

RockIEEE Overlook

Newsletter of

April 1993



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

Joint Denver Section/Colorado School of Mines Student Chapter **Demonstration of a Blaster A Hybrid Electrical Vehicle**

Blaster is a Hybrid Electric Vehicle built out of a modified Ford Taurus. The car is being built to participate in Ford's HEV contest, which will be held in June of this year.

Approximately 60 students were involved in the development of this project. The program

will consist of a presentation of vehicle components followed by a demonstration of the vehicle.

WHEN: Wednesday, April 7, 1993

6:45 p.m. dinner

6:30 p.m. program

WHERE: George R. Brown
Hall, Room 201
17th & Illinois Streets
Colorado School of Mines
Golden, Colorado

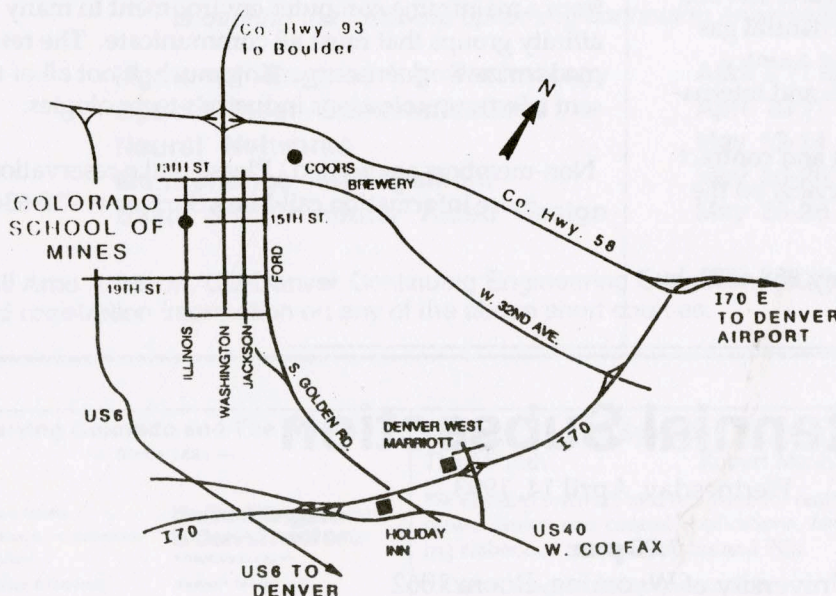
COST: Pizza dinner
Members \$ 3.00
Students free

PARKING:

Use the lot behind the building or park on the street.

RESERVATIONS:

Please call Marilyn Peterson at 329-1615 for reservations.



Society Chapter Meetings and Information

Joint PES/IAS Power Engineering/Industry Applications Societies

Thursday, April 15, 1993

Brooklyn's Saloon & Restaurant, 572-3999
2644 W. Colfax, Denver (under the viaduct)

6:00 p.m. Social
6:30 p.m. Dinner
(optional @ \$10.00, Student members free)
7:30 p.m. meeting

Speaker

Paul Longrigg, P.E.
President, Modus Technology Consultants, Inc.

"Deployment of Fuel Cells in the Outback Regions of Australia"

A U.S. made phosphoric acid fuel cell (the first in Australia) has recently been commissioned at an energy research institute associated with a Western Australian university. The project will serve as a model and test bed for the eventual utilization of methanol and natural gas fueled fuel cells in the remote regions of that country. Exportation potential of U.S. made fuel cells and international competition will also be discussed.

Representatives from several recruiting and contract engineering firms will also give a brief overview on the business climate.

Please contact Barbara at Peterson Company, 388-6322, by Thursday, March 4, 1993.

Joint VTS/COMSOC Vehicular Technology/ Communications Societies

Thursday, April 15, 1993

6:30 p.m.
Dinner at Cafe Tamara
4136 E. 8th Ave.

7:30 p.m. Meeting
University of Colorado Health Sciences Center
4200 E. 9th Ave. (9th & Colorado Blvd.)
Denver, Colorado
(Please call for location of meeting room.)

Speaker

Vic Tagawa
University of Colorado Health Sciences Center
"FDDI & Data Networks in a Campus Setting"

The University of Colorado Health Sciences Center houses many diverse entities which have different computing and networking needs. This campus has gone from a mainframe computer environment to many smaller affinity groups that must all communicate. The result is a modern network encompassing much, if not all of the present telecommunications industry's technologies.

