



VOL. 71
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Columbus Engineer

Official Publication of the Franklin County Chapter of the Ohio and National Societies of Professional Engineers

PRESIDENT’S MESSAGE

By Leon E. Winget, Ph.D., P.E. / FCC President



Time marches on. This is the second issue of Columbus Engineer in its 70th year. As mentioned earlier the Columbus Engineer facilitates the history of the Chapter as it is happening. The past two months have

been very busy for the members, with the Franklin County Chapter (FCC) MATHCOUNTS, Imagine Engineering, grading of Scholarships, State MATHCOUNTS, regional Science Fair, and Certificate Ceremony. Some pictures of the winning teams and students are shown in this issue.

To re-iterate what my predecessor wrote last year, following the Certificate Ceremony, I was reminded of our obligation to protect the health and welfare of the public above all else. To quote our illustrious MC when addressing the new PE license holders, “Congratulation, you now can be sued!”. This simple statement highlights the power, significance and responsibility that we as professional engineers have. We must not take it lightly.

MATHCOUNTS - Five teams and 10 individuals, not on a winning team, from the FCC Regional were eligible to advance to the State. FCC teams, at the State Competition, won second and third place and received trophies. Congratulations to New Albany and Dublin Karrer. Two of the middle school students from FCC scored very high and are now advancing to the Nationals in May. The Nationals will be in Washington DC this year. Please see the write-up in this issue.

Imagine Engineering – Several schools submitted requests to have an engineer explain to their second grade classes what we do as engineers. Thanks to Devon Seal; she did a great job administering the Imagine Engineering program. See the winners in this issue.

Luncheons - The Chapter had a very interesting presentation by Jim Arnold on March 21 at the Hickory House. He briefed us on the fundamentals and introduced us to the recent advances in the technology of heating, ventilation and air condition of commercial buildings. Indeed the science has progressed greatly from my days in the field over 30 years ago. For those of you who missed it, the Chapter has another very out-standing speaker, Bill Lhota; his topic is “Ethics”. Bill is one of the most recognized experts in the field of ethics in engineering. Here is your chance to acquire the one hour of CPD required for PE license renewal in many states. Please see the announcement of the luncheon in this issue.

Scholarships – This year only 6 students from 6 different schools submitted applications for the Chapter Scholarship. This was considerably less than the 26 applications received last year. Nathan Nelson, a senior at Delaware Hayes High School in Delaware was the recipient of the Chapter \$1,000 scholarship. My sincere thanks to Joe Sullivan for chairing the scholarship committee and the tremendous amount of work he did on the project. Three chapter members supported Joe; namely Steve Day, Howard Jones and yours truly.

Central District Science Day – Members of the Chapter judged several projects at the Regional Science Fair. The fair was held at CSCC. Thanks to Joe Sullivan for taking the time to organize and oversee the judging. The top three projects related to engineering were awarded prizes. See the details in this issue.

The Chapter’s slate of officers, are listed in this issue. Please review and either select or write in your choice in the space provided and return the ballot by April 30.

Until next month, I hope to see you at our luncheon with Bill Lhota.



FCC-OSPE April Luncheon Program

DATE: Thursday, April 18, 2013

PLACE: The Hickory House
550 Officecenter Place, Gahanna

TIME: Registration: 11:30 am
Lunch: 11:50 am
Speaker: 12:05 pm
Closing Remarks: 12:55 pm

COST: Advance Reservation: Members: \$20.00
Non-Members: \$30.00. Call Chapter at 470-4170 or email registration information to OSPEFCC@aol.com by Mar. 18. Please include name and phone number.
Pay at the door (check payable to FCC-OSPE)

SPEAKER:

Bill Lhota, PE, PS



William J. Lhota is a former President and Chief Executive Officer of the Central Ohio Transit Authority (COTA) From September 2004 to February 2011. COTA is the public transportation provider in central Ohio.

Following retirement from American Electric Power (AEP) in December 2001, as a senior executive, he formed LHOTA SERVICES in January 2002. LHOTA SERVICES was a sole proprietor business focusing on arbitration, mediation, energy consulting, as well as consulting, teaching and lecturing on business and engineering ethics.

