



**ROCHESTER SECTION OF THE IEEE
NEWS FOR DECEMBER 2014**

Jacob Z. Schanker, P.E., Newsletter Chair
The Rochester section web site is at: <http://rochester.ieee.org/>

Rochester Section Meeting – Tuesday, December 2, at Noon

The next monthly Rochester Section business meeting is on Tuesday, December 2, at 12:00 PM, at the **Hibachi Sushi Buffet Restaurant** in South Town Plaza on Jefferson Road (Route 252) just west of West Henrietta Rd. (Route 15). Any IEEE member is invited to attend. Lunch is only \$3 for IEEE members. No reservation or RSVP is needed, just show up.

Message from Section Chair Greg Gdowski

It is almost hard to believe that it is November as I write this. My message continues to be “communication, communication, communication”. At the last Excom meeting I learned that some new graduate students might not be receiving email notifications. If you recently relocated from a different IEEE Section to start graduate school in the Rochester area, you must actively change your address on your IEEE account in order to receive notifications from the Rochester IEEE Section. There is another important reason to do this! I have some good news for graduate students within the Rochester IEEE Section. We voted at the recent Excom meeting to establish a scholarship for graduate student IEEE members within the Rochester Section. Stay tuned as we roll out this new opportunity. If you have not yet changed your address, now would be the time to do it.

Rochester Section Undergraduate Scholarships!

The Rochester Section is also offering two \$1,500 annual scholarships to undergraduate members of IEEE. Two types of students are eligible.

1. If you have a kid that is in an ABET-accredited engineering school (even if they are not in school in Rochester) they are likely eligible as long as you reside within the Section. The student does not have to reside within the Rochester section while they are at school.
2. Any student from an ABET-accredited engineering school within the Rochester Section.

These scholarships are to recognize outstanding engineering, engineering technology, and science or technology students. These are merit-based scholarships. This is a great opportunity for students! Applications must be sent to the Rochester Engineering Society (RES).

The information required for applying to the local IEEE scholarships can be found on the RES website (<http://www.roceng.org/page-1702084>).

Rochester Engineering Society --- Engineer of the Year, Young Engineer of the Year, and Engineers of Distinction.

The Rochester Engineering Society is looking for nominations for its yearly awards for engineers. If you know of an IEEE member that should be nominated for any of these awards, please contact the Section so that we can help endorse your nomination and application for the individual. The deadlines for the in the initial application are December 19th. More information on these awards can be found here: <http://www.roceng.org/Recognition>.

Past Section Events:

October 22nd -- **Best Practices for Effective Test.** This was the Section's first sponsored event that provided PDH credit to participants. The event brought together 19 people for a half day of training on developing test systems. The Section would like to especially thank James Campbell (President, Viewpoint Systems, Inc.) for his efforts in running the session. We would also like to thank Ed Snyder (Marquardt) and John O'Brien (Trek Inc.) for participating in the session.

OTHER EXCITING UPCOMING SECTION EVENTS TO GET ON YOUR CALENDAR!

DID YOU EVER WONDER WHAT IT WOULD BE LIKE TO BE A VINTNER? Come join us for an evening discussing the "Engineering of Wine Making" on December 2nd from 6-9pm in Room 108 of Goergen Hall, University of Rochester with Steve Griffith and Michael Vonheckler.

Two longtime engineers will discuss what it takes to start a vineyard and produce wine. This is an event to not miss! This will be a great opportunity to directly interact with two well-established vintners.

Steve Griffith is the owner of Big Oak Vineyard in Monroe County. It is an estate vineyard with 6835 Total Vines (7.5 Acres) - Pinot Noir, Riesling, Traminette, Gewürztraminer, Vingoles, Voignier, Muscat, Cabernet Franc, and Cabernet Sauvignon.

Michael Vonheckler is the former managing partner of Warm Lake Estate Vineyard and Winery, which was the largest grower of Pinot Noir (55 acres) east of the Rocky Mountains. Michael von Heckler began his journey of winemaking in 1977 at a Les Amis du Vin in Greenvale, New York. He was awarded numerous medals for his wine from Intervin, American Wine Society and others.

