

Technologist

Includes information for the Syracuse Sections of the IEEE and the NSPE

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AIA - American Institute of Architects	Jamie Williams	Pres.	476-8371
AIAA - American Institute of Aeronautics & Astronautics	John E. LaGraff	Chair	
AIChE - American Institute of Chemical Engineers	Suresh Santanam	Chair	655-8161 x 340
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NSPE - National Society of Professional Engineers	Michael R. Hayes, P.E.	Pres	455 2000
NYSAPLS - NYS Assoc. of Professional Land Surveyors	Robert S. Green	Chair	428-4358
NYSATE - NYS Association of Transportation Engineers	Mary Clements	Pres.	428-4627
SAE - Society of Automotive Engineers	Angie Errico	Chair	432-4363
SAS - Syracuse Astronomical Society	Stu Foster	Pres.	492-9118
SBE - Society of Broadcast Engineers	Vincent Lopez	Pres.	472-6800
SFPE - Society of Fire Protection Engineers	Dennis McCarty	Pres.	716-599-4238
SME - Society of Manufacturing Engineers	Sam Waite	Chair	432-0700
SWE - Society of Women Engineers	Susan Weaver	Pres.	432-0506

The Technology Alliance of CNY has been reporting on technical excellence since 1903.

Vol. 9 No 1

September 2006

The Syracuse Section of the
Institute of Electrical and Electronics Engineers
www.ewh.ieee.org/r1/syracuse



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1. Honorees Did Groundwork for Popular Applications The next time you get an ultrasound image of your body, withdraw money from a cash machine, or watch a three-dimensional computer-animated film, you can thank some of the recipients of this year's IEEE medals for the experience. These are just a sample of the everyday tasks made possible because of the contributions of the 18 individuals recognized at the IEEE Honors Ceremony in June.
2. GOLD Celebrates Tenth Anniversary Engineers aren't typically known to be the partying type. But the Graduates of the Last Decade, better known as GOLD, are kicking off a monthlong celebration to commemorate their 10th anniversary.
3. Featured Conference: Robotics, Developing a Human Touch The robots we deal with don't look like the humanoids of myth and science fiction. Sometimes they're not even visible, just voices on the telephone. And the links between our intelligence and theirs are becoming shorter, stronger, and more numerous. Taking place in Beijing, the International Robotics and Systems Conference is scheduled for 9 to 15 October.
4. Ethics Discussed in Latest Issue of "IEEE Potentials" How are engineers to deal with the tricky issue of ethics? An article in the latest "IEEE Potentials" (July-August, p. 14) sets out to provide some answers. "Ethics for Engineers Falls in an Unstructured Gray Zone," by Jim Watson, suggests that ethics are seldom a purely black-and-white issue; as a result, engineers must, at times, not only factor in whether it is possible to create something, but also whether it would be correct to do so. IEEE members may read "IEEE Potentials" online at no charge as a benefit of their membership.
5. Register for September Project Management Seminar If you want to use project management techniques to succeed at work, accomplish more at home, or make a greater contribution to your community, then the "10 Success Factors in Project Management" seminar could be for you. The online seminar, taking place on 27 September at 9 a.m. EDT, will describe the 10 critical factors of a project, its lifecycle, and how to apply project management to a variety of tasks. You'll also learn how to run effective meetings and produce useful reports. Host Margaretha Eriksson will draw on her diverse, 25-year experience with engineering projects and consulting to bring you first-hand knowledge, as well as personal anecdotes. Registration ends 20 September.
6. Choose A Tech Webinar at IEEE Spectrum Online The IEEE Spectrum Online Webinar series features seminars on a broad array of subjects, including automotive MEMs, career advice for entrepreneurs and computer scientists, medical technology, electronic product design, and the impact of mobile devices on network security.
7. Benefits of Wi-Fi Mesh Networks One silver cloud in last year's disastrous hurricane season was the way Wi-Fi technology helped at least some of the newly homeless to communicate when regular telephone service was down. In Houston, equipment from an experimental inner city wireless network was used to let thousands of people stranded in the Houston Astrodome find their loved ones. Now the same mesh technology has been added to the Wi-Fi standard, making wireless broadband networks, such as those planned for Philadelphia and San Francisco, cheaper and more effective.

