

THE REPORTER

Journal of the Central Indiana Section • IEEE

New 2013 IEEE Fellows

The IEEE Grade of Fellow is conferred by the IEEE Board of Directors upon a person with an outstanding record of accomplishments in any of the IEEE fields of interest.
Congratulations to our newly elevated IEEE fellows!

Ahmed Elantably
Gerhard Klimeck
Peide Ye

Please see biographical information beginning on page 2 for our new fellows.

New Senior Members

The CIS-IEEE has always looked to facilitate members advancing to higher levels of membership.
Congratulations to our newest senior members!

Alan Chiu
Euzeli Dos Santos
Cheng Luo
Rajesh Shah
Thomas Sterling

Want to Become a New Member or Know Someone Who Should?

The Central Indiana Section is the fourth largest section in IEEE Region 4 (covering most of the Midwest beyond Ohio). The following table shows we are up for a monetary reward if we can continue our recruiting for next year. The IEEE will also reward individuals who bring in new members, so please share the values of IEEE membership with other folks you know who might be interested.

If you have not renewed your membership, please do so at your earliest opportunity. The entire Region 4 Membership Development report, showing our renewal rates (could be better) and our recruiting (average) are available at www.cis-ieee.org under Membership Development.

Region	Section Name	Qualifying Recruitment Gains	Qualified Incentive Payout
R4	Arrowhead Section		
R4	Calumet Section		
R4	Cedar Rapids Section		
R4	Central Illinois Section	3	\$ 60.0
R4	Central Indiana Section	3	\$ 60.0
R4	Central Iowa Section	2	\$ 40.0
R4	Chicago Section		
R4	Fort Wayne Section	4	\$ 80.0
R4	Iowa-Illinois Section		
R4	Madison Section		
R4	Milwaukee Section		
R4	Missouri Slope Section		
R4	Nebraska Section		
R4	Northeast Michigan Section		
R4	Northeastern Wisconsin Section	2	\$ 40.0
R4	Red River Valley Section		
R4	Rock River Valley Section		
R4	Siouxland Section		
R4	Southeastern Michigan Section	16	\$ 320.0
R4	Southern Minnesota Section		
R4	Toledo Section	2	\$ 40.0
R4	Twin Cities Section		
R4	West Michigan Section		
R4 Qualifying Gains & Payout		32	\$ 640.0

New 2013 IEEE Fellows Biographies

Ahmed Elantably is being recognized for contributions to AC machinery for electrical traction. He has a B.S., M.S. and a PhD in Electrical Engineering. He has 26 issued US patents and more than 31 years of experience in the USA, eight of them in the power industry at Westinghouse Electric Corporation and 18 years at General Motors Corporation GM. Promoted to manager at GM in 1994, he spent 12 years responsible for the development of advanced drive motor technology for GM hybrid vehicles. He accepted early retirement from GM in April 2006 and started an engineering consulting company (General Machines Corporation, LLC). Ahmed designed almost all the drive motors for the hybrid programs at General Motors till 2006, starting from the drive motor for the first commercial electric vehicle, EV1, the

motor for the New York City bus and the motors for the successful Ep8 Hybrid Bus Program by GM, which have sold more than a 1,500 busses in the U.S., Canada, Europe and China. He has also worked on the design of the drive motor for the Hybrid Tahoe and Hybrid Cadillac Escalade. He has broad experience in electric power generation, transmission, power system analysis, technical services to electric utilities through Westinghouse customer group, and all aspects of the power energy delivery systems. As a manager, he was responsible for the technology development of electric motor drives, finding funding for the programs within and outside GM, managing the programs and implementing them from concept to production and working with multiple teams simultaneously on several projects. During his work at Westinghouse & General Motors Corporations he successfully applied with other team members and was awarded multi-million dollar programs from, Electric Power Research Institute EPRI in Palo Alto, CA, the Department of Energy, DARPA, and the Defense Department. His R&D interests are design and analysis of all types of electrical machines for many applications; renewable energy systems design (wave energy, and Concentric Solar power systems).