At retirement from AEP, Lhota was President - Energy Delivery, American Electric Power and Executive Vice President, American Electric Power Service Corporation.

While at AEP Lhota was responsible for power transmission and distribution systems in 11 states. He spent 37 years at AEP serving in numerous management positions at Ohio Power Company and Columbus Southern Power, both subsidiaries of AEP in addition to the AEP Service Corporation.

Throughout his career Lhota has had extensive experience in public policy and labor relations. Early in his career, for four years, he had day-to-day responsibility for public policy in Washington D.C. and in Ohio. In all subsequent positions, in addition to other duties, he directed both national and state public policy. Lhota has worked with organized labor throughout his career and he was instrumental in establishing cooperative relations between AEP and its labor unions.

He earned a Bachelor's Degree in Civil Engineering in 1964 from The Ohio State University. He also earned a Master's Degree in Management from the Massachusetts Institute of Technology in 1978. He is a registered professional engineer and surveyor in Ohio and a member of the American Society of Civil Engineers, National Society of Professional Engineers (NSPE), and the Ohio Society of Professional Engineers.

Lhota created and managed AEP's original corporate compliance program, has extensive experience in ethics, corporate governance and is:

- * Member of the Board of Directors for the National Institute for Engineering Ethics (NIEE) at Texas Tech University, Lubbock, Texas
- * Past, chair and member of the NSPE Board of Ethical Review
- * Panel member for six ethics webinars presented annually by the National Society of Professional Engineers
- * Led the development of a Code of Ethics for the Ohio Chamber of Commerce and The Ohio State University Alumni Association

Articles and publications:

- * The Need For Professional Ethics
- * The Evolution and Application of Codes of Ethics for the Engineering Professional
- * Leadership and Teamwork
- * False Claims Acts Affect Compliance and Ethics Programs

PROGRAM: Ethics ? A Case Study on the Upper Big Branch Mine Disaster.

ABSTRACT: You will learn!

A certificate for 1 hour of Professional Development for attending the program will be presented at the luncheon.

MATHCOUNTS Regional & State

MATHCOUNTS – The program is in its 30th year. MATHCOUNTS was initiated by the National Council of Teachers in Mathematics (NCoTM) and the National Association of Professional Engineers. The MATHCOUNTS Competition provides the extra incentive and the atmosphere for the students to push themselves to achieve more in mathematics. Consisting of fun and creative problems that promote critical thinking and problem-solving skills, the competitions have written and oral rounds, as well as individual and team components. Though challenging and non-routine, the competition problems focus on the 6th through 8th grades standards of the NCoTM. Please note the competitions are administered by volunteers, many are members of OSPE.

The Franklin County Chapter Regional Competition Results

The competition was held at CSCC on February 16. Five winning schools advanced to the State Competition. The schools were:

- Dublin Sells Middle School; Coach Jodi Van Vranken
- Dublin Dr. Henry Karrer Middle School; Coach Kelcie Ellis
- New Albany Middle School; Coach Ginny Nicholson
- Jones Middle School; Coach Kerry Smith
- McCord Middle School; Coach Nicolette Meyer

The four top students, which received awards, were:

- Raymond Chen; Dr. Henry Karrer MS
- Varun Srikanth; Hilliard Memorial MS
- Sarah Wang; New Albany MS
- Gordon Liu; Granby Elementary School

It should be noted that the top 3 students recorded the same score and the “tie-breaker system” had to be used to rank the students according to the National MATHCOUNTS Rules.

Joe Bolzenius, as the FCC Coordinator, administered the program. Nick McCullough ran the Scoring Room, no easy task. Tina Sutermeister administered the procedures for the proctors and controlled the test material. Howard Jones with a generous donation from

(MATHCOUNTS continued on page 4)

April Auxiliary Meeting

The Auxiliary to the Franklin County Chapter of OSPE will have a noon luncheon at the Brookside Country Club, 2770 W. Dublin-Granville Rd. on Tuesday, April 16. Joe Blondo from the Columbus Dispatch will speak.

Marlene March will give the invocation and lead the pledge of allegiance. Joanne Troy is to be hostess. Guests and prospective members are always welcome. Call Jean Mitchell at 614-263-7071 to make a reservation.