BOOKMARK THIS!

Check out our Section Calendar at <http://www.ewh.ieee.org/r1/syracuse/cal.htm> for additions, updates and directions to meetings. This includes meetings that we have not been able to add to the Technologist due to scheduling. The Syracuse Section will add meetings for other organizations where IEEE members are invited and link to your web page. Don't have a web site for your organization? We will include the information on ours for related technical societies. Contact Don Herres at d.herres@ieee.org.

IEEECONTACT INFORMATION

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Those members who need to **CHANGE CONTACT INFO** on file with the IEEE, including e-mail addresses, should do so at:
 <<http://www.ieee.org/membership/coa.xml>>

SYRACUSE SECTION Meeting Information

Our Executive Committee Meetings are held on the first Friday of the month and are open to all members. Minutes are available online at <http://www.ewh.ieee.org/r1/syracuse/meet.htm>

Check out the all new Syracuse Section website:

Message from the Chair – Mike Hayes, P.E.

It seems like the summer went quickly; I hope everyone had a chance to enjoy it. We've got a lot of excellent programs this fall that I hope you'll take advantage of.

We are having a speaker coming all the way from the United Kingdom to discuss "*The Interaction between Business and Technology in Early Transatlantic Cables*", aka the "Victorian Internet" at OCC on September 18th. I expect that to be a very interesting presentation. Best of all, it's free.

On October 5th, we're having a presentation at the Syracuse University Sheraton about the DARPA Grand Challenge race across the Mojave Desert. The catch is that the cars were driverless, autonomous vehicles. It was pointed out to me that many cars already seem to be driverless, but this one really was!

Then on October 18th, there will be a meeting at OCC Whitney Auditorium about Nanotechnology, Electrons and the Electric Company. I read an article by our speaker, Jack Uldrich, titled: "A Cautionary Tale: Nanotechnology and the Changing Face of the Electric Utility Industry", and it was very interesting. "Stuff" is happening that I would never have dreamed of.

The following week on October 25th at OCC Whitney Auditorium, Stan Wilczek, Jr, nuclear engineer and author of "The Kept Secret" will discuss: "Secrets, Mysteries and Engineering Skills" How Engineering Studies Prepares You for Writing. He has recently published his first novel of intrigue. Stan credits his success to a life-long interest using his skills as an engineer to create, design and communicate in an engaging and thoughtful manner.

IEEE is one of the co-sponsors of the Third Annual Central New York Engineering Expo, which will be held at the Holiday Inn in Liverpool on Monday, November 6, 2006. There will be 6 or 7 PDHs available for New York Professional Engineers for under \$100.

Please see the meeting announcements elsewhere in this newsletter for more information, some of which are in the NSPE and TACNY portions of the newsletter.

Does it seem like prices keep climbing higher and higher? Well, there's one price that hasn't changed in over a dozen years. That is the price for most IEEE dinner meetings. When I moved to Syracuse in 1992, we were charging \$15 for most meetings. We still are most of the time. Does that mean we're not paying more to the restaurants and hotels where we have our meetings? No, of course not. The Section is subsidizing the costs so that economics are not a hurdle for you to attend our meetings. For example, the meeting at the Sheraton will cost about \$28 per person, members and their guests only pay \$15. Life members and students only pay \$5. Take advantage of this, it's your money that we're spending!

Please feel free to send me your comments and suggestions. My email is m.hayes@ieee.org.



IEEE Syracuse Section

Topic: **Insight Racing and the DARPA Grand Challenge – Driverless Vehicles**

Speaker: Grayson Randall, IBM

Location: Syracuse University Sheraton Hotel

Date: Thursday, October 5, 2006

Time: Networking – 6:00 PM
Dinner – 6:30 PM
Presentation – 7:30 PM

Cost: Members plus family & one guest - **\$15 (\$25 on or after 10/3/06)**
Students & Life Members plus family & one guest - **\$5 (\$15 on or after 10/3/06)**
Non-members - **\$20 (\$30 on or after 10/3/06)**

Reservations: Mike Hayes: phone 455-2000 or email: mhayes@cscos.com
Please make reservations not later than Monday, October 2, 2006 and provide names of all family members & guests when making a reservation. Pay at door.