Gerhard Klimeck is the Director of the Network for Computational Nanotechnology and Professor of Electrical and Computer Engineering at Purdue University, West Lafayette, Indiana, USA. He is being recognized for contributions to atomistic quantum simulation tools for nanoelectronic devices. Klimeck is internationally recognized as a leader in the simulation of realistic nano devices. Twenty years ago, he had the vision to realize that treating quantum mechanics with atomistic resolution would become necessary for 21st century nanoelectronics. In the mid-1990s at Texas Instruments, Klimeck led the development team and personally wrote about half of the 250,000 lines of code for NEMO 1-D, which produced new insight into the performance of resonant tunneling diodes. NEMO 1-D remains the gold standard for quantum device simulation. After joining NASA Jet Propulsion Laboratory (JPL), Klimeck turned his attention to quantum dots, the quintessential nanostructure, realizing that alloy disorder, interface roughness, and long-range strain effects in quantum confined structures would require an atomistic and quantum mechanical treatment. He led the development of NEMO 3-D, now the only electronic structure simulation package able to treat greater than 50 million atoms. The capability that he developed at JPL for quantum dots proved to be extendible to transistors. Experimentalists pushing the limits of miniaturization seek Klimeck out because he has the unique capability to simulate leading edge experiments. In a recent paper (Weber, et al., Science, 335, Jan. 6, 2012), Klimeck's simulations explained why "Ohm's Law Survives to the Atomic Scale." Further, his simulations described the operation of a single atom transistor (Fuechskle, et al., Nature Nanotechnology, Feb. 19, 2012). The capabilities that Klimeck pioneered are leading to a deeper understanding of electronics at the nanoscale that will be important as devices continue to shrink. Klimeck also is a pioneer in web-based dissemination of simulation and educational resources. Under his leadership, nanoHUB.org has been called the largest user facility for the nano science and technology community, providing an online meeting place for simulation, research, collaboration, teaching, learning, and publishing. nanoHUB serves over 240,000 annual users.

Peide (Peter) Ye is a Professor of Electrical and Computer Engineering at Purdue University, West Lafayette, Indiana, USA. He is being recognized for contributions to compound semiconductor MOSFET materials and devices. He received the B.S. degree in electrical engineering from Fudan University, Shanghai, China, in 1988 and Ph.D. in solid state physics from Max-Planck-Institute of Solid State Research, Stuttgart, Germany, in 1996. From 1996 to 2000, he was research fellow at NTT Basic Research Laboratories and NHMFL/Princeton University. He joined Bell Laboratories, Murray Hill, NJ and then Agere Systems in 2001 as a Member of Technical Staff and became a Senior Member of Technical Staff in 2003. Since January 2005, he joined Purdue faculty as Associate Professor of Electrical and Computer Engineering and became full professor in 2010. His current research is focused on ALD high-k integration on novel channel materials include III-V, CNTs and graphene, complex oxides, topological insulators, and 2D crystals. He received IBM Faculty Award in 2009, University Faculty Scholar award in 2011.

Local Educator Receives Prestigious Educational Activities Board Pre-University Educator Award

"for outstanding and innovative contributions to Science, Technology, Engineering and Mathematics education that inspire elementary school students"



Mrs. Meg Strnat has been teaching fourth grade at Cumberland Road Elementary School in Fishers for seven years. She is a Science, Technology, Engineering and Mathematics (STEM) Champion, not only in the classroom, but also throughout the school district and across the state of Indiana.

Mrs. Strnat has been awarded a CIS Teacher Grant every year since program inception and has presented more than a half dozen TryEngineering.org lesson plans in her classroom. *(For information on TryEngineering.org lessons and funding opportunities for local teachers, see article elsewhere in this newsletter.)*

In 2007, she was awarded the Indianapolis Power and Light (IPL) Golden Apple Award, and in 2009 was named the Indiana Association for the Gifted (IAG) Outstanding Teacher of the Gifted.

Mrs. Strnat's article "Squidy Family Night" was published in The Hoosier Science Teacher (Summer 2009). That same year, she participated in Purdue University's Inspire Workshop which promotes engineering in elementary classrooms. The workshop changed the way she taught science. As a result, she implemented engineering lessons in all major science units as well as in other disciplines using IEEE's TryEngineering.org and other materials.

