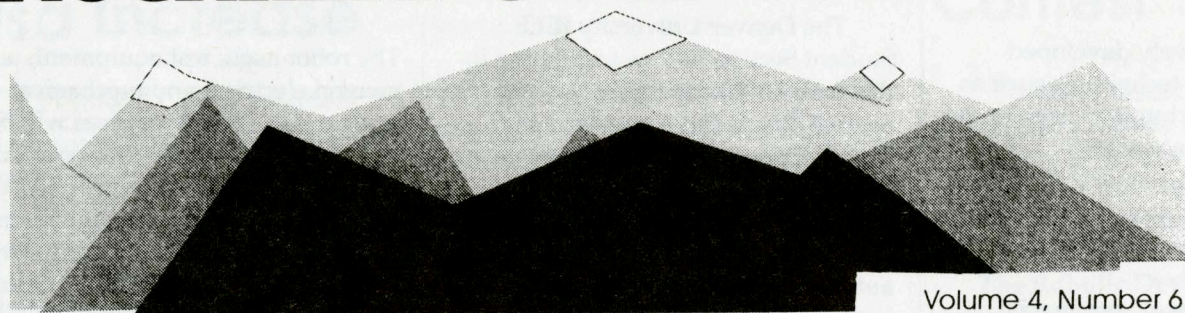


# RockIEEE Overlook



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Visit the IEEE Denver Section Home Page at [www.engr.du.edu/ieee/densec.html](http://www.engr.du.edu/ieee/densec.html)

## Society Chapters

### Computer Society

All members interested in participating in the Computer Society of Denver, please contact Jim West @ 303-218-5658 or [j.west@computer.org](mailto:j.west@computer.org).

### PES/IAS

PES/IAS meetings are typically held on the third Thursday of the month September through May excluding December. All participants are requested to sign up in advance by calling Barbara Linton at (303) 388-6322.

### The Engineers in Medicine and Biology

The EMB chapter for the Denver Section held its first meeting of the year on January 27. This was a joint meeting with the Laser and Electro-Optics Society. The seminar was entitled "Noninvasive Optical Detection of Glucose" and was presented by Kathleen Meehan.

A second meeting of the EMB will be scheduled in March, though the exact time and place have not been determined.

A third meeting will be held at 7:30pm on May 21 at NIST. This meeting will again be a joint meeting with the LEOS society. Please contact Kathleen Meehan ([kmeehan@du.edu](mailto:kmeehan@du.edu) or 303-871-2833) if you are interested in receiving further notices about the upcoming EMB meetings. Anyone interested in becoming an officer or assisting in organizing the EMB meetings should also contact Kathleen Meehan.

## Sitting in the Chair

by Cliff Alston

**"There is no Virtue like Necessity."  
W. Shakespeare**

This third month of the year brings gentle reminders of a general accounting. First quarter profits (losses) are projected and the appropriate spin is formulated. An increasing number of advertisements for tax services and loans and early returns hint of coming deadlines. Here in Denver, the flush of a Super Bowl victory gives way to critical assessments of the Rockies' pitching staff.

The Denver Section of IEEE is completing an assessment of our Chapter Officer Training Seminar, and preparing to rank our strengths/weaknesses relative to other Region 5 sections at our Conference in April. General comments on this subject can be summarized: 1) The Section is professionally and financially strong, with several centers of excellence on local campuses, corporations and utilities; 2) Although the Section has Board, Committee and Chapter positions unfilled, our current bounty of volunteers, listed on the Overlook's last page, performs its tasks with excellence, skill and patience; 3) Many of the tools the Section uses to serve its members, particularly its communication tools, are notably archaic and inefficient.

These comments lead to the above quote beginning these thoughts. Necessity in our case is not linked to invention, for both the means and the goal of 21st century communications already surround us; rather, I wish to stress the virtue in necessity by recalling the early days of the Internet, a.k.a. the ArpaNet. Twenty years ago, this network was a tool for scientific research. Early

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## Siting in the Chair

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researchers creatively developed Nobel Prize-level techniques such as packet switching, but they considered email functions only as an afterthought - a minor ArpaNet service. Today, email is easily the most utilized service provided, by necessity, by the Internet.

It is the nature of commercial interests to exploit a service to the fullest. We now seek to bring results-oriented evaluation to our engineering academic programs, similar to our evaluation of corporate projects. I propose that we apply results-oriented evaluation to the concept of fully exploiting Internet email for Denver Section communications services. IEEE Web sites and free IEEE email aliases are available and are just the beginning. We might pace the commercial sector if we can exploit all paths that might lead to 21st century communications today.

## IEEE Pairs Up With Teachers To Help K-12 Students Learn Technology

Piscataway, NJ, 29 January, 1999 -- Fifteen members of the IEEE Pre-College Education Coordinating Committee (PECC), a cross-section of engineers and educators, recently developed a framework for an IEEE pre-college education initiative. The framework was developed after the committee brainstormed ways in which the IEEE and the engineering community can collaborate with teachers to foster innovative teaching strategies among K-12 science, math, and technology teachers.