Non-members are invited. Please make reservations. For more information call Mark Shriver at 730-6348.

Centennial Subsection

Wednesday, April 14, 1993

7:00 p.m.

University of Wyoming, Room 1062
Engineering Building, 12th and Lewis, Laramie, Wyoming

For more information, please call Nancy Farrell at (303) 491-6600

Joint MTT/AP/GRS

Thursday, April 22, 1993

4:00 p.m.
National Institute of Standards and Technology
325 Broadway, Room 1103
Boulder, Colorado

Speaker

Professor Penina Axelrad
Aerospace and Engineering Sciences and CCAR
University of Colorado, Boulder

"Global Positioning System (GPS) Fundamentals"

The advent of GPS has had a tremendous impact on a broad range of technical fields including time transfer, surveying, altitude determination, and of course navigation of land, marine, air and space vehicles. Its rapid acceptance by such a broad user community is fueled by four factors - high accuracy, low cost, continuous availability, and ease of use.

This seminar will describe the fundamental operation and use of GPS. Each of the three components of GPS - the space, control and user segments will be reviewed. The signal structure will be outlined and key elements of the spacecraft and receiver hardware discussed.

For further information, please call
Zoya Popovic, (303) 429-0374.

Magnetics Society

Thursday, April 22, 1993

5:30 p.m.
Central Support Conference Room, Building 8
Storage Technology Corporation
2270 S. 88th St.
Louisville, Colorado

Speaker

Takeshi Yazawa
Vice President, Data Storage Laboratory
SONY Engineering and Manufacturing of America

"Optical Disk Data Storage Technology Update and Future Directions"

Please collect access badges at StorageTek Visitor Center, then proceed to Building 6 where there is ample parking.

For further information, call Dr. Richard Dee at (303) 673-3976, or Dr. Subrata Dey at (303) 673-6494

Future Meetings:

- May, Professor Fritz Friedlaender, "Vertical Bloch Lines"
- Thursday, May 13, 1993, Professor S. Iwasaki "Perpendicular Recording"
- June - September, Summer recess

Please note on your calendar the "normal" meeting date of the third Wednesday of the Month, September through May.

The UNIVERSITY OF COLORADO AT DENVER College of Engineering and Applied Science

is offering the following upcoming continuing engineering education programs:

Mgmt. of Engineering Technology	April 2 (1 day/8 hrs)	\$245
Optical Fiber Communications	April 23 (1 day/8 hrs)	\$245
Neural Networks	May 13-14 (2 days/16 hrs)	\$345
Maintenance Management	May 25-26 (2 days/16 hrs)	\$345
Basic 3-D Computer Aided Design	May 26-28 (3 days/20 hrs)	\$495

Call Arne Arnesen, CU-Denver Continuing Engineering Education, (303) 556-4907, for detailed program brochures and registration information on any of the above short courses.

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Consider a Student Professional Awareness Conference (S-PAC) as your next student activity!

IEEE student members have successfully organized more than 300 S-PACs at colleges and universities across the United States since 1979.

At these conferences dynamic national speakers present professional issues—non-technical career concerns—to students. Topics include developing your engineering career, confronting ethical dilemmas in the workplace, the value of advanced degrees, getting into management, joining a professional society, and many other engineering employment issues not usually covered in the classroom.

For more information on S-PACs, contact Ann Hartfiel at the IEEE-USA Office, 1828 L St, N.W., Washington, DC 20036-5104; telephone (202) 785-0017; fax (202) 785-0835. ♦

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 4750 - 5000) and delivered to the printer.