She co-wrote a grant to obtain engineering study units for all of the third and fourth grade classrooms at her school, and helped teachers implement the units in their classes. She has facilitated engineering workshops at the Indiana Student Achievement Institute Conference (2011) and the Indiana Association for the Gifted Conference (2012). She was awarded the Lilly Creativity Grant for the summer of 2011 to explore magnetically levitated trains for a "maglev" engineering unit in her classroom.

In the summer of 2012, she helped develop and facilitate a three-day Hamilton Southeastern Schools Summer Teacher Engineering Camp to expose over fifty teachers to IEEE's TryEngineering.org lessons and related engineering materials. A grant from IEEE-USA's K-12 STEM Activity fund helped provide participating teachers with a text on science notebooking. *(For information on K-12 STEM Activity Fund Grants, contact Brad Snodgrass at bsnodgrass@ieee.org)*

Her article "Meeting Indiana's New Engineering Standards" was published in the Indiana Association for the Gifted's (IAG) Images publication (August 2011). She co-wrote Mouse Makers: Engineering in the Elementary Classroom," also for IAG Images (April 2012); both articles focused on IEEE's TryEngineering.org lessons with links to examples of student-made advertising videos for computer mouse innovations.

Meg recently presented a TryEngineering.org lesson for more than 75 teachers at the Hamilton County Reading Council. Meg is an Indiana State Finalist for the 2012 Presidential Award for Excellence in Science, the highest science award in the country. Central Indiana Section could not have a better ambassador. **Congratulations Mrs. Strnat!**



Write an Essay - Win \$500 for your FRC Team

Statewide Essay Contest for 2013 Build Season

The Central Indiana Section of the IEEE (pronounced Eye-triple-E) is inviting **ALL** Indiana FRC Teams to submit their essays to earn a \$500 Sponsorship. Three Sponsorships will be awarded.

The IEEE is the world's leading professional association for the advancement of technology. With more than 350,000 members worldwide, IEEE is the largest technical society in the world. The IEEE is a leading authority on a broad range of topics including aerospace systems, computers, telecommunications, robotics, nanotechnology, biomedical engineering, electric power, consumer electronics, and many others.

Central Indiana Section of the IEEE is the local organization supporting the nearly 2000 IEEE members in Central Indiana.

2012 Essay Topic

Describe a design failure on your robot and how that failure was utilized to make your design better.

Eligibility for Sponsorship

If your FRC Team is headquartered in Indiana, **YOU QUALIFY!**

Essay Contest and Sponsorship Rules

Teams must submit a short (one-page) essay. Submissions must be in PDF format.

Only one entry per team is allowed.

The top three entries will be selected from all submissions. Each of the three winning teams will receive a \$500 Sponsorship from CIS-IEEE. The judges will determine the winning entry and the decision of the judges is final.

Winning Teams are required to display the CIS-IEEE logo at all competitions and demonstrations.

Deadline

Entries must be submitted by **Friday, February 22, 2013**. All entries must be sent to bsnodgrass@ieee.org. All submissions will receive confirmation that their essay was received and that they have met eligibility requirements.

Awards will be announced no later than Friday, March 8, 2013.

IEEE Resources for Students and Teachers

<http://www.cis-ieee.org/>

<http://www.ieee.org/about/index.html>

<http://en.wikipedia.org/wiki/IEEE>

http://www.ieee.org/education_careers/index.html

http://www.ieee.org/education_careers/education/preuniversity/tispt/index.html

Questions

Questions or requests can be sent to Brad Snodgrass at bsnodgrass@ieee.org. Brad is an Adult Mentor for Team 629 at Warren Central and will not be judging the contest. Questions and requests will **not** be shared with Contest Judges.



CIS-IEEE Continues Teacher Grants for 2013

Teachers Reimbursed for up to \$100 of Classroom Expenses

The Central Indiana Section of the IEEE (pronounced Eye-triple-E) is encouraging area teachers to utilize the large selection of free lesson plans available at TryEngineering.org. Lessons focus on Science, Technology, Engineering, and Math and are designed for classroom presentation for under \$100.

