrul Ula**, Electrical Engineering Dept., University of Wyoming, Laramie WY 82071, (307) 766-6268

## Society Chapter Chairmen

Aerospace and Electronics - **Ed LeBlanc**, Transmountain Electronics, 393-9257  
Electromagnetic Compatibility - **Mark Lapchak**, Metrum Information Storage, 773-4626  
Engineering in Medicine and Biology - **Jim Heller**, 790-9010  
Joint Antenna and Propagation/Microwave Theory & Techniques/Geoscience and Remote Sensing - **Ron Vidano**, Ball Aerospace, 460-2001  
Joint Computer/Information Theory - **Brice Chapman**, Storage Tek, 673-4762  
Joint Vehicular Technology/Communications - **Ken Shugg**, Martin Marietta Information and Communications Systems, 397-7417

Instrumentation & Measure. - **Richard Groves**, CO School of Mines, 273-3677  
Joint Power Engineering/Industry Applications - **Bob Struthers**,  
United Engineers & Constructors, 843-2235  
Laser & Electro Optics - **Arun K. Majumdar**, Univ. of CO Denver, 556-2715  
Magnetics - **Dr. Subrata Dey**, Storage Tek, 673-6494  
Power Electronics - **Clyde Manning**, Intellistor, 682-6492  
Power Engineering - **Kenneth McBryde**, CO Ute Electric Assoc., 249-4501  
Reliability - **Rick Karcich**, StorageTek, 673-6223

Senior Past Chairman - **John R. Reesey**, 755-1720

RockIEEE Overlook Editor - **David B. Richmond**, United Engineers, 843-2465  
P.O. Box 5888, Denver, CO, 80217

Publication Coordinator - **Anita Wanberg**, AMW, 220-8042  
P.O. Box 4056, Englewood, CO, 80155-4056

## The Institute of Electrical and Electronics Engineers



Denver Section  
P.O. Box 4056  
Englewood CO 80155-4056  
Phone: 220-8042

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

## The Month at a Glance

**February 20, 1992**

PES/IAS Meeting

**February 21, 1992**

Colorado Engineer's Dinner

**February 26, 1992**

EMBS Meeting

RockIEEE Overlook  
Official Publication of the  
IEEE Denver Section