◆IEEE Berkshire Section Newsletter

Update: December 2014

Berkshire Consultants Network Luncheon Meeting:
December 4th, 2014

Control Systems in the 21st Century
by John Tatro

Robotics, Home Automation and Networked Objects, Science and Measurement, Education and Teaching, Product Design – these are just a small sampling of areas of interest that greatly benefit from the use of modern Control Systems and Control System concepts. Until recently the hardware, software, and the knowledge needed to design and build these systems was the realm of highly educated specialists. Also, the cost and access to the hardware and software, including Integrated Development Environments for software development, was expensive and typically beyond the reach of even reasonably skilled engineers and technologists. The exponential advances in technologies at the beginning of the 21st century have made access to an almost limitless selection of devices and software to fit the needs of Control System enthusiasts from rank beginners to the highly skilled specialists of the past. Powerful, low cost, microprocessors like the Arduino UNO and the Raspberry Pi cost about $25, and when coupled with an enormous selection of sensors and specialty items, can be combined to build an impressive array of widely different systems from the simplest to the very complex. The important software and software development systems are "Open Source" and free for use by all; and there is a large community that has developed a great deal of specialty algorithms and routines that are available to the community.

This talk introduced the attendees to the "World of Makers", a community of enthusiasts, through a number of hands-on applications of the Arduino UNO microprocessor along with an assortment of accessories. The participants experimented with the hardware and software to perform a number fundamental microprocessor interface and communication operations, and then implemented some typical Robotic actions involving the use of actuators and sensors.

Meeting contacts: Rich Kolodziejczyk, P.E.
Guest Attendance: 3
IEEE Member Attendance: 7

The Speaker: John Tatro presenting

John Tatro explains the powerful, low cost, microprocessors, the Arduino UNO

IEEE Berkshire Section Newsletter

STEM Fair at Berkshire Community College:
Friday, November 21, 2014

George Haus, Education Chair and Jim McVeigh, Chairman attended 2014 Science Technology Engineering Math (STEM) Fair.

The 8th Annual STEM Career Fair was designed to engage local high school students interested in STEM careers, and to create awareness of local opportunities in STEM careers and postsecondary education.

It was estimated that 84 students out of the total 450 attendees visited our display. This has been our best year to date.

STEM Fair Contact: George Haus, Education Chair

George Haus with his display table and curious students

George Haus attempts to explain the principles of the NAOMI'S ELECTRIC BIKE

More power IGOR: a student attempts to light a 100 watts light bulb to show how much work it takes to generate that amount of power.

IEEE Berkshire Section Newsletter

Power Chapter Luncheon Meeting: November 20th, 2014

Early Electric Power Developments in Southern Berkshire County
Presented by
Tom Blalock

Tom Blalock give a presented a topic of early electric power developments in southern Berkshire County. This material was based on a two-part "History" feature article which appeared in 2012 in the IEEE Power & Energy magazine. In particular, electric power was introduced in Lenox, Stockbridge, and Housatonic in the years following William Stanley's historic demonstration of alternating current distribution in Great Barrington in 1886.