Eligibility

- A lesson from www.tryengineering.org must be chosen
- The lesson must be presented by the classroom teacher. (Not by an IEEE Volunteer)

Applying for a Grant

Central Indiana Section (CIS) will reimburse costs for presentation of an eligible lesson up to the \$100 limit. Teachers should first get a pre-approval for the reimbursement by supplying the information requested below. Pre-approved lessons will be given an address for submittal of related lesson expenses, up to the \$100 limit.

To apply, send an email with the following information to Brad Snodgrass at bsnodgrass@ieee.org

- Name and address of the School
- Teacher sponsoring the lesson
- Grade level(s) targeted for the lesson
- Name of person who will be presenting the lesson
- Date lesson will be presented
- Name of the lesson that will be presented.

Questions

Send questions or requests to Brad Snodgrass at bsnodgrass@ieee.org. Brad coordinates Pre-University Activities for the Central Indiana Section of IEEE.

About the IEEE

The IEEE is the world's leading professional association for the advancement of technology. With more than 350,000 members worldwide, IEEE is the largest technical society in the world. The IEEE is a leading authority on a broad range of topics including aerospace systems, computers, telecommunications, robotics, nanotechnology, biomedical engineering, electric power, consumer electronics, and many others.

Central Indiana Section (CIS) of the IEEE is the local organization supporting the nearly 2000 IEEE members in central Indiana.

About the Teacher In-Service Program

The Teacher In-Service Program (TISP) features IEEE Section volunteers developing and presenting technologically oriented subject matter to local K-12 educators in an in-service or professional development setting. TISP allows IEEE volunteers to share their technical expertise and to demonstrate the application of engineering concepts to support the teaching and learning of science, mathematics and technology disciplines.

To schedule a TISP Presentation for your school, contact Brad Snodgrass at bsnodgrass@ieee.org.

IEEE Resources for Students and Teachers

<http://www.cis-ieee.org/>

<http://www.ieee.org/about/index.html>

<http://en.wikipedia.org/wiki/IEEE>

http://www.ieee.org/education_careers/index.html

http://www.ieee.org/education_careers/education/preuniversity/tispt/index.html

Section Conference 2013



Please plan on joining the Central Indiana Section for a two day conference geared towards current, future, and past engineers. The dates for the conference are November 15-16, 2013. The event will be held at the Indianapolis Marriott East. We are planning an exciting agenda with speakers from the following societies and affinity groups:

- *Communications Society
- *Computer Society
- *Signal Processing Society
- *GOLD (Graduates of the Last Decade)
- *CIECN (Central Indiana Consultants' Network)
- *PACE (Professional Activities Committees for Engineers)

If your organization would like to exhibit at the conference please contact David Koehler for pricing details (email: David.Koehler@ieee.org).

In the next edition of *The Reporter* we will have addition conference details. Please also check the section's website for registration and agenda details in the next month: <http://www.cis-ieee.org>

PES/IAS/PELS News

Earl Hill, Chair, PES/IAS/PELS
Ben Huckaba, Vice-Chair, PES/IAS/PELS

The PES/IAS/PELS has started another year of well-attended monthly seminars and meetings. On January 15th, the section held a meeting on SCADA, Distribution Automation. Don Bergert of Efacec-ACS presented a software program that allows a utility to automate the fault detection, isolation & restoration on a feeder with a tie to another circuit without having the costs, complexity, upkeep and maintenance of a full GIS model. The solution was a true model driven solution and not a script driven product that can only solve a single fault.

On February 12th, the section held meeting on Arc Flash Hazard Mitigation Techniques. Mr. Jeremi Jermakowicz of Schneider Engineering presented several options for mitigating arc flash hazards, but specifically highlighted his company's system that measures fault current and light via arc sensor channels and should a fault occur, minimizes burning time by quickly cutting off the current feeding the arc. Traditional arc protection methods do not provide fast enough protection and short arc burning times are critical, especially when the arc develops during maintenance work on the switchgear, endangering personnel safety and life.

In March the section will hold a Battery Short Course taught by representative from both academia and industry vendors. Batteries are likely to play a bigger role in the electric industry, for remote applications, substation backup, electric vehicles, and more. This short course will explore some of the key battery issues. The meetings will be held in the Safety Room of the Indianapolis Power & Light Engineering Building each Tuesday in the month of March from 6:30 – 8:30 pm, with networking from 6:00 – 6:30 pm.