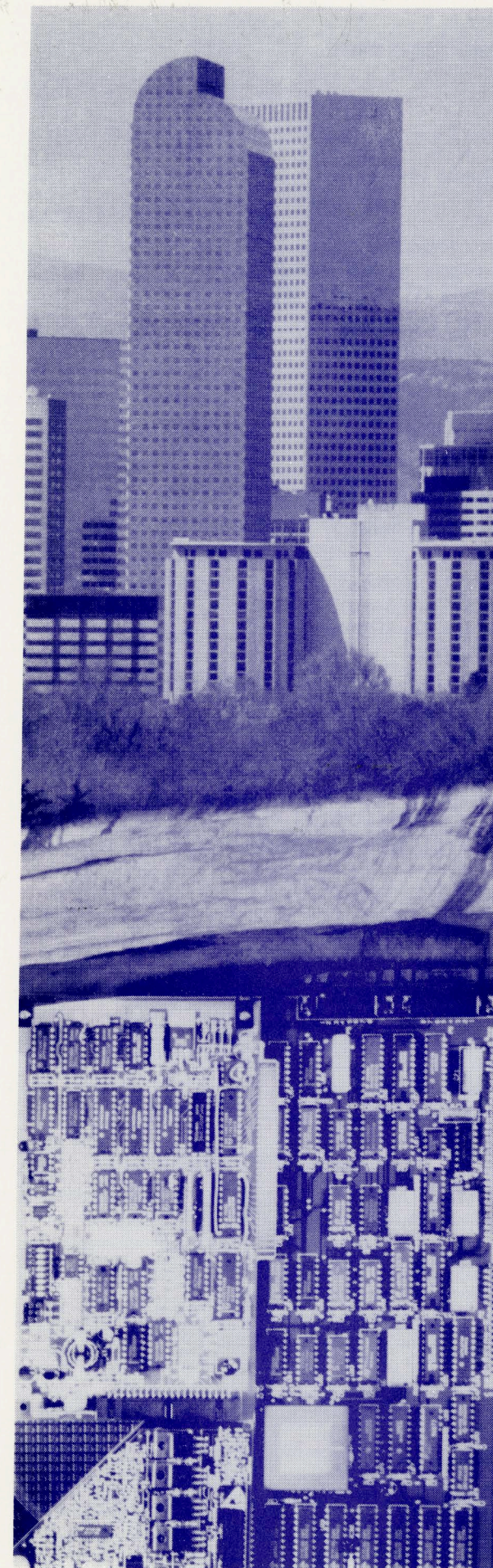
Deadlines for 1992-1993

May 1993 Newsletter - April 2, 1993

Deadlines for 1993-1994

September 1993 Newsletter - August 2, 1993	October 1993 Newsletter - September 1, 1993
November 1993 Newsletter - October 1, 1993	January 1994 Newsletter - November 29, 1993
February 1994 Newsletter - December 30, 1993	March 1994 Newsletter - February 1, 1994
April 1994 Newsletter - March 1, 1994	May 1994 Newsletter - April 1, 1994

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.**



Imagine.

The perfect balance.

Instrument and Control Expo and Rocky Mountain Electronics Expo

April 7 - 8, 1993

9 A.M. - 5 P.M.

Colorado Convention Center

700 14th Street • Denver

Sponsored by:



TECHNICAL SESSIONS

Symposia: These half-day symposia will help your company continuously benchmark; shrink new product development time; unleash the power of teamwork; plan and re-plan systematically; increase market share and price competitively.

Price: \$65 each

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Buyer-Supplier Partnerships

Symposium (#2) World Class Tools & Techniques

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Failure Factors of Mismanaging Change
High Performance Teams

Tutorials:

Price: \$45 each

Tutorial (#3) Control System Tutorial (3-1 hr. classes)

PID Basics
Problems with PID Control
Control System Design & Documentation

Tutorial (#4) Electronics for Non-Engineers (half day)

This class will cover the basics of electronics in an easy to understand presentation.

Sixty additional seminars and workshops will be offered at no charge in the following general interest areas:
Instrument and Control Technology
Surface Mount Technology (2 half day workshops)
Semiconductor Technology: The Cutting Edge
Competing in the International Marketplace: Management Issues
Electro-Mechanical Technology

...and more!

PREREGISTRANTS WILL RECEIVE A COMPLETE SEMINAR SCHEDULE WITH ASSIGNED DAYS AND TIMES.

COMPLIMENTARY REGISTRATION FORM

Copy and mail or fax this registration form by March 15, 1993 to receive your registration packet by mail. After March 15, 1993, bring this completed form to Registration to save \$5.00 Admission Fee at the door.