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(MATHCOUNTS continued from page 3)

Tai C. Wong PE, furnished the refreshments, including donuts, for the volunteers. Over 80 volunteers helped in the proctoring, grading and CountDown Round. Most were members of the Chapter.

State MATHCOUNTS Results

The State competition was held at CSCC on March 9. Thirty-one teams from Ohio competed. The total number of students competing was 190, although 192 were invited. The top schools were:

- Mason Middle School, Coach Sallie Carney, Cincinnati Chapter
- ***New Albany Middle School***, Coach Ginny Nicholson, FCChapter
- ***Dublin Dr. Henry Karrer MS***, Coach Kelcie Ellis, FCChapter
- Birchwood School, Coach Charles Debelak, Northeast Chapter
- E.H. Green Intermediate School, Coach Maggi Fridman, Cincinnati Chapter;

The top four students, which will represent Ohio at the Nationals, are:

- Peter Zhu, Mason MS, Coach Sallie Carney
- ***Varun Srikanth***, Hilliard Memorial MS, Coach Brad Ruffener
- ***Sarah Wang***, New Albany MS, Coach Ginny Nicholson
- JuHyan Park, E.H.Green Intermediate School, Coach Maggi Fridman

(The ***bold italics*** indicate that they are from the Franklin County Chapter Regional Competition.) Leon Winget, Tina Sutermeister and Howard Jones administered the State Program. Tina Sutermeister was in complete control of the volunteers. She assigned the proctors and maintained a tight control of the testing procedures. Thank you Tina. Steve Bullock with the help of John Molander ran the Scoring Room. Both Steve and John are from the Cincinnati Region. Howard Jones, with a generous donation from Tai C. Wong PE, furnished the refreshments for the volunteers. The Staff of the EFO, namely Pam and Holly, handled the paper work, including the registrar tables, distribution of the trophies, and information for the Nationals. Our Executive Director Tim Schaffer took the pictures. Yes, there is considerable amount of paper work. The MATHCOUNTS Committee thanks the Staff for their support.



Here is the picture of Raymond Chen. He was the top student at FCC competition and missed by one question on the Sprint Round of going to the Nationals.

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Imagine Engineering Coloring Contest

Imagine Engineering is an annual engineering educational opportunity and coloring contest for 2nd grade students. Franklin County Chapter members gave presentations about engineering to 900 second grade students at 17 schools across the FCC area this winter. The presentations, which take between 30 and 60 minutes include reading a book, "Not All Engineers Drive Trains", which was written by representatives from the Iowa State University College of Engineering. Presenters talk to the students about what engineers do, the importance of the field of engineering to the

safety and welfare of the public, what it takes to be an engineer, and what it means to be a licensed Professional Engineer. The students also get to participate in short engineering experiments. Students then color pictures showing engineers at work and submit them for the Imagine Engineering Coloring Contest. Contest entries were evaluated by FCC board members. Three were selected as the top entries in the FCC area. Their entries are shown on pages 6, 7 and 8. These three students' entries will be submitted for consideration for the top three OSPE prizes.

FCC 2013 OUTSTANDING ENGINEERING STUDENT AWARD

The 2013 Franklin County Chapter Outstanding Engineering Student Award recipient is Alexander (Alec) Sichko. Alec graduated from The Ohio State University in June of 2012 with a Bachelor's of Science degree in Civil Engineering. Alec is currently in the Master's program at The Ohio State University and is