Driven by a Congressional mandate to convert one-third of the military vehicles to driverless computer-driven mode by 2015, the Department of Defense who holds great promise for autonomous and women in uniform at risk. Ra-Rat computer driven Chevy Suburban DARPA Grand Challenge Race, the team field had stopped mid course the 1987 Chevrolet Suburban permit it to drive unknown terrain, regulate its speed, and avoid obstacles just like a human driver but without any human intervention.



authorizes and runs the DARPA (Defense Agency) Grand Challenge, believes the future vehicles to perform missions that put our men leigh, NC based, Insight Racing team's Desert ban was one of the last 3 robots on the on October 8, 2005. A finalist in the historic Desert Rat was still running after 17 of the 23 in the Mojave Desert course. The sensors on

Grayson will talk about the team, what it took to develop the robot, and has lots of pictures and video of the qualification and race events in California. More information is available at <http://www.insightracing.org>.

Grayson Randall is the team leader of Insight Racing. He is responsible for the overall system design and architecture of their Grand Challenge entry. Specific development responsibilities include vision processing and sensor data management. Grayson started the team in early 2003 in response to the initial DARPA Grand challenge. Grayson is a senior software engineer at IBM. He has 24 years experience in systems design and architecture. Grayson holds a BS in Aerospace engineering from Parks College of St. Louis University. He is chairman of IEEE Robotics and Automation chapter for Eastern North Carolina. He also mentors a FIRST high school robotics team which won 1st place in the 2004 international FIRST competition as well as numerous other awards.

Date	Time	Location	Topic
September 8	12:00 PM	C&S Engineers	Section Executive Committee Meeting
September 18	6:00 PM	OCC Whitney Auditorium	Victorian Internet The Interaction between Business and Technology in Early Transatlantic Cables
September 19 - 20	12:00 PM	OnCenter	fuse2006
October 5	Networking - 6:00 PM Dinner - 6:30 PM Presentation - 7:30 PM	Sheraton University Hotel	DARPA Driverless Car Challenge
October 6	12:00 PM	C&S Engineers	Section Executive Committee Meeting
November 3	12:00 PM	C&S Engineers	Section Executive Committee Meeting
November 6	8:15 AM - 5:00 PM	Holiday Inn Electronics Pkwy & 7th North Liverpool, NY	CNY Engineering Expo Earn up 7 PDHs for PE Registration Re- quirements
November 10	12:00 PM	Golisano Auditorium RIT Rochester, NY	3rd IEEE Upstate NY Workshop on Com- munications & Networking
January 5	12:00 PM	C&S Engineers	Section Executive Committee Meeting
February 2	12:00 PM	C&S Engineers	Section Executive Committee Meeting
March 2	12:00 PM	C&S Engineers	Section Executive Committee Meeting
April 6	12:00 PM	C&S Engineers	Section Executive Committee Meeting
May 4	12:00 PM	C&S Engineers	Section Executive Committee Meeting



Joint Meeting

IEEE Syracuse Section & TACNY Sweet Lecture

Topic: “Victorian Internet” - *The Interaction between Business and Technology in Early Transatlantic Cables*

Speaker: Dr. Donard deCogan, University of East Anglia, UK

Location: Onondaga Community College – Whitney Auditorium

Date: Monday, September 18, 2006

Time: 6:00 PM

Cost: Free

Reservations: Mary Reidy: phone 428-5326 or email: mary.reidy@us.ngrid.com
Please make reservations not later than Thursday, September 14, 2006.

Dr. Donard de Cogan, Reader in the School of Computing Sciences at the University of East Anglia, will speak on *The Interaction between Business and Technology in Early Transatlantic Cables*. The establishment of the Victorian internet, the world network of submarine telegraph cables had as profound an impact in its time as today's Internet is having for us. It is interesting to draw parallels. The former was established under the hegemony of the British Empire, while the latter has grown out of pioneering work in the United States. It is equally interesting to observe the differences. The world-wide web uses stable technology, which is incredibly cheap, when measured in terms of bits per dollar. It is altruistic and the information is distributed. Cable communications, on the other hand used untested technology that was forced to adapt to the pressures that were put upon it. It was hampered by the limitations that lack of bandwidth caused and the cost per bit was enormous. In essence, it was dominated by the information conduits rather than by the content. Those who managed the conduits had limitations and the economic models by which they operated are very different to what we see in use today. This is a topic which has clear parallels with our own communications growth in the age of mobile communications.

