



## Atlanta Metro Chapter

Georgia Society of Professional Engineers

### May 2008 Meeting

- Date:** 11 May 2008
- Time:** Gather ..... 6:00pm  
Announcements and Introductions..... 6:20pm  
Dinner..... 6:30pm  
Brief Presentation of Interesting and Useful Internet Site ..... 7:10pm  
Presentation ..... 7:15pm  
Adjourn..... 8:30pm
- Where:** Steak and Ale, Tucker-Northlake, LaVista and I-285  
(2150 Northlake PKWY, Tucker 770.939.3582)  
Northlake Parkway just north of LaVista Road. Exit either at LaVista Road or Northlake Parkway. Steak and Ale is one block outside the Perimeter.
- Cost:** \$20 Including Meal
- Program:** Automate vs. Export The Work

**Speaker:** Steve Dickerson, Professor Emeritus, Georgia Tech

**RESERVATIONS ARE NECESSARY** because we need to tell the restaurant how many people to expect. Please call Steve Strong at phone 404.978.8051 or e-mail: s.strong@ieee.org **only if you plan to attend.**

Deadline is 2pm on meeting day to let me know.

Get a PDH. Remember Georgia PE's need 15 per year to maintain their Georgia PE license.

BRING A FRIEND -- Meet old friends -- Meet some new people -- Network

Even if you can't make dinner join us for the presentation.

We now have a table for company brochures set up before the meeting. Feel free to bring yours. For more details, please see the item at the end of the newsletter.



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*Georgia Tech retiree and inventor Steve Dickerson has ideas to keep American manufacturing competitive - and here. His specialty is using low cost robotic automation and machine vision to meet the cost challenge. Ever the entrepreneur, Dr. Dickerson is applying his know how to champion another start up company to provide cost effective technology to manufactures.*

- **DHS developing early warning system for cyber-attacks:** The [AP](#) (4/9, Robertson) reports, "Federal cybersecurity officials are trying to develop an early warning system that alerts authorities to incoming computer attacks targeting critical U.S. infrastructure," according to Homeland Security (DHS) Secretary Michael Chertoff. His "keynote speech at the RSA security conference, however, was light on details about this and other initiatives, many of which he said were classified." The DHS chief "did not say how the government plans to detect and flag computer threats as they sneak into government networks. But he did acknowledge the technical challenge in developing such a system." He added that "the system would improve upon the government's current tools for analyzing computer threats, which he said are built on 'fundamentally a backward-looking architecture' -- that is, they scrutinize threats coming into the networks and work backward to identify the nature and source of the attack."

<http://www.washingtonpost.com/wp-dyn/content/article/2008/04/08/AR2008040802585.html>

- **Disney unveils eight digital 3-D movies:** [Reuters](#) (4/9, Nichols) reports that, on Monday, "Walt Disney Studios previewed ten animated movies" of which "eight...will be made in digital 3-D." The technology "still requires moviegoers to wear geeky glasses, but the left- and right-eye images are calibrated so finely that most viewers experience no headache or eyestrain."

<http://www.latimes.com/entertainment/news/movies/la-et-disney9april09.1.162531.story>

- **Oil firm strikes deal to protect environment, tap into undersea reserves:** In a front-page story, the [Los Angeles Times](#) (4/11, A1, Weiss) reports that Plains Exploration & Production Co. (PXP), a Houston oil company, "has agreed to shut down its offshore oil production...decades early in exchange for approval this year to drill into untapped undersea reserves." This "unprecedented deal, announced Thursday by PXP and its fiercest environmental opponents, was designed to make a long-stalled drilling proposal more palatable to county and state officials in an area where a 1969 oil spill helped launch the modern environmental movement in California." Linda Krop, chief counsel of the Santa Barbara-based Environmental Defense Center, said, "Negotiations among these adversaries...resulted in more concessions from PXP than any state or local agency could ever muster."

<http://www.latimes.com/news/local/la-me-oil11apr11.1.7198481.story>



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- **Report confirms America's space dominance:** [The Economist](#) (4/10) reported, "A report by Futron, a technology consultancy, confirms America's dominance of space. On its space-competitiveness index -- which comprises 40 measures, including government spending, numbers of spacecraft built, numbers of spaceports, and corporate revenue from space ventures -- America is light years ahead of its closest rivals in Europe." The ranking has Russia in third and China in fourth, although China is "an emerging space power with ambitious goals backed by heavy government investment."

[http://www.economist.com/markets/indicators/displaystory.cfm?story\\_id=11019607&fsrc=RSS](http://www.economist.com/markets/indicators/displaystory.cfm?story_id=11019607&fsrc=RSS)

- **New IBM chips faster, consume less power:** [IDG](#) (4/15, Shah) reports that "IBM demonstrated technology Monday that improves performance and reduces power consumption on chips used in devices from mobile phones to high-performance servers." The chip's high-k/metal gate "boosts performance by up to 30 percent and reduces power consumption by up to 50 percent on chips manufactured using the 32-nanometer process," according to IBM. That "compares to chips manufactured using the 45-nanometer process operating at the similar voltage." Mukesh Khare, senior manager at IBM's microelectronics division explained that, "when a 45-nm process chip operating at 1.1 volts is scaled to the 32-nm process with high-k metal gate technology it will have a 24 percent increase in speed and a 40 percent reduction in power consumption." IBM "is shipping an evaluation kit that includes chip models and shows customers how to design chips using the high-k/metal gate technology," which "uses material to reduce electricity leaks on chips."