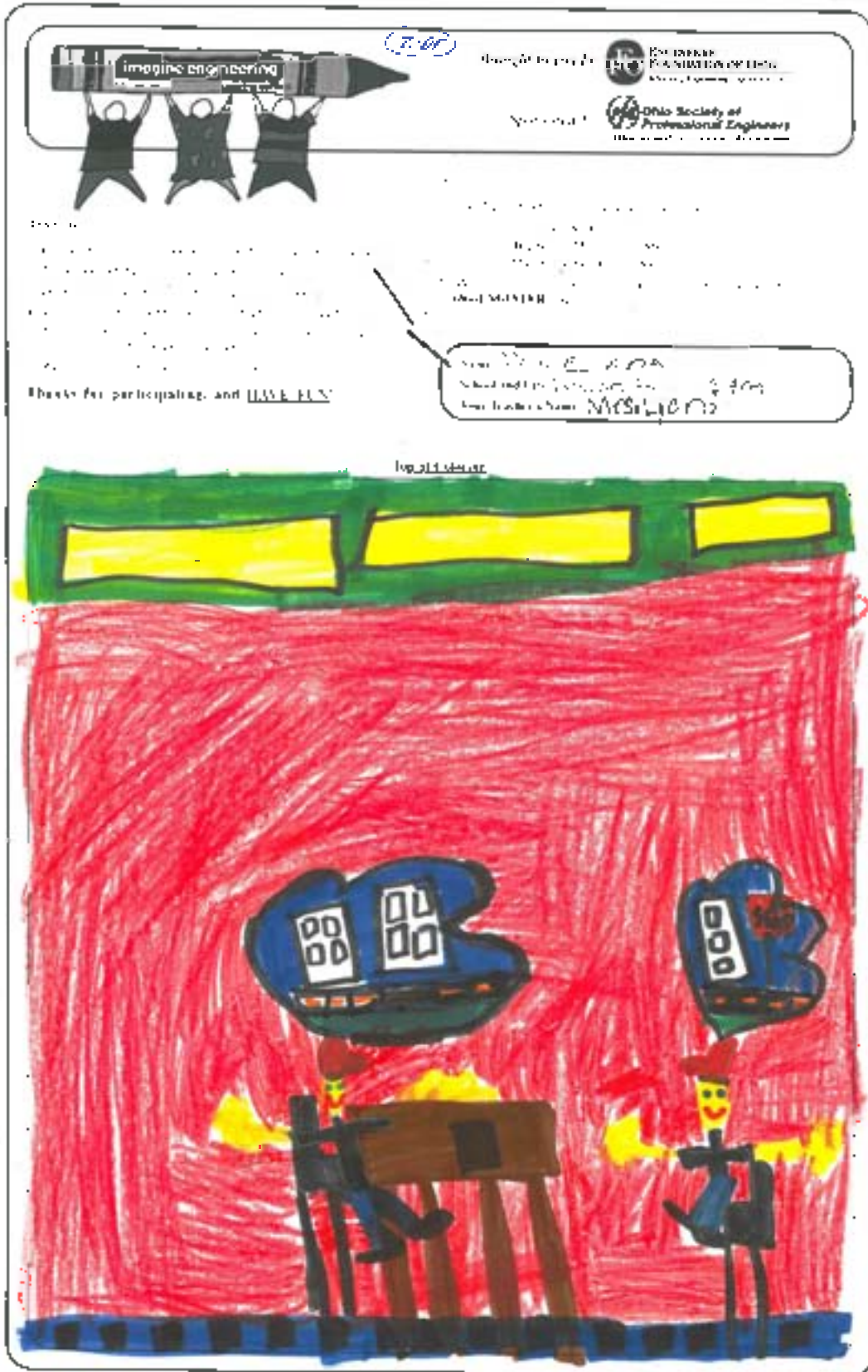
Alec Sichko

expected to complete his Master's program in Spring of 2014. Alec is currently working on researching the application of mechanical rebar couplers in high-strength reinforcement applications. Specifically, he is working towards developing acceptance criteria that can be used in building codes. These guidelines will aid coupler manufacturers in their design processes as there is currently no unified standard available. He has been successful in securing the support of several coupler manufacturers as well as a high-strength reinforcement supplier.