The Short Course dates, speakers and topics are listed below.

March 12th

John Mandeville, American Electric Power (AEP), Dolan Labs (Columbus, OH)
AEP has been proactive in using batteries for energy storage and other benefits. The presentation will review the benefits and operational issues associated with Sodium Sulfur (NAS) battery and Lithium ION battery installations.

March 19th

Dr. Kim, Assistant Professor of Mechanical Engineering at IUPUI
Battery technology research and development

March 26

Steve Tolen of Indy Power
Randy Brantley of Delphi
Presenting advances in battery technology for commercial applications.

June 4th (Rescheduled due to snow)

Charles (Chuck) LaSota, President/CEO of the Battery Innovation Center (BIC)
Research focused on delivering new high capacity energy storage systems for vehicle and energy grid uses.

On May 21st a meeting is planned on Modular Nuclear Reactors. Jeff Snow of Babcock and Wilcox will present his company's mPower reactor, a scalable, modular, passively safe, advanced light water reactor system. The reactor features a four-year operating cycle without the need for refueling, and is designed to produce clean, zero-emission operations. Generating capacity can be added in 180 MW increments to match customers' load growth projections.

PES/IAS/PELS Event Planned

The Power Electronics Society will be hosting a tour of the SMIL and PEDAL labs at Purdue University, West Lafayette, IN. The date is April 9th at 6PM, in Michael Golden Labs, Room 1232.

Smart Meter Integration Lab (SMIL) by Landis+Gyr Corporation, Purdue's Smart Meter Integration lab (SMIL) was established in 2010 as an industry sponsored applied research facility to promote innovations around smart meters in smart grids. Startup costs and four year funding are provided by Landis+Gyr Corporation. The facility is open for products from all smart grid device manufacturers. Mission of the Smart Meter Integration Lab (SMIL) is to promote innovations around smart metering devices to increase efficiency of electric power grid and reduce per capita electric power consumption by integrating modern power electronics, communication technologies, and consumer behavior findings.

<http://www.tech.purdue.edu/ECET/SMIL>

Power Electronics Development and Application Lab (PEDAL) by International Rectifier Corporation, PEDAL was established in 2007 from the initial funding received from International Rectifier Corporation. It is a state of the art power electronics applications development lab founded in industry, including LeCroy test instruments and dSpace based electronic circuit developments. The mission of this laboratory is to promote integrated, energy efficient power electronics based solutions to all possible applications and to educate students and instructors. Lab activities focus on power electronics in motor drive systems, power conversions, and class-D audio systems. Current projects include hub wheel driven neighborhood electric vehicle drive systems, regeneration, human-machine interfaces, ultra capacitor integration, and power converters for renewable energy integration. This facility is used to develop new electronic hardware for innovations in smart meter based projects.

<http://www.tech.purdue.edu/ECET/PEDAL/>

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expanded chapter on filter design, signal integrity,
and signal return currents on PCB's
at no extra charge



April 23-25, 2013 (Tues. - Thurs.)
Hilton Hotel, Northbrook, IL

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Classes fill quickly so register early

email cgorowski@dlsemc.com or call 847-537-6400
www.dlsemc.com/emcdesignseminar

**CENTRAL INDIANA SECTION
of the
INSTITUTE OF ELECTRICAL and ELECTRONIC ENGINEERS
A HISTORY
By George R Fraser
Volume D***

Part X

The early part of the year 1984-85 has previously been published in THE REPORTER.

The Centennial year is over and our section has participated, via satellite, in the presentation of "The Second Century Begins" from the Franklin Institute in Philadelphia. Over the past ten months we have been reminded of our heritage in several different ways, plant histories, brief talks, slide presentation, an interesting program by one of our Fellows, Dr. Leslie A. Geddes on the History of Electricity in Medicine 1745-1983 and the publication of the History of the Central Indiana Section in THE REPORTER.