Meeting contacts: David Rueger, Power Chapter Chair
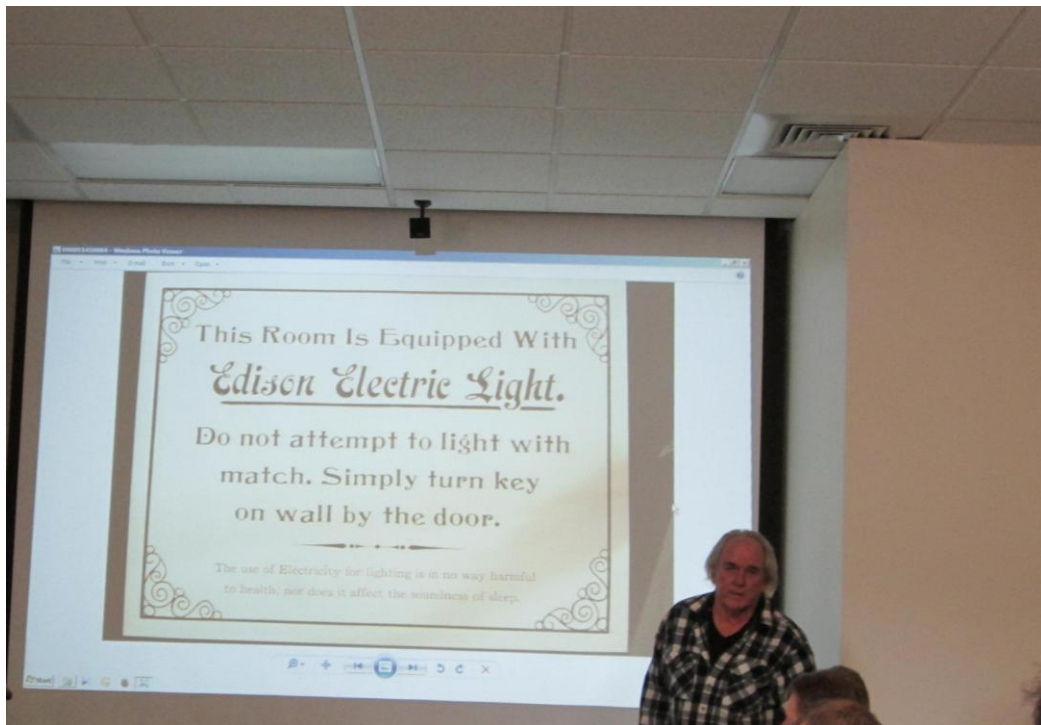**Guest Attendance: 2**
IEEE Member Attendance: 15

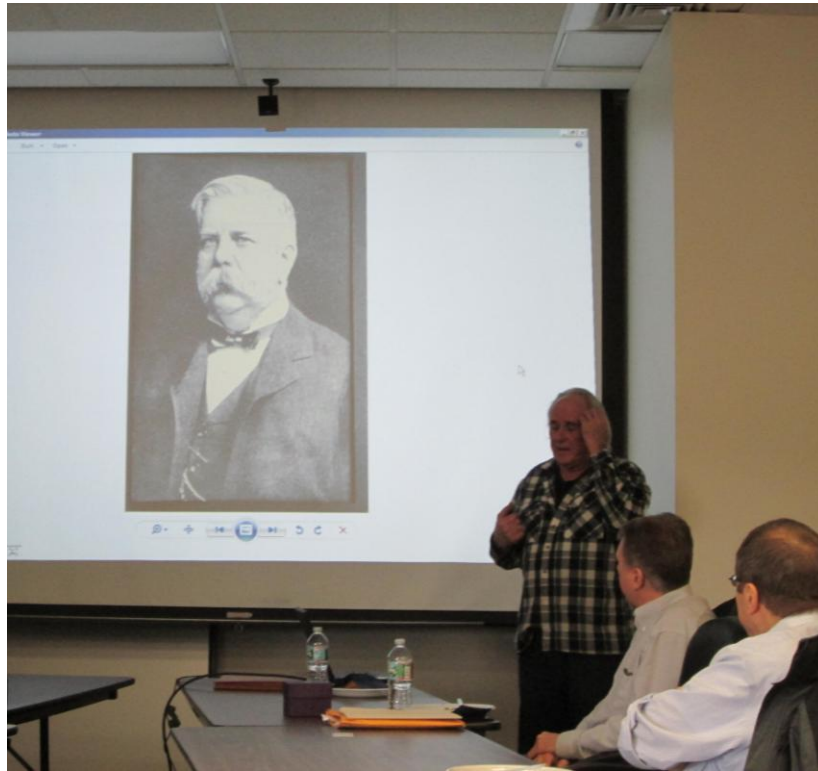Dave Rueger, Power Chapter Chair, starts the meeting by introducing the speaker

The Speaker: Tom Blalock presenting

Tom explains Edison's role in electric power developments

Tom explains Westinghouse's role in electric power developments

Dave Rueger, Power Chapter Chair, presents Tom with a gift from the Berkshire Section

◆IEEE Berkshire Section Newsletter

IEEE Berkshire Section Life Member Affinity Group is formed
14 November 2014

The IEEE Member and Geographic Activities Vice President, Ralph Ford, congratulated Rich Kolodziejczyk on formation of the IEEE Berkshire Section Life Member Affinity Group. The effective date of this affinity group formation is 20 October 2014. He has been appointed as a temporary Affinity Group Chair.