In assessing the interaction between the business of communications and the technology by which it was achieved in the period 1866 - 1880 the speaker is in a unique position. His wife's family claims four generations of telegraph cable operators, beginning with her great-great grandfather, James Graves. He was the first superintendent of the Valentia island cable station at the Eastern termination on the West coast of Ireland. In the last century, a granduncle worked for the Italian Cable (Italcable) at Anzio from 1927 until Mussolini removed all non-Italian staff. In this talk, use will be made of some novel computer-based methods for the presentation of parallel-themed historical information, which he hopes others might find useful.

Pizza, soft drinks, and water will be available at no cost to attendees.

**CENTRAL CHAPTER
NY STATE SOCIETY OF PROFESSIONAL ENGINEERS**

NEWSLETTER

SEPTEMBER 2006

President's Message - Mike Hayes, PE

Mark your calendars for the Central New York Engineering Expo on Monday, November 6, 2006 at the Holiday Inn in Liverpool. Please see the schedule on the chapter's web site at www.cnype.org. There will be an opportunity to earn six or seven PDHs. The cost will again be \$80, which includes lunch. I am trying to arrange for a lunch speaker, which would allow us to offer 7 PDHs; 6 will be offered if there is no lunch speaker. The www.cnype.org web site will provide a link to the online registration site.

Credit cards will be accepted only for online registration. We haven't figured out how to accept credit cards the day of the Expo without either a lot of hassle or higher expenses. Checks or cash will be accepted "at the door" at the higher late registration fee of \$100.

Additional PDH programs will be offered this September and October plus January through June. Most, but not all, will be lunchtime meetings eligible for 1 or 2 PDHs. Please see the announcement below for the September meeting. The goal of the CNY PE chapter is to sponsor programs offering 14 PDHs a year, including the Expo.

We are also having our annual presentation about New York PE licensing. See the announcement below for more information. Although aimed primarily at students, it is open to anyone interested in learning the licensing requirements and current PE Board policies.

The Syracuse Post Standard listed our Chapter's Scholastic Achievement award winners in the June 16, 2006 edition of the newspaper. As you may remember, we presented \$1000 awards to Patricia Hurd, Manlius Pebble Hill and Christopher Wheeler, Cazenovia. We'll have the article posted on our web site. Your contributions to our scholarship fund make this possible.

Finally, I am debating about offering a course about electrical power system engineering for non-electrical engineers. The course would familiarize you with electrical systems for buildings, some design considerations, and an overview of the National Electrical Code. The course (or courses) would offer 12 to 24 PDHs. See below for a tentative course syllabus. The course would start sometime next spring. **Please let me know if you would be interested in this course.** You can send an email to me at mhayes@cscos.com.

Electrical Power System Engineering Overview for non-Electrical Engineers			
Class 1	Typical building power system description & NEC overview & voltage levels & clearances	Class 7	Grounding
Class 2	Electrical power system math	Class 8	Motor circuits
Class 3	Load calculations	Class 9	Transformers
Class 4	Short circuit calculations	Class 10	Services, feeders, & branch circuits
Class 5	Voltage drop calculations	Class 11	Special cases: hazardous areas, hospitals, fire pumps
Class 6	Overcurrent protection	Class 12	Comprehensive problem

NSPE Meeting Announcement 1

Topic: Geotechnics: Looks Like Dirt To Me!

Speaker: Ms. Beth Ann Smith, PE

Location: C&S Engineers
499 Col Eileen Collins Blvd (Hancock Airport Access Rd)
Syracuse, NY 13212

Date: Friday, September 22, 2006

Time: Lunch – 11:45 AM
Presentation - Noon

Cost: \$10

Reservations: Mike Hayes, 455-2000, mhayes@cscos.com, by September 21, 2006

The objective of the presentation is to inform what methods are available to find soil information for projects from design to construction. Basic soil properties needed for projects can be found from existing information, subsurface investigations, laboratory testing and construction quality assurance/quality control soil testing.