Formed in October 1998 at the Technological Literacy Counts workshop in Baltimore, MD, the PECC is one of the few IEEE committees that actively recruits non-engineers. Pete Lewis, Educational Activities Staff Director, contends, "It's important that the IEEE take an active role in enhancing the technological literacy of K-12 students. We can only do so by listening to the educational needs of those on the front lines, the teachers themselves."

In a round-table discussion format, participants sought to answer the following questions:

- In this rapidly growing technology age, WHAT tools/resources do K-12 educators need in order to most effectively teach their students science, math, and technology subjects?

- As the world's largest technical professional society, HOW can the IEEE, and the engineering community at large, help teachers foster technological literacy among their students?

A participating and appreciative eighth-grade science teacher from Oklahoma said, "I am so glad the IEEE is breaking out of the 'box' and reaching out to teachers." For more information, contact Barbara Stoler, IEEE Educational Activities, 445 Hoes Lane, PO Box 1331, Piscataway, NJ, 08855-1331; e-mail: b.stoler@ieee.org.

(From Christy Bouziotis Outreach Communications Coordinator c.bouziotis@ieee.org 1.732.562.6526).

## Robotics Competition

The Denver University IEEE Student Section will be competing in the Robotics Competition in April against other schools in the region. The design specifications this year are rather rigorous and will make for quite an event. The basic design for this year's competition is a small, autonomous robot, capable of navigating a piece of plywood fitted to resemble a house, detect a candle flame, extinguish it, and leave. Points are subtracted for attempting more technologically challenging things, such as elevated surfaces and non-ideal conditions, and points are added for touching walls and failing to meet mission objectives. The lowest score wins.

This year, since it is our first year competing in an event of such caliber, we are looking for all the help we can get, both financially and intellectually.

The robot itself, test equipment, and general electrical and mechanical engineering practices/ideas will be needed, and monetary support as well. We are looking forward to working with companies interested in sponsoring our team in any way, and hope to be successful in the competition, maybe even winning! Thanks for your time.

Please contact:

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## Congress Approves H-1B Visa Increase

On October 21, 1998, President Clinton signed into law the American Competitiveness and Workforce Improvement Act (ACWIA). The new law was passed in response to claims from business and educational organizations that the nation faces serious shortages of information technology workers. It makes major changes in laws governing the admission of foreign nationals to work temporarily in the United States on H-1B visas.

The new law provides for a three-year increase in H-1B admissions from 65,000 per year under prior law to 115,000 in FY 1999; 115,000 in FY 2000 and 17,500 in FY 2001. It also establishes a new \$500 per petition filing fee for businesses to fund scholarships in math, engineering and computer science; retraining for displaced workers and pay for improved program administration and enforcement. And it increases monetary penalties on employers of H-1B workers that file fraudulent applications or violate other provisions of the law.

Under pressure from IEEE-USA and other groups, Congress also enacted worker safeguard provisions to ensure that the admission of foreign nationals on H-1B visas does not adversely affect job opportunities and compensation for U.S. workers. Under these provisions, some employers who wish to hire H-1B workers will have to affirm that they have tried to recruit similarly skilled American workers and that they have not displaced American workers before they hire foreign workers. Unfortunately, the recruitment and retention requirements will only apply to a handful of so-called "H-1B dependent" companies.

IEEE-USA and other organizations representing engineers, computer scientists and health care

providers opposed enactment of the new law on the grounds that IT worker shortage claims were overstated and because of concerns about the limited applicability of the worker safeguards.

IEEE-USA will support needed reforms in the nation's immigration laws through legislative and regulatory actions designed to safeguard jobs, wages and working conditions for U.S. workers (including citizens, legal permanent residents and temporary foreign workers) and promote full utilization of the nation's engineering resources during the new Congress.

(From Pender M. McCarter, APR, Fellow PRSA, Associate Communications Director)

## Student Design Contest

Student Contest Deadlines:  
**The Undergraduate Design Contest:** Deadline for entry March 12, 1999. Guidelines: Same as for 1998 contest. Contact: Conference Chairman.

**The Robotic Devices Contest:** Deadline for entry is March 12, 1999. One team (undergraduates only) per Branch (max 30 teams in contest). Contact: John Jones (jjones@csu.com)

**Professional (non-technical) Student Paper Contest:** Deadline for entry is March 12, 1999. Contact: Paul Meisel (p.meisel@ieee.org).

Additional information concerning these contests can be obtained at <http://www.ewh.ieee.org/reg/5/sco ntst.html>, or the Student Guidebook, or by contacting Kathleen Meehan (kmeehan@du.edu) or Robert Whitman (rwhitman@du.edu).

## Which degree is better? A master's in engineering. Or a master's in business.

If you really want to be successful, the answer is both. After all, the best jobs are interdisciplinary, so you need to be, too. Not only do you need to know your professional area well, you also need a great deal of expertise in business management. That's why the Daniels College of Business offers an interdisciplinary Master of Science in Management program. Others may offer both degree programs, but they can't offer the strength in both disciplines that the University of Denver can. With advisors from both your specialty and business management areas working with you, you'll enhance your command of the field you're passionate about and—at the same time—you'll earn a master's in business management. (Our students even develop strategic plans for themselves!)

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