PETITION TO FORM AN IEEE AFFINITY GROUP

Name of IEEE Section/s or Council: _BERKSHIRE SECTION – R1_

Please specify type of Affinity Group:
- ☐ Young Professionals
- ☐ Women In Engineering
- ☐ Consultants Network
- ☒ Life Member

We, the undersigned, who are members of the above Section/Council, and are IEEE members above Student grade, hereby petition for approval to form an Affinity Group in the Section indicated above.

Signature of Petitioner	Member Number	Printed Name
1.		ROGER W MANZOLINI
2.		George B. Haus
3.		DAVID P. RVEGER
4.		MOSHE LESSNER
5.		Justin Bell
6.		Timothy A. Martin
7.		Thomas E. HARRIS
8.		HAO DANG
9.		James McVeigh
10.		George Gela

** 6 QUALIFIED PETITIONERS ARE REQUIRED FOR AN AFFINITY GROUP FORMATION **

3 | Page
Updated 23 April 2014

IEEE Berkshire Section Newsletter

From: Vince Socci IEEE [socci.ieee@gmail.com]

Happily approved.

Sent from my iPhone

On Oct 16, 2014, at 2:21 PM, Petition Mailbox <petition@ieee.org> wrote:

Dear Director Vincent Socci and Life Member Committee Chair J. Cruz:

We received a petition to form the IEEE Berkshire Section Life Member Affinity Group.

The petition is approved by the Executive Committee of the Section and has the required amount of qualified signatures.

The organizer is Richard Kolodziejczyk (rkolod@ieee.org).

Do we have your approval to form this Life Member Affinity Group?

Best regards,

Joe Hale

_____

IEEE Member and Geographic Activities Department
445 Hoes Ln
Piscataway NJ 08854-4150
USA
petition@ieee.org

IEEE. Fostering technological innovation and
excellence for the benefit of humanity.

◈ **IEEE**
Advancing Technology
for Humanity

Cecelia Jankowski
Managing Director
Member and Geographic Activities
Phone +1 732 562 5504
Fax +1 732 981 1591
c.jankowski@ieee.org

14 November 2014

RICHARD KOLODZIEJCZYK
PO BOX 401
HINSDALE, MA 01235-0401

Dear Richard Kolodziejczyk:

Congratulations! On behalf of the IEEE Member and Geographic Activities Vice President, Ralph Ford, it is a pleasure to inform you that the requirements of the MGA Board Operations Manual have been met, and the IEEE Berkshire Section Life Member Affinity Group has been formed. The effective date of this affinity group formation is 20 October 2014.

You have been recorded as Affinity Group Chair. When an election has been held, please report the name and member number of the new Affinity Group Chair to the IEEE using the online Officer reporting tool at www.officers.vtools.ieee.org. Valuable information regarding IEEE affinity groups can be found at http://www.ieee.org/go/affinity. If we can assist you in any way in the planning of the affinity groups activities, please let us know.

We extend our best wishes for the successful operation of this affinity group.

Sincerely,

Cecelia Jankowski
Managing Director
Member and Geographic Activities

cc: R. Ford – Member and Geographic Activities Vice President
V. Socci – Region 1 Director
J. Cruz – Life Member Committee Chair
L. Luceri – Region 1 Life Member Coordinator
J. McVeigh – Berkshire Section Chair
S. Waters – Senior Administrator

IEEE Berkshire Section Newsletter

Computer and Control Chapter (C&C) Meeting:
October 23, 2014

A how to guide on recognizing and protecting against:

VIRUSES, MALWARE, ADWARE, SPYWARE, and SCAMS
by
Michael Glaberman
MSG Computers & Genesis Corp.