The Second Century has indeed begun as we look back on the past with pride and accomplishment but if we are to continue to grow as an individual and section we must look to the: future and prepare for the future. A review of the programs of the section and of the courses being offered by our various educational activities can result in only one conclusion and that conclusion must be that the opportunity is available but it is up to you, the individual member, to accept and participate in these opportunities if you are to be a part of the challenge of the future.

Programs as scheduled in THE REPORTER went along pretty much according to schedule. The annual trip to the

track was again one of the major meetings of the year with Tom Binford, Chief Steward of the Indianapolis 500, our speaker. Mr. Thomas W. Binford, as one of the most prominent men in Indianapolis, talked about racing as he knew it and his particular philosophy that had helped him in making some difficult decisions that involved racing over the years. This program was again jointly sponsored with the Electric League of Indiana. The tour of the garage area was interesting, as usual, and the presentation by Mr. Binford was outstanding.

For those that attended regularly it was obvious that an honest attempt was made during the year to have something for every member. Meal costs and social hours were varied, beer was brought in and made available at cost for a few of the meetings in an effort to reduce costs.

During the Centennial year membership in the IEEE had passed the quarter million mark. Our Central Indiana Section membership had also grown from a reported 1,541 members at the end of the 1983-84 year to a reported 1,835 members in March of 1985. Much of the increase was due to increased student involvement. This is good as they are the members of the future. Chairman Marvin Needler reported that the student section of IUPUI has become a very active student section.

The funding of the section and particularly the funding of THE REPORTER are usual problems but with an all-around conservative effort and the changes in the publication of the section publication this was not a problem of the year 1984-85. The year had started with \$17,963.40 available in the treasury and ended with \$18,865.95 available to start 1985-86. IndyCon'84, held October 8 and 9, 1984 had again been successful and resulted in income to IEEE of \$1,816.47, Region 4 of IEEE \$90.82 and to the section \$1,725.65.

Several video conferences were held during the year with the section taking an integral part in each.

The section officially dropped the following subsections from the activities of the section; Circuits and Systems, Information Theory, Engineering Management and Engineering in Medicine and Biology. All were inactive and had failed to elect new officers.

An event of the past several months that has caused concern not only to our community but also to our section has been the phasing out and closing of the Western Electric Plant on Shadeland. The community has lost an asset, the employment of many people and our section has lost some fine engineers as a result.

The year 1984-85 was a year of many changes but a good year and a solid base has been established for the coming year.

Part XI

Chris Jamison became our Chairman in September 1985. Chris had been an active member since commencing his work career at the Naval Avionics Center. For many of our members their first acquaintance with Chris was at the door of an IEEE meeting while Chris was serving on or Chairman of the Hospitality Committee. Chris was ably assisted during the year by Max Willis from Public Service Indiana as Vice-Chairman, Ed Byrun from R.C.A. as Secretary and Larry Ogborn of Purdue University as Treasurer. Directors were Dr. Marvin A. Needler of IUPUI and Ken Barr of R. C. A. Editor of THE REPORTOR was Nancy Molzan from the Naval Avionics Center. All of our officers were registered Professional Engineers. It is believed this was the first time that all officers of the section were PEs.

Programs for the year were aimed at membership participation and the number and type of tours were increased as this usually brings out more members for a meeting. Six of the nine meetings had a tour as part of the meeting. For those whose feet and energy didn't wear out the first meeting of the year, a tour of the Indiana Bell facility in downtown Indianapolis, proved to be most complete and interesting. Tours of TV station WXIN and Indy Cablevision were interesting and educational. It is good to see that the section continues to work closely with our student sections. For many years the section has alternated between Rose Hulman in Terre Haute and Purdue University in West Lafayette on a joint section and student section meeting. This year this meeting was held at Rose Hulman with a tour of the CBS/Sony Digital Audio Plant as a high light of the meeting.

The annual May meeting at the Indianapolis Speedway almost did not have a tour due to the construction of new garages but almost at the last minute construction progress did permit a garage tour. The new garages are certainly an improvement and are better equipped to assist in the quest for speed and safety. The last tour and meeting of the year was a tour of the Cummins Engine Plant in Columbus, Indiana. This tour proved very popular and once again proved that with a good program members are willing to travel. Approximately 50 members attended this meeting. Other meetings of the year were on manufacturing automation, Star Wars, and for our annual honors and awards night a very excellent meeting on medicine by Dr. James E. Lingeman of the Indiana University School of Medicine and Methodist Hospital.