Please Check All Applicable Selections:

COMPANY/ORGANIZATION CLASSIFICATION

- ☐ Aerospace
- ☐ Business Equipment
- ☐ Communications
- ☐ Computers: Peripheral/Storage
- ☐ Computers: PC Workstations
- ☐ Consumer/Entertainment
- ☐ Education/Consulting
- ☐ Electronic Components/Devices
- ☐ Government/Military
- ☐ Medical
- ☐ Test Equipment
- ☐ Other

JOB FUNCTION

- ☐ Administration/Management
- ☐ Design: Circuit/System
- ☐ Education/Consulting
- ☐ Engineering Management
- ☐ Marketing/Sales
- ☐ Packaging
- ☐ Production/Manufacturing
- ☐ Purchasing
- ☐ Research/Development
- ☐ Test/QC/QA
- ☐ Other

INTEREST

- ☐ CAD/CAE
- ☐ Computer Peripherals
- ☐ Computer Software
- ☐ Consulting/Fabrication Services
- ☐ Electro-Mechanical Components
- ☐ Electronic Components
- ☐ Electronic Packaging
- ☐ Instrumentation/Test Equipment
- ☐ Measurement Systems
- ☐ Mechanical/Packaging
- ☐ Production Equipment
- ☐ Production Materials
- ☐ RF/Microwave Components
- ☐ Test/Inspection Equipment
- ☐ Other

Sessions Free Unless Fee Listed:

PLEASE REGISTER ME FOR THESE SEMINARS

	By Mar. 5	After Mar. 5
SYMPOSIA		
<input type="checkbox"/> Symposium #1	\$ 65.00	\$ 95.00
<input type="checkbox"/> Symposium #2	\$ 65.00	\$ 95.00
<input type="checkbox"/> Symposium #1 & #2	\$100.00	\$160.00
Preferred Date/Time		
<input type="checkbox"/> April 7	<input type="checkbox"/> 8:45 - 12:30	<input type="checkbox"/> 1:15 - 5:00
<input type="checkbox"/> April 8	<input type="checkbox"/> 8:45 - 12:30	<input type="checkbox"/> 1:15 - 5:00

TUTORIALS

- ☐ Control System #3 \$ 45.00 \$ 65.00
- ☐ Electronics for \$ 45.00 \$ 65.00
- ☐ Non-Engineers #4

WORKSHOPS

- Surface Mount Technology NO CHARGE
- ☐ Session #1
- ☐ Session #2

Sessions may be cancelled if minimum attendance is not met. Fees will be refunded in this instance.

Mail or FAX to:

EXPO '93

6535 South Dayton Street, Suite 2000
Englewood, Colorado 80111
FAX (303) 799-0678
Phone (303) 799-0650

Please Print

Name (First or Initials)	Last		
Position	Area Code	Telephone	Fax
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One registrant per form. This form may be photocopied. Unless listed, there is no charge or registration for technical sessions. They will be filled on a first come first served basis.

Joint Computer/Information Theory Society
Denver Chapter

JC/IT Video Library

SHORT CUT METHODS FOR
POWER SYSTEM ANALYSIS

Sponsored by the Denver Section
Joint Power Engineering/Industry Applications Society

Instructor: Jackson Fuller, Retired Professor of Electrical Engineering, University of Colorado

Content: This tutorial will present several short cut methods for determining quantities such as voltage drop and short circuit current, as well as short cut methods for analyzing the effect of various motor starting methods such as switched capacitors, reactors and autotransformers.

Date: Friday, April 16, 1993

Time: 1:00 pm to 5:00 pm

Location: Storage Technology Corporation
Independence Conference Room, Building 5
2270 So. 88th St., Louisville, CO 80028-3159
(Refer to map on back for directions)

Enrollment is limited: 15 minimum - 60 maximum
For further information, contact Phil Goldhammer at (303) 673-5342.