[http://www.pcworld.com/businesscenter/article/144540/ibm\\_boosts\\_performance\\_cuts\\_power\\_intake\\_on\\_chips.html](http://www.pcworld.com/businesscenter/article/144540/ibm_boosts_performance_cuts_power_intake_on_chips.html)

- **Cement plant emitting high levels of carcinogen, air regulator says:** The [Los Angeles Times](#) (4/15, Wilson) reports, "A cement factory near Riverside (Calif.) is emitting high levels of hexavalent chromium, a toxic carcinogen, from enormous outdoor dust piles blowing downwind across an industrial area and a residential community, the region's top air regulator" said on Monday. According to Barry Wallerstein, chief executive of the South Coast Air Quality Management District, "months of sampling and lab work showed that so-called clinker dust piles at TXI Riverside Cement in the Rubidoux area near the Riverside-San Bernardino County line were the source of high levels of airborne hexavalent chromium detected at sites in the area, including a uniform factory directly across the street." A company official said that although "TXI had been talking with air quality officials about the readings," the "plant had not officially been identified as the source of the emissions." Under California's toxic hot-spots law, Wallerstein said, "the facility's owners would be required to notify the public of the emissions and take steps to mitigate them."

<http://www.latimes.com/news/local/la-me-hex15apr15.1.378145.story>



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- **Tesla Motors to release fully-electric car:** [USA Today](#) (4/16, Woodyard) reports that the Tesla, "[a] little roadster that goes into regular production in two weeks, is already electrifying the auto industry." Even though Tesla Motors "promises that the Tesla will deliver pin-you-back-in-your-seat acceleration -- 0 to 60 miles per hour in a Ferrari-like 3.9 seconds," and has a "European sex appeal," its "groundbreaking distinction is under its carbon-fiber skin. The \$98,000 Tesla is the first production high-performance electric car." Powered totally by electricity, the car is "a plug-in that will never use a drop of gasoline. And it's billed as being able to go 221 miles in mixed city/highway driving on a full battery charge." Moreover, the vehicle "is being touted as the first of a wave of electric cars that will bring the most profound change in the auto industry since the first Model T rolled off Ford Motor's (F) assembly line 100 years ago." However, critics, cite "Tesla's high price, exotic battery technology, and lack of onboard backup power" to argue that "it will remain a niche vehicle."

[http://www.usatoday.com/money/autos/environment/2008-03-03-tesla-electric-car\\_N.htm](http://www.usatoday.com/money/autos/environment/2008-03-03-tesla-electric-car_N.htm)

- **Chinese solar-wafer maker awards \$1 billion contract to Fluor Corp:** The [Dallas Business Journal](#) (4/15) reported that "Fluor Corp. said it received a contract from LDK Solar Co. to provide engineering, procurement, and construction management services for a new, \$1 billion polysilicon facility in China," which will be "adjacent to LDK Solar's existing solar wafer manufacturing plants. The new facility is expected to produce up to 15,000 metric tons per year of polysilicon and 90,000 metric tons per year of trichlorosilane." The Dallas Business Journal noted that "LDK Solar, based in Xinyu City, China, is a leading manufacturer of multicrystalline solar wafers, which is the principal material used to produce solar cells."

<http://www.bizjournals.com/dallas/stories/2008/04/14/daily16.html>

- **'Missing link' memristor created: Rewrite the textbooks?** The long-sought after memristor--the "missing link" in electronic [circuit](#) theory--has been invented by Hewlett Packard Senior Fellow R. Stanley Williams at HP Labs (Palo Alto, Calif.) Memristors--the fourth passive component type after resistors, capacitors and inductors--were postulated in a seminal 1971 paper in the IEEE Transactions on Circuit Theory by professor Leon Chua at the University of California (Berkeley), but their first realization was just announced today by HP. According to Williams and Chua, now virtually every electronics textbook will have to be revised to include the memristor and the new paradigm it represents for electronic circuit theory.

<http://www.eetimes.com/news/latest/showArticle.jhtml?articleID=207403521&pgno=1>

- **Hydraulic Hybrid Cars: No Batteries Required:** What if there was a hybrid vehicle technology that could at least double the gas mileage of passenger cars, SUVs and light trucks? What if it could slash emissions by 50 percent or more? And what if it could challenge our usual mileage expectations by offering better fuel consumption in the city than on the highway?

<http://www.designnews.com/article/CA6549294.html?nid=2333&rid=1172839912>



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- NSPE Job Postings: Looking for a job, need to hire an employee? Did you know that NSPE has a job posting board? Well they do!!!  
[http://www.nspe.org/career/jobboard/job\\_post\\_faq.asp](http://www.nspe.org/career/jobboard/job_post_faq.asp)
- Need a new domain name? Licensed PEs can now register secure, personalized .pro and .eng.pro domain names. NSPE members will receive a substantial discount by signing up through the NSPE Web site.
- Would you like to use the NSPE logo? Licensed Members and Members are encouraged to use the NSPE logo on personal and business stationery and business cards.
- Share your company brochures: We now have a table set up at the start of our meetings for company brochures. If you'd like to bring yours for others to take, feel free. Because we are not equipped to store these between meetings and don't want to be responsible for out of date information, all brochures not picked up will be discarded at the end of the night. Please keep these to company information only. This is not the place for political, religious, or other personal literature. Please keep them related in some way to engineering. Please no obviously controversial or objectionable material. The board reserves the right to request that any inappropriate material be removed.
- Brief Articles: If you have a brief pertinent article that you'd like to write for the newsletter, please send it to me at [s.strong@ieee.org](mailto:s.strong@ieee.org) and I can see about adding it. Also if you know of something in the news that is pertinent and would like to refer the readers to that article, feel free to send me a link. All articles will be subject to editorial review by the board and its officers.