The Power Engineering Society was very active, as usual, with regular meetings and the presentation of both a fall and spring training program. In January Marlin Ford became Chairman of the PES group replacing Mike Martin who had been

Chairman during 1985, This chapter is one of the top chapters in the United States finishing in the top five of all United States chapters almost yearly.

During the 1985-86 your Historian knows of the following that are representing the Central Indiana Section at the national and international level: Gene Nix of the Power Engineering Society and from the Electrical Engineering Technology Department of Purdue University was appointed Chairman of the internationally active PES Student Affairs Committee Fritz Friedlander, Electrical Engineering Department, Purdue University is with the Magnetics Society and Dr. Leslie A. Geddes of the Biomedical Engineering Center, Purdue University was appointed as a member of the *IEEE* History Committee.

Membership in the *IEEE* and the Central Indiana Section continue to show a good growth pattern. During 1985 internationally *IEEE* grew at the rate of 4%, finishing the year with 273,000 members world wide. Our Central Indiana Section finished the year with over 1723 members.

Costs of operating the section continues to increase but the section operates very close to its self- established operating budget. At the end of August 1985 cash available and invested was reported as \$17,963.40. On September 1, 1986 the reported cash available and invested was \$17,116.87. INDYCON that at one time was conducted entirely by our section has grown to such an extent we now have partners in sponsoring the show and the show is managed by a professional management corporation. For 1985 the section received \$580.60 as its share of the profits of which 5% is obligated to Region IV of *IEEE*.

Educational activities during the year were numerous and covered many areas. Chuck Elliott of Purdue University has been a regular contributor to *THE REPORTER* and has worked long and hard to assist furthering engineering education. This year he was promoted from his position as Head of Continuing Engineering Education at Purdue University but he continued writing for *THE REPORTER* until his successor was appointed. A portion of one of these reports deserves repeating; "It's never too late to learn more." Good advice for all and the opportunity is available through our section. Dr. Phillip H. Swain was named to succeed Chuck as Director for Continuing Engineering Education. Phil is well known to many members of the section as he has not only been an active member but he organized and for several years was Chairman of the Central Indiana Chapter of the *IEEE* Computer Society.

All officers are to be congratulated for another good year.

George Frasier
IRE M'48-SM'56
IEEE LS'83

* This fourth and last portion of George Frasier's history document appeared in *THE REPORTER* IN April, May, and June 1986. The third portion of the history was republished in the December 2012 edition of the *REPORTER* and originally appeared in *THE REPORTER* IN April, May, and June 1985. The second portion of the history was republished in the September 2012 edition of *THE REPORTER* and originally appeared in *THE REPORTER* in January, February, and March, 1985. The first portion of the history was republished in the June 2012 edition of *THE REPORTER* and originally appeared in *THE REPORTER* in September, October, and November, 1984. These reprints were excerpted and slightly edited by Marvin Needler, CIS-IEEE Historian, 1998-current.

A REQUEST FOR YOUR POINT OF VIEW AND FOR HISTORICAL INFORMATION ON THE CIS-IEEE

As mentioned in the last newsletter, we are looking for history of the section. We have many stories in the history documentation written in the 1980s by George Fraser with the assistance of many others, and we are reproducing that history here. However, we are short of interesting and insightful tales of the section events and member and officer activities, especially in more recent years. We are asking all members, officers and especially life members to share their stories for publication in the next issue of the CIS-IEEE Reporter.

In the last issue, suggested example topics were provided. We need to write the history, both general and anecdotal that surely the future membership will want to know. Please share your experiences with us.

Also, we have a few gaps in our history. We are missing the names of the following persons:

- The chair of the AIEE in 1947-48.
- The chair of the IRE in 1957-58.
- All the officers of the CIS-IEEE in 1968-69.

And we are missing some copies of *THE REPORTER* in our *IEEE* archives:

- All copies preceding 1968.