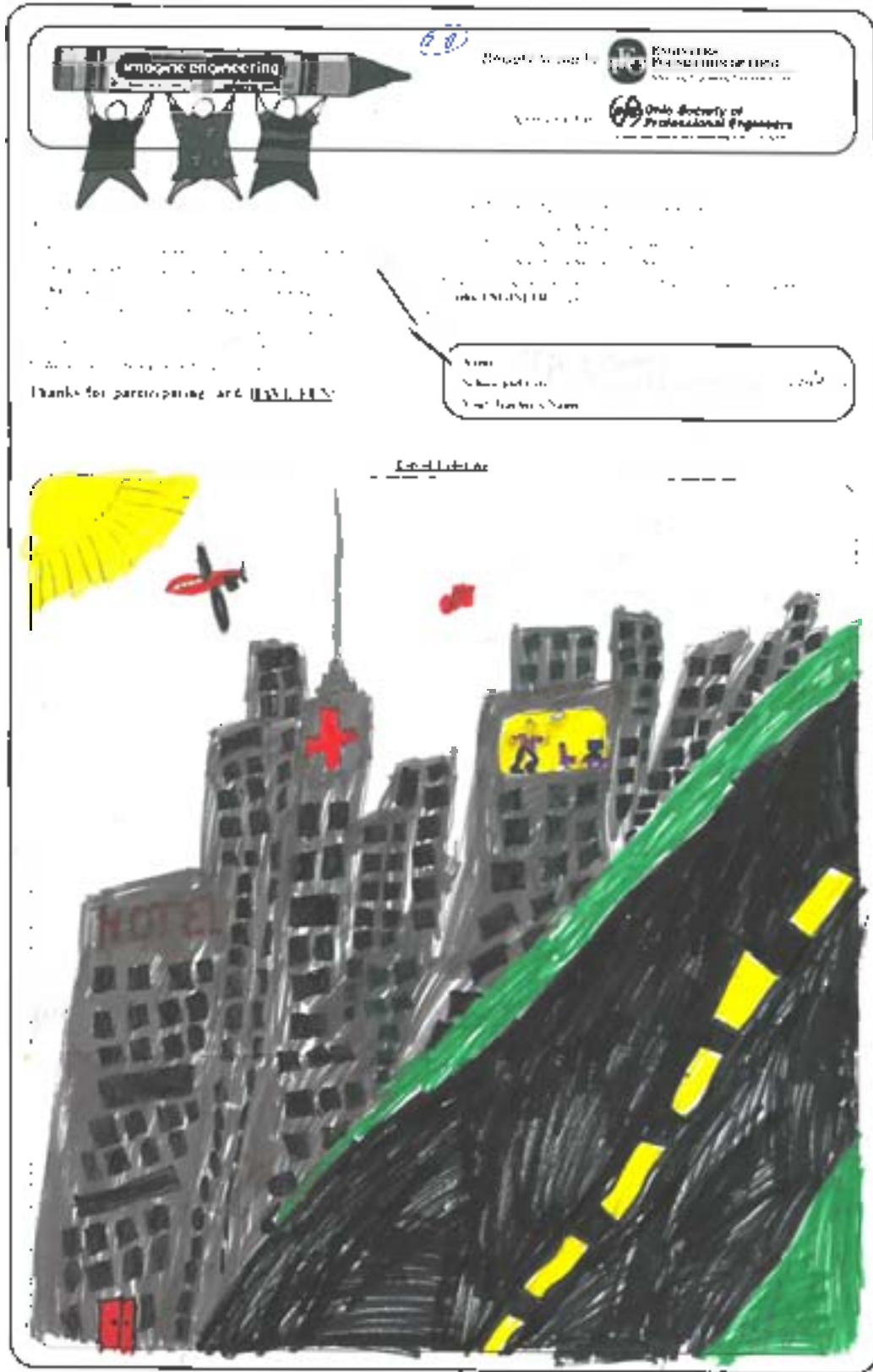
At the end of his undergraduate program, Alec took and passed the Fundamentals of Engineering exam. Alec is a member of the Structural Engineers Association of Ohio and ASCE. Alec has also been active in several student organizations at The Ohio State University as he has served as the Fundraising Chairperson and the webmaster for Engineers Without Borders, a member of the Steel Bridge Competition Team, and a nominated member of the Student Strategic Design Committee.

Alec was one of the founding members of the student chapter of Engineers Without Borders at OSU. As webmaster, he created the first website for the club that is still in use today. As fundraising chair, Alec led the members as they secured funding from private institutions and the university. He also succeeded in involving the student population in fundraising by organizing a dodge-ball tournament, casino night, and several restaurant nights. He is currently serving in an advisory role in the local projects committee for a boat ramp construction project.