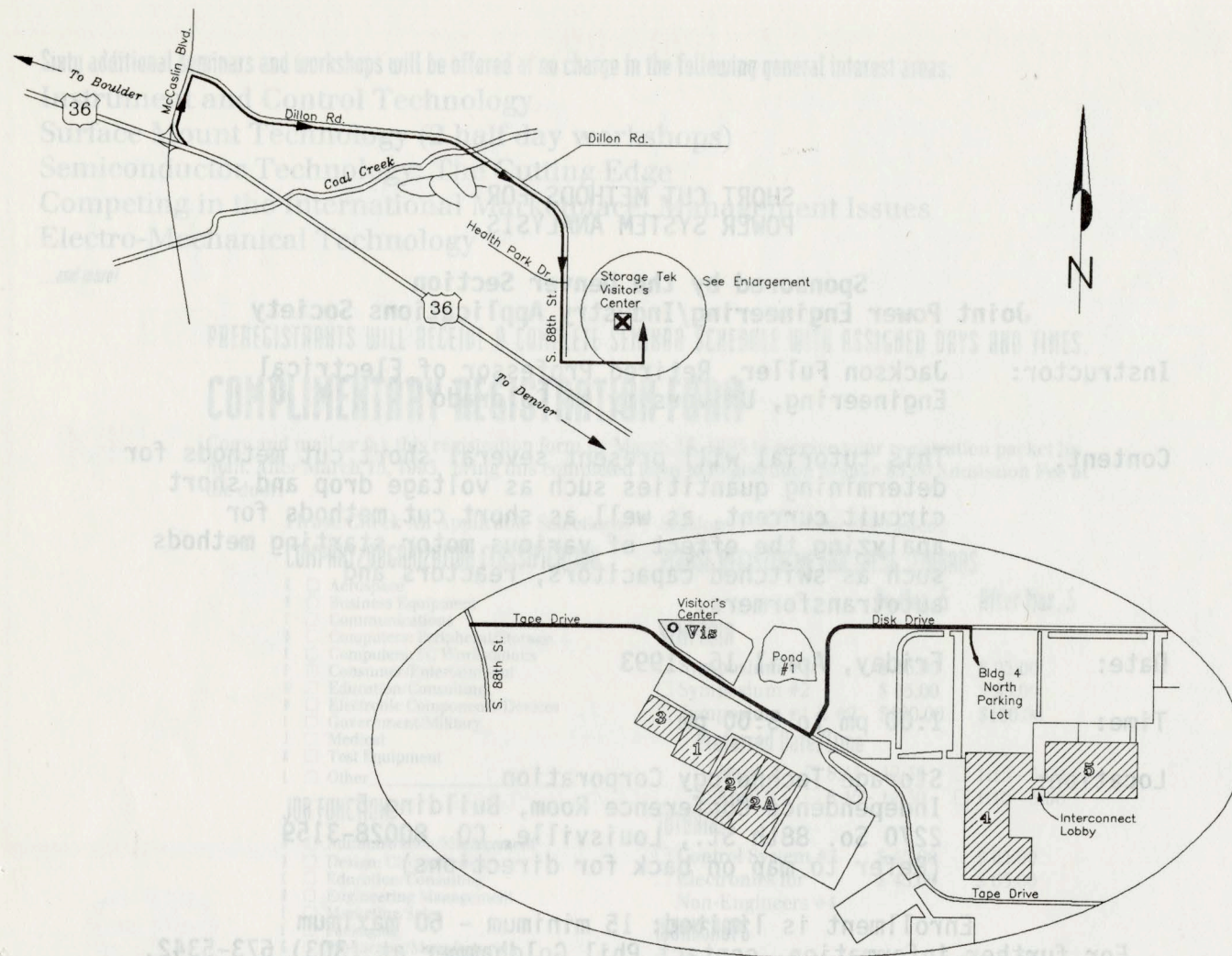
SHORT CUT METHODS FOR POWER SYSTEM ANALYSIS
Registration Form
Cost: \$60.00

Name	Checks payable to: IEEE PES/IAS
Address	Send checks with registration to: Phil Goldhammer Storage Technology Corporation 2270 South 88th Street Louisville, CO 80028-3159
Company	
Work phone	
Home phone	

Registration deadline is Friday April 2, 1993

Proposed Conferentes and Meetings

International Conference on Harmonics in Power Systems (ICHPS) 1996
ESMO 1996
ITC 2000
Sections Congress 1996
ICC 1995-2000



Joint Computer/Information Theory Society Denver Chapter JC/IT Video Library

The Joint Computer/Information Theory Society announces the establishment of the JC/IT Video Library.