Ms. Smith has education and experience in civil and environmental engineering with special emphasis in the area of geotechnical engineering. Ms. Smith has experience as a geotechnical engineer on projects for terrestrial and marine earthwork activities, site development, slope stability analyses, drainage analyses, building foundations, sanitary/storm sewer and pipeline construction, highway construction, earthen embankment dam for reservoirs, general structure construction, solid waste facilities, site investigations and environmental remediation projects.

There will be one PDH offered for this presentation.

NSPE Meeting Announcement 2

So You Want To Be an Engineer: The Ins and Outs of Getting Licensed in NYS

A Panel Discussion Sponsored By:

CNY Chapter of the NY State Society of Professional Engineers, NYS Department of Education, SU College of Engineering & Computer Science, and IEEE Student Chapter

Date: September 27, 2006

Time: 5:30 PM

Location: Room 369, Link Hall, Syracuse University.

Parking will be available at no charge in the SU VIP lot (q4) on College Place adjacent to the Science and Technology Building.

Jane W. Blair, P.E. Executive Secretary of the Engineering and Land Surveyor's Licensing Board, NYS Education Department will be our panelist for a discussion of issues relative to the licensing of engineers. Topics will include: Why be licensed?, the application process, the exams (including recent changes).

Contact TBD (SU contact—see web site www.cnype.org or send email to John Przepiora), *to arrange for parking*, John Przepiora, P.E. (email: jwp134@twcny.rr.com) for program details.

There is no charge for attendance at this session.

Calendar

Date/Time	Topic	Speaker	Location	Cost	Contact
9/22/06	Geotechnical Engineering	Beth Ann Smith, PE	C&S Engineers	\$10	Mike Hayes, PE, 455-2000, mhayes@cscos.com .
9/27/06	Getting Licensed in NY	Jane Blair, P.E. (tentative)	Syracuse University., Link Hall, Room 369	Free	Mike Hayes, PE, 455-2000, mhayes@cscos.com .
Oct 06	TBD	TBD	TBD	TBD	Seventh in series of "PDH" luncheons. Date is tentative.
11/6/06	Various	Various	Holiday Inn, Liverpool	\$80	2006 CNY Engineering Expo. 6 or 7 PDH.
Jan 07	TBD	TBD	TBD	TBD	Joint with AIA & ACEC. Meeting @ Ashley-McGraw (tentative). "PDH" dinner.

CALENDAR (continued)

Date/Time	Topic	Speaker	Location	Cost	Info/Contact
Feb 07	TBD	TBD	TBD	TBD	Sixth in series Joint with AIA & ACEC. Meeting. location TBD. "PDH" lunch & Engineers' Week meeting. of "PDH" luncheons. Date is tentative.
Mar 07	TBD	TBD	TBD		Seventh in series of "PDH" luncheons. Joint with AIA & ACEC. Meeting @ Wyndham (tentative). "PDH" lunch. date is tentative.
Apr 07	TBD	TBD	TBD	TBD	"PDH" luncheons
May 07	TBD	TBD	TBD		"PDH" luncheons
June 07	TBD	TBD	TBD	TBD	"PDH" luncheons

WEBSITE

There are a number of events, schedules and dates in this newsletter. Unfortunately the slowness of the printed word keeps it at least 3 weeks behind your receipt. To keep current right up to the event, go to our website at <http://www.cnype.org> . The site is as up to date as we can make it. **Check it today for current EXPO schedule and registration forms.**

BOARD OF DIRECTORS MEETINGS

NSPE members are most cordially invited to attend all board meetings. The next meeting is scheduled for Wednesday, September 6, 2006 at noon at Microwave Filter. Those wishing to attend should contact Mike Hayes: (315) 455-2000 ext. 4384; mhayes@cscos.com to confirm time and date.