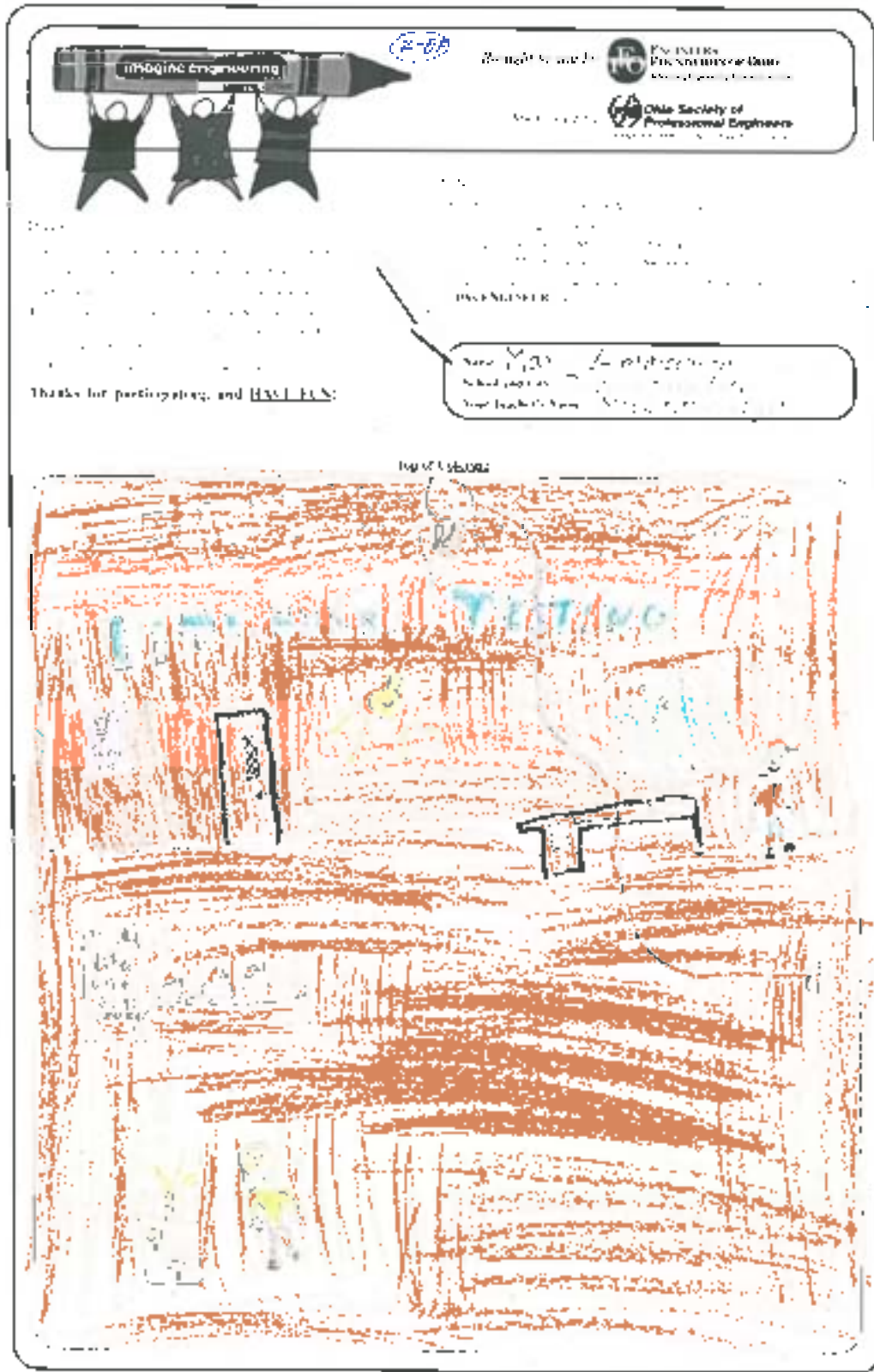
Alec is a product engineer at a Columbus, Ohio fiber optic company, PLC Connections (PLCC). He maintains a part-time status during the school year and works full-time over the breaks. His primary role is to work with customers who are seeking non-standard products, and therefore need personal attention with their components. He works with multidisciplinary teams to develop solutions that are acceptable to the customer in terms of product design, timeframe, and cost. Additionally, he frequently serves as the primary contact within PLCC which involves participating in conference calls and multiday business trips to meet with the customers. Many of his projects are covered by non-disclosure agreements with PLCC's customers, so he cannot list specific projects and contributions. PLCC's size and scope of technologies allow Alec to participate in multiple areas, including managing IT, process development, and the design of non-COTS manufacturing and measurement equipment. Congratulations to Alec Sichko in being our 2013 FCC Outstanding Engineering Student!