Malicious Software can be devastating to a computer, a network, or an entire company. Viruses, malware, spyware, and other intrusions can spread through an organization like wild fire in a matter of seconds. Adware, phishing, and other scams can be a nuisance, disruptive, or create financial loss and/or hardship. Cyber Crime, which includes the use and deployment of these Malicious Software(s) has increased significantly over the last decade. An independent IT Company AVTest has shown an increase of 62% in attacks from 2013 to present, and over 280% since 2004. There has also been an enormous increase in Malicious Software being deployed every day! There are over 450,000 new Malicious Programs being registered per day, and approximately 105,000,000 registered so far in 2014. This has risen from 82,000,000 in 2013 and 34,000,000 in 2012, with no sign of slowing down or stopping. It is more important now than ever before to educate and protect yourself due to this uncontrollable growth and continuous threat to Data Security, Financial Security, and Identity Theft. This presentation, provided various classifications of Malicious Software, how to recognize when your computer has become infected, what to do if your computer is infected, and ways to prevent infections or intrusions.

Meeting contacts: Rich Kolodziejczyk, P.E.
Guest Attendance: 12
IEEE Member Attendance: 14

IEEE Berkshire Section Newsletter

Rich Kolodziejczyk, C&C Chapter Chair, starts the meeting by introducing the speaker

The Speaker: Michael Glaberman presenting

Mike explains topic in details

Rich Kolodziejczyk, C&C Chapter Chair, presents Mike with a gift from the Berkshire Section

◆IEEE Berkshire Section Newsletter

[Berkshire Consultants Network Dinner Meeting:](#)
Thursday, July 31, 2014
The Consultant's Life
By
Larry G. Nelson Sr., President of Nelson Research

Consulting is becoming more popular in the engineering profession. Many have taken up consulting with good success. This sort of independence, coupled with an opportunity to do your technical best, is very appealing.

Engineering unemployment stands at about 6.5%, which is very high compared to other professions. IEEE members find consulting a good alternative after being laid off, down sized or fired. In addition, employers are finding they can save money by downsizing engineering personnel and hiring them back as consultants -- part time with no benefits.

The employers like an abundance of engineers because they are able to bid engineers against one another. As a result, engineers' salaries go down along with consulting fees. In fact there are too many engineers!

Larry provided answer to the questions of:

- How do you start
- Business forms
- Where to get clients
- Budgeting
- How much to Charge
- How to get paid.

Meeting contacts: Rich Kolodziejczyk, IEEE Berkshire Consultant Network Chair
Guest Attendance: 8
IEEE Member Attendance: 8

Rich Kolodziejczyk, Consultant Network Chair Chair, starts the meeting by introducing the speaker: Larry Nelson