SCHOLARSHIPS

Each year the Central New York Chapter of the New York State Society of Professional Engineers (CNYSSPE) awards scholarships to worthy High School Seniors who will be going to college in an engineering or technical discipline. These young people are judged by an impartial algorithm based on their academic background, scholastic achievements and SAT scores. We are actively soliciting donations from local firms and individuals to support the scholarship fund. Public attribution and appreciation will be publicly expressed in all news releases, The Technologist newsletter and at the annual "Celebration of Technology" dinner. For additional information please contact Carl Fahrenkrug, carl-f@microwavefilter.com, 438 4722

Thank you in advance for your generosity. Together we can encourage more Central New York young people to choose engineering as a career. Your donation check should be made out to the CNYSSPE Scholarship Fund and sent to:

CNYSSPE c/o Microwave Filter Company, Inc.
6743 Kinne Street
East Syracuse, New York 13057
ATTN: Nancy Young

THANK YOU

We continue to seek donations for your Chapter's Scholarship Fund. The fund is supported by contributions from firms and individuals who take an active interest in the future of our profession. Current contributors include:

- Associated Builders & Contractors
- Blasland, Bouck and Lee
- C&S Engineers Inc.
- Clough Harbour
- Klepper Hahn & Hyatt, PC
- Microwave Filter
- Ram-Tech
- Stearns & Wheeler
- Syracuse Research Corporation.
- Syracuse Thermal Products
- Watkins Environmental Sciences, P.E., P.C.

Officers 2006-2007

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Web Site of the Month

<http://www.battelle.org/forecasts/default.stm>



Looking Forward

What changes in technology will you see in the next 10 years? Perhaps a universal remote to turn on the computers, lighting, appliances and HVAC in your home? Or diabetics getting insulin from an imbedded sensor-delivery system? Researchers at Battelle, an Ohio-based company that commercializes technology, has compiled lists of what they see happening.

President's Message

Somehow, the summer is over, or at least the editorial deadline for the September issue is over. Therefore I'll be brief. First of all, I appreciate the confidence of our Board that has reelected me as president of TACNY. Mary Reidy once again will be our Program VP, and Marc Viggiano will take over as lead for the Technical Societies Council. Bill Busher has been elected treasurer, and Mike Masingale continues as secretary. Thank you to all our officers, and to new Board members Jennifer Reina and Maria T. Welych, for stepping up and adding to already full plates.

Mary Reidy and the Program Committee have a number of exciting programs coming up, details of which may be found elsewhere in the Technologist. We have already begun discussions with a possible keynote speaker for the 2007 Celebration of Technology. Our Junior Café Scientifique continues to meet monthly at the MOST.

Like any all-volunteer organization, the program committee can use additional help. If you are interested in working on any of these activities, drop me a note at hollander@tacny.org. Can't help, but would like to attend? Check out all our upcoming events at www.tacny.org/calendar.

Thanks.

Howie



**Sweet Lecture:
Learn the Benefits of 'Going Green'**
6:30 p.m. Oct. 3, 2006

TACNY is sponsoring a presentation and tour of the Enable building from 6:30 to 8 p.m. Oct. 3 at the building, 1603 Court Street, Syracuse. The presentation, entitled "Why Build Green?", and tour will be given by Tracie Baule-Hall, the former development director at Enable who currently is executive director of the Upstate Chapter of the U.S. Green Building Council.

The Enable Building was recently honored as a Technology Project of the Year at TACNY's 2006 Celebration of Technology Banquet.

This tour and presentation will address the questions surrounding the environmental issues of the green building initiative. Hall will discuss the human health and performance expectations as well as address the value engineering issues associated with the decision to implement this technology for Enable.

This tour and presentation qualifies as a John Sweet Lecture. Professor Sweet established a Sweet Lecture as part of the Technology Alliance of Central New York(TACNY)'s mission for the development of technology presentations benefiting the Central New York community. This presentation is free and open to the public.

Event is limited to the first 80 people to register. Due to the limited space available, please e-mail your reservation as soon as possible to programs@tacny.org.

**Sweet Lecture:
Engineering
Career Serves
as Training
Ground for Writer**
6:30 p.m. Oct. 25, 2006



Ever think that engineering studies provide you with a unique skill set to develop stories of intrigue, mystery and detail? If so, this Sweet lecture might be for you.

Stanley Wilczek Jr., a retired nuclear engineer, will give a talk entitled "Secrets, Mysteries and Engineering Skills: How Engineering Studies Prepares You for Writing" from 6:30 to 8 p.m. Oct. 25 at Whitney Applied Technology Center on the Onondaga Community College campus.

Wilczek recently published his first novel of intrigue, "The Kept Secret." He credits his success to a life-long interest using his skills as an engineer to create, design and communicate in an engaging and thoughtful manner. Wilczek's work is an example of the success that engineers can obtain communicating original written designs.