First Place –
McKenna from Duncan Falls Elementary



Second Place –
Arpen Parekh from Dresden Elementary



Third Place –
Max Zimmerman from Duncan Falls Elementary

**FRANKLIN COUNTY CHAPTER
OHIO SOCIETY OF PROFESSIONAL ENGINEERS
BALLOT FOR ELECTION OF OFFICERS
2013 – 2014**

2012-2013 Previously Elected Positions

President – Richard Smelker, PE
American Electric Power

The following Trustees are in the second year of a two-year term:

PEC Trustee – Kevin Ernst, PE
Terracon Consultants, Inc.

Retired Prof. Engineers Trustee – Howard Jones, PE
American Electric Power, Retired

PEHE Trustee – Halil Sezen, PE
The Ohio State University

Young Engineers Trustee – Carlos Casablanca, PE
American Electric Power

PEI Trustee – Jim Arnold, PE
Haslett Heating & Cooling

BALLOT

(Please Check or Write-In Selection)

Vice-President/President-Elect (vote for 1)

Steve Wilson, PE
American Electric Power

Vice-President (vote for up to 3)

C.R. Weaver, PE
Gresham, Smith and Partners

Kevin Ernst, PE
Terracon Consultants, Inc.

Paul Junk, PE
Retired

Chapter Secretary (vote for 1)

Michael Russ, EI
American Electric Power

Chapter Treasurer – Two Year Term (vote for 1)

Steve Day, PE
Day Engineering LLC

Trustees

(Vote for only those Practice Divisions that you belong – the term is two years unless otherwise noted)

PEPP Trustee

Paul Junk, PE, PS
Retired

PEG Trustee

Richard Irwin, PE
ODOT, Retired

_____	<u>President</u>
Write-in candidate	Position

Write-in candidate	Position

Write-in candidate	Position

Write-in candidate	Position

Please Sign (or Type) Your Name to Validate Ballot

Click Submit Form Button to email form:

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Or print and Return to:
FRANKLIN COUNTY CHAPTER
P.O. Box 69
Reynoldsburg, OH 43068-0069

Or Fax to: 866-651-2722

Ballots must be postmarked by April 30, 2013



FCC-OSPE Membership Directory

The 2012-2013 FCC-OSPE Membership Directory will be emailed to members later this month. The information listed in the directory is obtained from the NSPE database. This database is compiled from the information you provided NSPE on your dues statement. If any of the info shown is missing or incorrect, please make corrections on the NSPE website. Just login and navigate to the "My Account" page where you can add or edit your profile information. If you have problems NSPE Member Services can be contacted by dialing 1-888-285-NSPE (6773).

If you would like a hard copy of the directory, please contact Joe Sullivan at 614-486-4383 or drop him an email at joe.sullivan@stantec.com.

OSPE's Continuing Professional Development (CPD) Conference and Annual Meeting

The theme is "*Socially Responsive & Responsible Engineering*". This year's meeting is being held June 14-15, 2013 at Ohio University in Athens, Ohio. 12.5 CPD hours are available in Engineering Education. Be sure to mark your calendar for CPD education, fellowship and fun.

Central District Science Day

Chair – Joe Sullivan

Once again this year the Franklin County Chapter was a Sponsored Award Organization for the Central District Science Day. The Central District event was held on March 16th at Columbus State Community College. Projects devoted to any of the different engineering disciplines were eligible for the Franklin County Chapter awards. Grading was based on the knowledge achieved, effective use of the scientific method or engineering design process, clarity of expression, originality and creativity. Awards of \$150, \$100 and \$50 were presented to our top three finishers. 30 projects were graded.