The Speaker: Larry Nelson presenting

Rich Kolodziejczyk presents Larry with a gift from the Berkshire Section

IEEE Berkshire Section Newsletter

Power Chapter Meeting: June 26, 2014

HVDC Converter Systems – The Basics
by
Frank Fisher

Frank discussed the equipment one would find in the terminal of a high voltage direct current (HVDC) converter system. The intent of the talk was to introduce the elementary operation of a HVDC system, and describe what the various pieces of equipment in a converter terminal are and what they are used for. The talk was not a details of the control systems, converter operation or the economic aspects of HVDC systems; rather to help remove the "gee whiz" reaction that one with no background in the matter might have upon visiting a HVDC terminal for the first time.
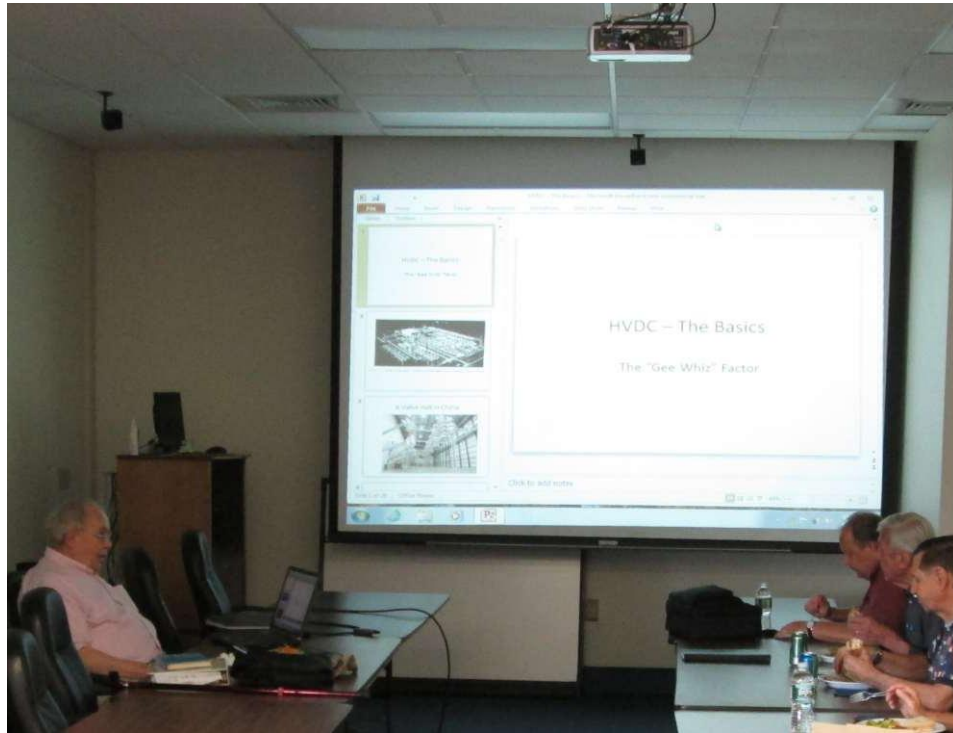
Meeting contacts: David Rueger, Power Chapter Chair
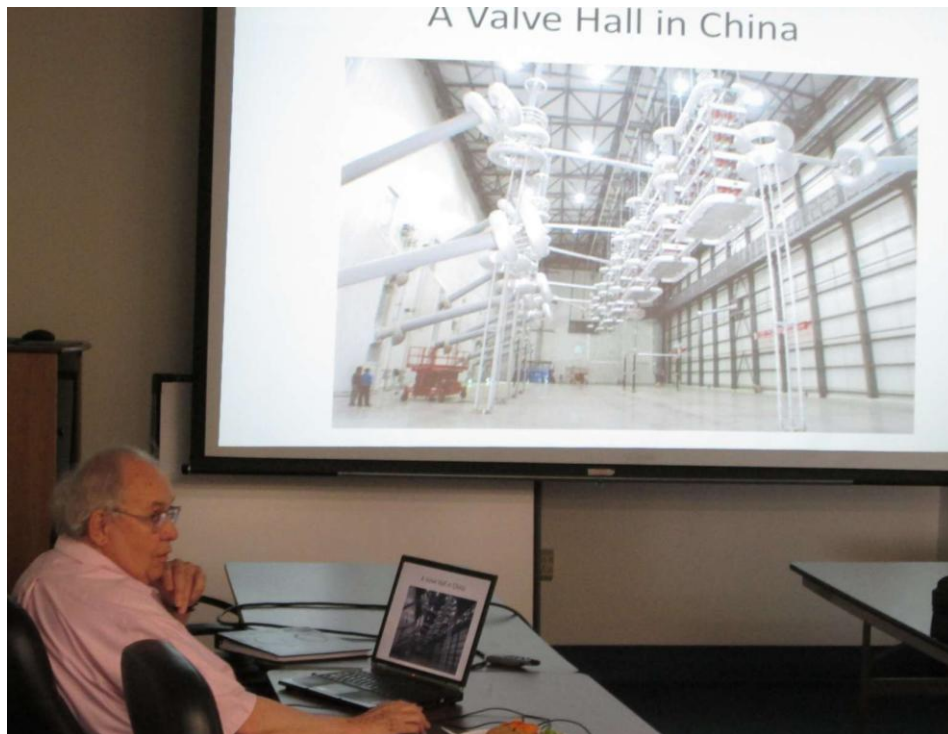**Guest Attendance: 0**
IEEE Member Attendance: 12

The Speaker: Frank Fisher presenting

Frank Fisher explains the HVDC Basics

Frank discusses a typical Valve Hall in operation

IEEE Berkshire Section Newsletter

Computer and Control Chapter (C&C) Meeting:
May 8, 2014

The Future of "Computer" (Are we in serious trouble?)
by
Dr. Yale N. Patt
Teacher at the University of Texas at Austin

Dr. Yale Patt was a guest speaker at the IEEE Computer Society 60th Anniversary Reception in San Juan, Puerto Rico, June 14, 2006. The video of his talk was recorded by the IEEE Computer Society and is made available on line for viewing. The IEEE Berkshire Section Computer and Control Chapter decided to present this video to its members due to its relevance to the topic of computers. He says "…those who should know better claim that:

- Computer Architecture is Dead
- Computer Architecture research needs revitalization

BUT …

- Demand shows that we have not even scratched the surface
- Resources show that more than one billion transistors on a chip can be fabricated
        or that clock frequencies in excess of 3 GHz can be achieved.