Members wishing to borrow these video presentations must pay shipping charges and a refundable deposit. Please use the JC/IT Video Library Loan Request Form to borrow the videos. Information: Call Bryce Chapman, JC/IT chair, at 673-4762, or Shah Bhatti, JC/IT vice chair, at 682-6664.

JC/IT Video Library Loan Request Form

"Engineering Software System Development, Acquisition and Use with Software Reliability Measurement," by John Musa. With video notes. [IEEE]

Stress Testing[CMG] **Analysis of LAN Performance**[CMG]

Analyzing DB2[CMG] **MVS DASD**[CMG]

Capacity Management: Getting it going and making it work[CMG]

Data Workload Characterization [CMG]

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mail to: IEEE JC/IT Society, c/o Bryce Chapman, 2602 Ridge Drive, Broomfield, CO 80020

Schedule of Conferences and Meetings

March 17-19, 1993	Denver	NETA Tech. Conf. Int. Elect. Testing	Mary Jordan	(303) 467-0526
April 14-16, 1993	Denver	Intl. Conf. Management Cost Memory	Rich Breck	(800) 535-4746
April 28-30, 1993	Denver	EMC/ESD International	Renae Fierros	(303) 220-0600
June 6-9, 1993	Denver	EOS/ESD Assoc. Stds. Development	Renae Fierros	(303) 220-0600
November 3-6, 1993	Denver	ISSRE (Int. Symp. Software Rel. Eng.	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
August 17-19, 1999	Denver	EMC	Mark Lapchak	(303) 773-4626

Proposed Conferences and Meetings

International Conference on Harmonics in Power Systems (ICHPS) 1996

ESMO 1996

Sections Congress 1996

ITC 2000

ICC 1995-2000



THE INSTITUTE OF ELECTRICAL AND
ELECTRONICS ENGINEERS, INC.

CODE OF ETHICS

We, the members of the IEEE,
in recognition of the importance of our
technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to
our profession, its members and the communities we serve, do hereby commit ourselves to the highest
ethical and professional conduct and agree:

- 1 to accept responsibility in making engineering decisions consistent with the safety, health and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;
- 2 to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;
- 3 to be honest and realistic in stating claims or estimates based on available data;
- 4 to reject bribery in all its forms;
- 5 to improve the understanding of technology, its appropriate application, and potential consequences;
- 6 to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;
- 7 to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
- 8 to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;
- 9 to avoid injuring others, their property, reputation, or employment by false or malicious action;
- 10 to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.

Approved by the IEEE Board of Directors

August 1990



INTERNATIONAL SYMPOSIUM ON NEW ENERGY

APRIL 16-18, 1993

Radisson Hotel
1550 Court Place
Denver, Colorado

TOPICS: Zero Point Energy * Vortex Mechanics * N-Machines *
Cold Fusion * Scalar Wave Theory * Gravitational Effects *
Magnetic Motors * Transmutation of Elements *

SPEAKERS: Harold Aspden * Patrick Bailey * William Baumgartner *
Bob Beutlitch * Tim Binder * Harry Braun * Hal Fox *
Raymond Gelinas * Peter Graneau * Toby Grotz * David Hudson *
Donald Kelly * Moray King * Roy McAlister * Stefan Marinov *
Henry Montieth * Dale Pond * Troy Reed * John Stover *
Paramahansa Tewari * Charles Yost *

Registration:

Before March 1, 1993	\$110
Before April 1, 1993	\$130
At Door	\$150

CONTACT

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Joint Power Engineering/Industry Applications - **Kevin Wright**, NEI, 431-7895
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Power Engineering - **Kenneth McBryde**, CO Ute Electric Assoc., 249-4501
Reliability - **John Adams**, ValleyLab, 530-2300

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P.O. Box 4056, Englewood, CO, 80155-4056

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The Month at a Glance

April 7, 1993

Denver Section/School of Mines

April 14, 1993

Centennial Subsection Meeting

April 14-16, 1993

Intl. Conf. Mgmt. Cost Memory

April 15, 1993

PES/IAS Meeting

VTS/COMSOC Meeting

April 22, 1993

MTT/AP/GRS Meeting

Magnetics Society Meeting

April 28-30

EMC/ESD International

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Official Publication of the
IEEE Denver Section