**Rochester IEEE Section Excom Volunteer Appreciation Dinner.
December 11th from 6-10pm. Artisan Works. Open to all Rochester IEEE Section
Excom members.**

ARE YOU A NEW STUDENT OR ARE YOU NEW TO THE AREA?

If you are a new student (graduate or undergraduate) in the Rochester area, there really is no reason why you should not join the IEEE. The engineering community extends well outside your campus, and IEEE is by far the best way to get to know them. Joining is easy and the dues for students are remarkably low (\$32/yr.)! If you are an undergraduate or a graduate student and would like to become an IEEE member, I can help.

Undergraduate and Graduate Student members must carry at least 50% of a normal full-time academic program as a registered graduate student in a regular course of study in IEEE- designated fields. The designated fields are: Engineering, Computer Sciences and Information Technology, Physical Sciences, Biological and Medical Sciences, Mathematics, Technical Communications, Education, Management, and Law and Policy. Please join today and let us help you get connected!

HOST A MEETING!

As Section Chair, I am putting out a challenge to our entire Rochester engineering community. If you find that you cannot attend many of the IEEE meetings because they are offered at inopportune times or are located too far away, **why not consider hosting an IEEE event at your company?** Or, if you are a member of another professional society and have wondered why more IEEE members don't come to your events, **why not consider having a joint event?** I am more than happy to facilitate networking events at your company or in conjunction with other engineering societies. Let's collaborate and make Rochester a better place for engineers to live and work.

JOIN US AT THE NEXT EXCOM MEETING!

If you are looking for a cheap \$3 lunch, join us for the next monthly Rochester Section IEEE Executive Committee meeting. It will be from 12-1pm on December 2nd at the Hibachi Sushi Buffet in Southtown Plaza (3333 W. Henrietta Rd, Henrietta, NY). Please join us to learn more about the Section, and how you may contribute.

IEEE Life Member Affinity Group Meeting Dec. 5

The Life Member Group will hold the next meeting of the Posterity Project on Friday, December 5th at 1 PM. We will meet for lunch at the Rochester Yacht Club. The meeting will include discussion of stories by Life Members which have been submitted to the group. Anyone who would like to contribute a story about an engineering experience they have had should feel free to do so.

Stories and reservations to come to the meeting on December 5th can be emailed to Henry Simon at henrysimon@frontiernet.net.

IEEE Technology Management Council Meeting Dec. 9

The next IEEE Technology Management Council Rochester Chapter Meeting will highlight "Photonics in Rochester."

The heritage of major corporations in our area has spawned many local centers of excellence that manifest themselves in the different areas of photonics. In this talk, Tom Battley, Director of New York Photonics and the Rochester Regional Photonics Cluster, outlines the steps that are being taken to nurture and expand photonics in the Rochester area. This is a timely discussion for engineering and technical professionals, students, and those interested in the economic development of Western NY.

Date: Tuesday December 9 2014

Time: 6 PM

Location: Rochester Institute of Technology Institute Hall, Building 73, Room 1140.

Please join us for the talk, meeting the speaker, discussions and light refreshments. RSVP through vtools at: <https://meetings.vtools.ieee.org/m/30170>.

Computer Society / Computational Intelligence Society Meetings on Genetic Algorithms

Dates: Monday evenings, December 1 and 8.

Time: Pizza & Drinks 6:00, presentation 7:00 PM.

Location: Golisano Hall, room 70-3000, Rochester Institute of Technology.

Speaker: Presented by Peter G. Anderson, RIT Professor of Computer Science (Emeritus)

Abstract: Genetic Algorithms (GAs) are among a growing body of problem solving techniques inspired by natural systems, biological, sociological, chemical, physical, etc. GAs are based on the evolutionary idea of survival of the fittest and are implemented as algorithmic problem solving by selective breeding. A GA uses a population of dozens or hundreds of proposed solutions to a problem and repeatedly creates new solutions (children) from pieces of the relatively better individuals (parents), injecting a small amount of error (mutation) into the new individuals. Surprisingly, this often works.