This year's First Place Award went to Abigail Myer, an 8th grader from Big Walnut Middle School. Her project was titled "ARCTIC OIL SPILL CLEAN-UP". Our Second Place Award went to Jesse Rines. Jesse is in the 11th grade at Big Walnut High School and his project was titled "GRATZEL CELLS: THE FUTURE OF ENERGY". The Third Place Award went to Anisha Babu, a 9th grader at Dublin Jerome High School. Her project was titled "THE JUMP FROM THE BUMP".

Five Franklin County Chapter members judged the event. They were: Jim Arnold, Paul Junk, Richard Smelker, Tina Sutermeister, and Joe Sullivan. One non-FCC member, Frances Rubio also helped with the judging.

Ohio Engineers Legislative Day

Ohio Engineers Legislative Day is being held May 14, 2013 at the Capital Club in Columbus. Speakers and program begin at 9 a.m. and end at 1:45 p.m. Legislative visits from 1:45 p.m. to 4:00 p.m. Participants can earn 4.0 CPD hours. More details to come from OSPE



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FCC-OSPE 2013 OUTSTANDING ENGINEERING EDUCATOR AWARD

The 2013 Franklin County Chapter Citation Award recipient is Professor Fabian Hadipriono Tan. Dr. Tan received his Master of Science in 1978, his Master of Engineering in 1980, and his PhD in 1982 all degrees are from the University of California, Berkeley. Dr. Tan has over 30 years of teaching experience and is currently a Professor at The Ohio State University in the Department of Civil Engineering, Construction Engineering, and Management program. He has taught a variety of courses and he currently teaches undergraduate “Introduction to Engineering – I/II” courses, as well as “History of Ancient Engineering”.

Dr. Tan is actively involved in research projects sponsored by the National Science Foundation, the Ohio Department of Transportation, the National Institute of Safety and Health, the United States Department of Agriculture, and NASA. Currently, his focus of research has been on the safety of civil engineering structures, their environment, and the builders. More specifically, his research emphasizes (1) the safety of construction operations, (2) the safety of structures, (3) the system safety and reliability, (4) the worker’s safety, (5) forensic engineering, (6) ancient construction and structures, and (7) ancient engineering. To conduct research in this area, automation and simulation processes are employed. Related tools are fault tree analysis, fuzzy logic, expert systems, multi-media and visualization, and virtual reality. Dr. Tan has produced over 250 journal publications, conference proceedings, presentations, book articles, and research reports to date.

Throughout Dr. Tan’s academic tenure, he has developed a PhD program in Construction (previously non-existent), supervised over 15 PhD candidates and over 50 Master’s Degree candidates, and established the Construction Laboratory for Automation and System Simulation. He is currently visiting ancient sites, researching how ancient specimens and structures were engineered and constructed and writing books concerning the History of Ancient Engineering. At this stage, locations have been completed in Bali and Italy (Pre-Roman). He is now working on Italy (Roman) and China.

Dr. Tan became a PE in 1984 and in addition to his teaching responsibilities Dr. Tan has also taught a PE refresher course for practicing engineers who are looking



for the additional training prior to taking the PE exam. Dr. Tan was a fellow in the American Society of Civil Engineers (ASCE), a member of Chi Epsilon for Civil Engineering, and listed in Who’s Who in America and Who’s Who in the World.

Congratulations to Professor Fabian Hadipriono Tan in being our 2013 FCC Outstanding Engineering Educator Award Recipient!

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2013 CALENDAR

Apr. 9	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
Apr. 15	5:00 p.m.	Deadline for April <i>Columbus Engineer</i>
Apr. 18	Noon	Program: Luncheon - Bill Lohta, PE - Ethics ? A Case Study on the Upper Big Branch Mine Disaster
—		
May 14	5:30 p.m.	FCC Board Meeting @ Korda Nemeth
May 14	9 a.m. - 4 p.m.	Ohio Engineers Legislative Day
May 21	11:30 a.m.	Joint FCC-OSPE/Auxiliary Annual Spring Banquet
/		
Officer Installation		
June 11	5:30 p.m.	FCC Budget Meeting Location to be announced
June 14-15	8:30 a.m.	Annual Spring Leadership Conference

Korda Nemeth Address: 1650 Watermark Dr Ste 200, Columbus, OH 43215