Wilczek will share his experiences and provide tips on how to develop good communication skills, as well as provide encouragement to other "budding" novelists. For more information about Wilczek and some of his works, link to <http://www.stanwilczekjr.com>.

This tour and presentation qualifies as a John Sweet Lecture. Professor Sweet established a Sweet Lecture as part of the Technology Alliance of Central New York's mission for the development of technology presentations benefiting the Central New York community.

The presentation is free and open to the public. Due to limited space, please e-mail reservations to programs@tacny.org.

Spurring CNY Technology Businesses

Fuse 2006, a two-day initiative highlighting existing technology business successes and new opportunities for technology business growth in Central New York, is slated for Sept. 19 at Syracuse University's Whitman School of Management and Sept. 20 at the Oncenter. Business executives, college presidents, and industry experts are expected to cover such topics as alternative energy systems, Web 2.0, and personalized health care.

It costs \$95 to attend one day of Fuse 2006, \$125 for both days. For a detailed agenda, list of speakers and to register, link to <http://www.fuse2006.com/>.

Save the Date: Engineering Expo 2006

Plans are being finalized for CNY Engineering Expo 2006, which is set for Nov. 6 at the Holliday Inn at Electronics Parkway and Seventh North Street, in Liverpool. The daylong event, which will run 8:15 a.m. to 5 p.m., features seminars in five different engineering areas: civil, mechanical, electrical, professional/industrial, and fire protection. Attendees can earn up to seven PDH for PE registration requirements.

You can download a complete itinerary at <http://www.ewh.ieee.org/r1/syracuse/cal.htm>. The event costs \$80 per person for registrations postmarked by Oct. 31, or \$100 after. For more information, contact Mike Hayes at 455-2000. To register, call Alicia Faber at 455-2000 or e-mail her at afaber@cscos.com.

Junior Café Scientifique

Junior Cafe Scientifique, an interactive science talk for students in grades six through 12 and their families, has been drawing sizable crowds to the Milton J. Rubenstein Museum of Science and Technology on the third Saturday of the month for nearly a year. The 9:30 a.m. event even draws adults who don't bring their children, although the focus is on students for a question-and-answer session.

The lecture series, which is sponsored by TACNY, is modeled after the International Cafe Scientifique, which began in Britain, and is among few Junior Cafes in the United States. The program features a brief talk by a guest speaker on a current science, mathematics, engineering or technology topic. This is followed by a snack to "help digest the talk," then questions. At the conclusion, attendees are invited to tour the MOST free of charge.

Café founder: Gwendolyn Maturo and organizer Peter Plumley are still working to line up speakers for the next school year, but the next four months have been scheduled:

Sept 16: How to Make Electricity from Sunlight

Speaker: Eric Shiff, a physics professor at Syracuse University

Oct. 21: Nanotechnology: About Little Things, But It's Big Science

Speaker: Teddy Asefa, a chemistry professor at Syracuse University

Nov. 11: Workplace Detectives: A Day in the Life of an Epidemiologist and Industrial Hygienist

Speaker: Dr Shannon Magari of Colden Corporation

Dec. 16: Erie Canal's Engineering Story

Speaker: Sam Clemence, a professor in Syracuse University's Department of Civil and Environmental Engineering

For more information and to register, call the MOST at 315-425-9068, ext. 2121. If you'd like to suggest a topic or speaker, or to volunteer, contact board member Gwendolyn Maturo at gmaturo@tacny.org or by phone at 435-4450. For a full calendar of TACNY events, visit www.tacny.org.

Not Just for Kids Anymore?

Even adults have fun at Junior Café Scientifique lectures, held every Saturday morning at the Milton J. Rubenstein Museum of Science and Technology. Take, for instance, last month's lecture by Sam Sampere, lab manager at Syracuse University's Physics Department.

In his job, Sampere is responsible for developing demonstrations that visually illustrates scientific topics.

When attendees arrived Saturday morning for Junior Café Scientifique, Sampere greeted them with a table full of gadgets and equipment. For almost two hours, he used one demonstration after another to illustrate the existence of waves and how they move.