These algorithms can often be very effective to find maxima of continuous functions in cases where calculus cannot easily be applied, and also to quickly find acceptable sub-optimal solutions to difficult (i.e., NP complete) combinatorial problems such as scheduling, bin packing, traveling salesperson, map coloring, etc.

The first of the two talks gives an introduction to the basic algorithm along with variations and tuning parameters and surveys some applications. In this portion,

solutions to problems will be represented by bit strings, a familiar object that is easy to create randomly, crossover (sexual reproduction) and mutate.

The second talk covers more interesting variations and applications. We give special attention to permutation-based problem solutions and how to perform crossovers on permutations.

About the speaker: Peter was a member of the Computer Science faculty at RIT for 25 years, concentrating on graduate education, CS Theory, Neural Networks, Pattern Recognition, and GAs . He continues to actively advise Graduate CS students, pursue research in Fibonacci Numbers, and march with the Pittsford Fire Department Band.

2015 Section Officer Candidates

The slate of candidates for section officer positions for next year can be found on our website. A direct link is: <http://rochester.ieee.org/about/section-officers/candidates-for-2015/>.

New free E-Book for members in December

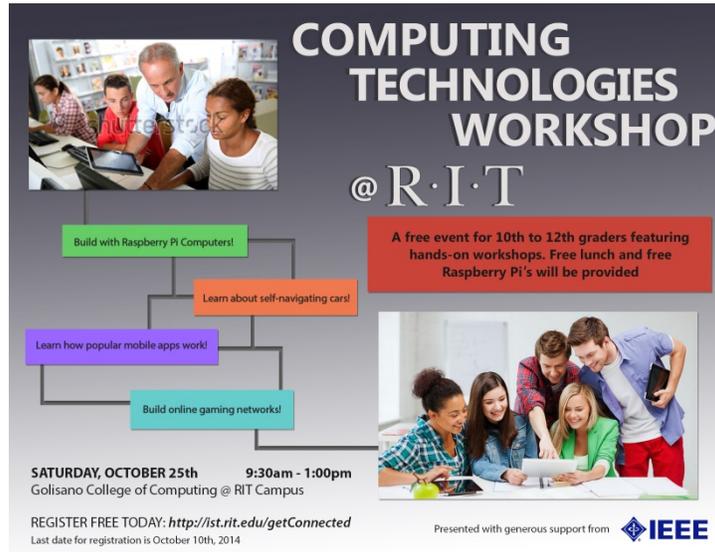
In December, IEEE-USA E-books will offer “Starting Your Start-Up – Book 2: Market Size & Strategy” by Tanya Candia. You can read about the series of books on the author's website at: <http://www.candiacomm.com/publications.html>

IEEE PES Scholarship Plus Initiative award recipients

Congratulations to University of Rochester students Jeremy Warner (2015) and Aaron Lim (2017) for being named as recipients of an IEEE Power and Energy Society [Scholarship Plus Initiative](#) award. Recipients of IEEE PES engineering scholarships are high achieving undergraduate students in electrical engineering who have committed to exploring the power and energy fields through both coursework and career experiences.

IEEE supported workshop for HS students held at RIT

Held on October 25, the Computing Technologies Workshop for 10th to 12th graders, was a free event. Included was lunch and free Raspberry Pi's. The workshop was organized by Nirmala Shenoy and supported by the IEEE Communications Society Chapter.



COMPUTING TECHNOLOGIES WORKSHOP @ R·I·T

Build with Raspberry Pi Computers!
Learn about self-navigating cars!
Learn how popular mobile apps work!
Build online gaming networks!

A free event for 10th to 12th graders featuring hands-on workshops. Free lunch and free Raspberry Pi's will be provided

SATURDAY, OCTOBER 25th 9:30am - 1:00pm
Golisano College of Computing @ RIT Campus

REGISTER FREE TODAY: <http://ist.rit.edu/getConnected>
Last date for registration is October 10th, 2014

Presented with generous support from **IEEE**