Computer Architecture is about the interface between what technology can provide and what the market demands…."

Meeting contacts: Rich Kolodziejczyk, P.E.
Guest Attendance: 2
IEEE Member Attendance: 8

Rich Kolodziejczyk, C&C Chapter Chair, starts the meeting by introducing the video

◆IEEE Berkshire Section Newsletter

Annual Dinner Meeting: May 1, 2014

What It Takes To Win the IEEE Science Writing Contest
Presentations by Writing Contest Winners

We recognized this year's winners by giving the students a few minutes to talk about their papers: how they chose their topic, their research, and any interesting discoveries.

Grades 9/10 prizes: (1st - $500, 2nd - $250, 3rd - $100)

1st - **William Serkin** - Monument Mountain Regional High School
    "Porcine Cardiac Xenotransplantion"

2nd - **Georgia Bass** - Monument Mountain Regional High School
    "Light Years Away: Exploring the Depths of our Solar System"

3rd - **Ranjana Lingutla** - Taconic High School
    "Robotic Surgery: Breaking Barriers"

Note: Grades 9/10 Students were not present during the award presentations

Grades 11/12 prizes: (1st - $500, 2nd - $250, 3rd - $100)

1st - **Meghan Cum** - Monument Mountain Regional High School
    "Charley's Fund: A Race Against Time"

2nd – **Alice Curtin** - Monument Mountain Regional High School
    "The First Discovery of Argon Hydride in Space"

3rd – **Megan Martin** – Lee High School
    "Me, Myself and I"

From Award Chairman Bernard Clairmont:

Bernie announced the list of winners of the Member Child Awards for 2014
Member Child Awards $100:   Holly Rueger

Meeting contact: George Haus, Education Chair
Guest Attendance: 26
IEEE Member Attendance: 14

George Haus, Education Chair
Starts the meeting with introduction of 2013 Writing Contest Winners

George Haus, receiving an award from Jim McVeigh, Section Chair
on behalf of the Berkshire Section

1ˢᵗ Prize Grade 11/12 Meghan Cum - Monument Mountain Regional High School
"Charley's Fund: A Race Against Time"

2ⁿᵈ Prize Grade 11/ Alice Curtin - Monument Mountain Regional High School
"The First Discovery of Argon Hydride in Space"

3ʳᵈ Prize Grade 11/12 Megan Martin – Lee High School
"Me, Myself and I"

2014 Writing Contest Winners Grades 11/12, Grades 9/10 Students not present

IEEE Berkshire Section Newsletter

National Engineers Week Dinner Meeting: February 20, 2014

Life Members, a Most Valuable Resource
By
Louis A. Luceri, LSMIEEE

Life Members (LM) represent an invaluable repository of personal experiences involving the history of areas of interest to IEEE. The IEEE Life Members Committee believes that keeping Life members active and engaged is a key component of the success of IEEE in local IEEE activities. The talk covered that the Life Member are, what they do, and how they make a difference. It covered the workings of the Life Member Committee and its philanthropic actives. It showed some of the activities of LM affinity groups.

Life Members must be at least 65 years of age and have been a member of IEEE or one of its predecessor societies for such a period that the sum of his/her age and his/her years of membership equals or exceeds 100 years. When an individual achieves Life Member status, his or her basic membership dues and Region assessments are waived.

Meeting contacts: Rich Kolodziejczyk, P.E.
Guest Attendance: 6
IEEE Member Attendance: 14

The Speaker: Louis Luceri presenting

Rich Kolodziejczyk, PACE Chair, presents Lue with a gift from the Berkshire Section