- Many copies in the late 60s and early 70s.
- All 1982, 83, and 84 copies.
- All 1993 and 94 copies.
- A few miscellaneous copies.
- (on the other hand, we have many duplicate copies that need to be discarded, any interest?)

If you have any of the above and are willing to share, please contact, Marvin Needler, Historian, (mnpn@juno.com)

2013 Meeting Calendar

Date	Host	Subject	Location
Monthly	CIS	Executive Committee Meeting Annual Planning Meeting	ET103, IUPUI Internet/Phone Bridge

... Check the [Section web page](#) for details and current information. 

ADVERTISER EVENT

April 23-25, 2013	DLS http://dlsemc.com/	EMC by Your Design Seminar	Hilton Hotel, Northbrook, IL
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How Do You Communicate??

Want to know what is happening in Central Indiana Section? Don't know where to look? Already inundated with E-Notices? Need to ask a question? Want to find an expert? Got a meeting idea?

Here are some of many communication channels available in Central Indiana Section



Find the Central Indiana Engineering Consultants' Network and the Central Indiana Section Communications Society, as well as several other IEEE related organizations on LinkedIn.



Student Branch members are encouraged to join "CIS-IEEE Student Branches" group on Facebook. Several opportunities for students and student branches have been posted there. The Facebook group also provides an opportunity for CIS student members to interact or to make contact with student members outside of Central Indiana. There is no substitute for a good network, but be aware that some hiring managers are also checking these sites.

Communications Society members can find "COMSOC – Central Indiana Section" on Facebook.

CIS Home Pages

Start with the main site. (www.cis-ieee.org) Check out the calendar of events, or link to the many IEEE groups in Central Indiana Section, including all of the Student Branches.

E-Notices

Not getting E-Notices? E-Notices are not only a resource for keeping in touch with the activities throughout CIS, but you will also receive information on topics of interest throughout IEEE

Login to myIEEE from the IEEE Home Page (www.ieee.org) and sign-up! at the main site. (www.cis-ieee.org) Check out the calendar of events,

Central Indiana Engineering Web Links

ACEC	American Council of Engineering Companies, Indiana	acecindiana.org
ASCE	American Society of Civil Engineers	inasce.org
ASME	American Society of Mechanical Engineers	sections.asme.org/central_indiana
ASM-INDY	American Society for Metals - Indianapolis	asm-indy.org
CIECN	Central Indiana Engineering Consultants' Network	indy-engineer.dnsalias.com
CINLUG	Central Indiana Linux Users Group	cinlug.org
IBEN	Indiana Biomedical Entrepreneur Network	indianabionetwork.org
IHIF	Indiana Health Industry Forum	ihif.org
INCOSE	International Council on Systems Engineering	incose-coa.org
INDSPE	Indiana Society of Professional Engineers	indspe.org
INDYASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers	indyashrae.org
NSBE-IAE	National Society of Black Engineers - Indianapolis Alumni Extension	nsbe-iae.org
PIMCIC	Project Management Institute - Central Indiana Chapter	pmicic.org
SAE	Society of Automotive Engineers, Indianapolis	indianasae.org
Sciencetech	Sciencetech Club in Indianapolis	sciencetechclub.org
SIM	Indianapolis Chapter of Society for Information Management (SIM)	SimNet.org
SWE-CI	Society of Women Engineers - Central Indiana Section	swe-ci.com
Techpoint	A diverse collection of technology-based Indiana industries.	Techpoint.org

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Distribution: The Reporter is made available electronically to the approximately 1800 IEEE members within the Central Indiana Section including student members and faculty of Purdue, IUPUI, Rose-Hulman Institute of Technology and ITT Technical Institute.

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Editorial Policies

Each issue of The Reporter typically references three months - the month in which it is published and the following two months. The Reporter is typically published in March, June, September, and December.

Material to be included should be submitted mid-month prior to the month it is to be published. For example, material intended for the September issue should be submitted to the Editor by August 15. The Editor will send a reminder to all IEEE Central Indiana Section entities by the 15th of the month to submit their updates.

Copy should be submitted electronically. Photographs are desirable. Advertisements are welcome. Contact the editor for layout sizes and rates.