With the use of a wave made up of wooden rods, Sampere demonstrated constructive and destructive interference and how they affect waves. He picked up a solid wave and pushed it into a slot on the side of the wooden-rod wave. When the second wave was pushed in all the way, the peaks and troughs lined up perfectly, doubling the size of the wave – constructive interference. But when the second wave was pulled out a little so its peaks were aligned with the first wave's troughs, the wave evened out and became level – destructive interference.

Waves also exist in sight and sound, and those are much harder to demonstrate. People cannot see the wavelength of light because one wave measures one billionth of a meter long. Yet Sampere was able to show that, too, with the use of a Michelson interferometer, a device that splits and reintegrates a light beam to introduce interference, a photometer and audio equipment.

He hooked up a laser pen to the interferometer, split and recombined it, and displayed it on the wall. Lines of darkness interrupted the light from the device. Once he hooked it up to the photometer and audio equipment, the light was translated into a steady noise. When Sampere placed his hand in front of one of the light beams, the sound was interrupted.



Sam Sampere shows physics teachers in California one of the wave devices that he demonstrated to attendees of the Junior Café Scientifique.

The most dramatic demonstration came at the end, when Sampere used sound waves to break a glass beaker. First, he found the frequency at which the beaker vibrated. Then, after putting on headphones and warning the audience to plug their ears, he turned up the sound, loud. Within seconds, the beaker began to shake violently and then shatter. The audience cheered and applauded.

Junior Café Scientifique, which is sponsored by TACNY, meets at 9:30 a.m. the third Saturday of every month at the MOST. After the event, attendees can tour the MOST for free.

Staying Skeptical

Dr. Stephen Barrett, founder and board member of the National Council Against Health Fraud, recently spoke about "The State of Quackery Today" at Onondaga Community College. Dr. Barrett runs 22 Web sites including Quackwatch.org, a nonprofit corporation whose purpose is to combat health-related frauds, myths, fads and fallacies.



The lecture was sponsored by CNY Skeptics, the Technology Alliance of Central New York and the Syracuse Section of the American Society for Quality. Following is an interview conducted by Bill Busher, a past president of TACNY and current President of CNY Skeptics.

What is your definition of quackery?

It is the promotion of health products or services that are unsubstantiated and lack a scientifically plausible rationale.

How can unjustified or outright false claims be made about health products or services?

There are so many people involved in the making misleading advertising claims, that the government does not have the regulatory resources to effectively monitor or control them.

What puts most of the alternative medicines outside the scrutiny of the FDA, such as homeopathic products?

We have a regulatory framework under which products that are marketed as drugs are expected to be safe and effective. The FDA could but has not applied this framework to homeopathic products.

How do you respond to: "If it makes them feel better, what's the harm?"

If a product doesn't work, but somebody thinks it does, that patient has been mentally harmed, and may be more vulnerable to being misled in the future. Quackery is never harmless.

Where would you place chiropractic in all this? Is it quackery?

It's a mixture. Chiropractors do some things that are rational and effective, and many things that are not rational. For example, they may be able to help appropriately selected people with back pain, by stretching the painful areas. On the other hand, many chiropractors are opposed to immunization.

In your experience, is there one form of alternative product or therapy that is more dangerous than others?

One that concerns me greatly is chelation therapy. It's a treatment where the patient gets an intravenous chemical that will supposedly clean out blockages in coronary arteries. It's marketed as an alternative to people who may need bypass surgery. People who do need bypass surgery but submit to chelation therapy put themselves at risk for heart attacks.

We touched on homeopathy earlier. Could you describe what it is?

Homeopaths claim that if large amounts of a substance will cause symptoms in healthy people, that small amounts will cure diseases that have those symptoms. That simply is not true. Homeopathy also claims that the more you dilute something, the more powerful it gets. There are some

homeopathic products that are so diluted that they have no molecules of the original solution. They do absolutely nothing. **The late Carl Sagan once said that everyone should have their own built-in "baloney detector." What can the average person do to protect themselves against bogus claims and remedies?**

The key is to have the right level of skepticism - enough to real that there are a lot of questionable products and services. It's all important to be able to identify and put one's trust in reliable sources. Generally, the major health organizations, both professional and voluntary are reliable, and when it comes to sorting out questionable claims, quackwatch.org probably does this most extensively. The best all around practical print source probably Consumer Reports on Health.

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