



# Midwest Gateway Newsletter

## International Council on Systems Engineering

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<http://www.incose.org/mdwest/index.htm>

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### President's Corner



Greeting fellow INCOSE Midwest Gateway members,

Fall is almost here! We have some awesome opportunities coming up to engage with future systems engineers.

INCOSE MG plans to have a table at BEST robotics competition geared toward K-12 students <http://www.bestinc.org/MVC/Hub/display?hub=42>. The event will be in

October 25 starting in the morning and lasting until noon.

E-mail me if you would be interested: [marcos.chu@incose.org](mailto:marcos.chu@incose.org). A special thanks goes to Nick Guenther, Doug Dwyer and Al Vigland for volunteering as judges for this event.

INCOSE MG in collaboration with BEMRC (Boeing Employees Mentoring Robotics Club) is sponsoring a Halloween house at Clayton Homes site. This event is been advertised to students at Lincoln County public schools. The event is from 2PM-5PM on October 25. 803 OLD MOSCOW MILLS RD. TROY, MO 63379. Come and join us

(see **Presidents Message...** on page 2)

### It's Never Too Early

by Bob Scheurer,  
INCOSE Member Board  
Representative for Region I

When's the first time you considered yourself a "Systems Thinker?" Systems thinkers are often characterized as individuals able to think in the abstract or see the "bigger picture." To check up on your systems thinking skills, how would you answer the following questions?

What does the word 'structure' mean? Give some examples of structures.

What does the word 'function' mean? Give some examples of the functions of the structures you listed in (1).

Among the words below, which are structures and which are functions?

Heart  
Keep things cold  
Drill  
Refrigerator  
Tire  
Turn screws  
Tire  
Shoes  
Holding feet  
Supporting a car

What would you say is the main difference between structures and functions?

How did you do? At what age do you think someone would be able to answer these questions? High School? Middle School? Grade

(see ...**Too Early** on page 2)

### Midwest Gateway Chapter INCOSE CSEPs



The International Council on Systems Engineering has a Professional Certification Program called Certified Systems Engineering Professional (CSEP). The CSEP program provides a formal method for recognizing the knowledge and experience of systems engineers.

Our Midwest Gateway Chapter of INCOSE currently has three members who have attained their CSEP certification. Page three of this newsletter has a short bio of each of these exemplary individuals.

For more information on the INCOSE CSEP program, see <http://www.incose.org/educationcareers/certification/>

### It's Election Time

Annual elections for the Midwest Gateway Chapter of INCOSE are upon us. Currently we are soliciting interested parties to run for positions. Next month we will be having the elections.

### Call for Nominees

The Midwest Gateway Chapter of the International Council on

(see ...**Election Time** on page 4)

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## Outreach Report

Marcos Chu

This year has been a good year for the Outreach Committee so far. Our presence in the community is well known, with many leaders praising our efforts specially on our youth outreach. The growth of our membership in the past 3 years shows how the outreach efforts of our members have revitalized this chapter that has last seen this type of growth back in 1992. We have expanded our support for pre-engineering programs including our presence in the community colleges and also as volunteer judges at programs such as BEST robotics <http://www.slu.edu/billikenbest/>. As we expand our efforts, we find ourselves in the necessity in having a volunteer Outreach Chair focused in keeping our presence in those areas while we try to expand our reach at other metropolitan areas outside of St. Louis such as Wichita, KS. If you are interested in leading us, contact Interim Outreach Chair Marcos Chu: [marcos.chu@incose.org](mailto:marcos.chu@incose.org).

... **Too Early**  
from page 1

School? Would you believe that Jacob Neupert, son of Boeing Systems Engineer, Rick Neupert, had these questions for a homework assignment in the 4th Grade?

As you see, the concepts of function and structure can be understood at a relatively early age. If we project into the future, how can we nurture these skills to encourage students and adults at all ages to become "systems thinkers"?

By the way, another trait of a systems thinker is one who asks lots of questions. In the preceding article, did you notice that there were only two sentences that were not questions?!



INCOSE MG Table at an Outreach Event sponsored by The Boeing Company.

### Presidents Message ...

from page 1

for the fun, bring your robots and candy !!!!. Contact Marcos Chu for more info.

The Outreach Committee is looking for members !!!!. We plan to resume our quarterly meeting at lunchtime - Next meeting scheduled Dec 5. If you like to host a meeting let us

know: 450 miles or less from St. Louis :)

We are currently 67 members strong !. Welcome to our newest members : Keith Bernard.  
Sincerely,

*Marcos Chu, Chapter President,  
INCOSE, Midwest Gateway  
Chapter*

### INCOSE MWG 2008 Board of Directors

**President:**

Marcos Chu  
[marcos.chu@incose.org](mailto:marcos.chu@incose.org)

**President-Elect (Vice President):**

Brian Beyer  
[brian.beyer@incose.org](mailto:brian.beyer@incose.org)

**Secretary (07/08):**

Tariq Ashraf  
[tariq.ashraf@incose.org](mailto:tariq.ashraf@incose.org)

**Treasurer (08/09):**

Bill Schoening  
[william.schoening@incose.org](mailto:william.schoening@incose.org)

**Directors (07/08):**

Bill Gold  
[william.gold@incose.org](mailto:william.gold@incose.org)

Steve D'Urso  
[steve.durso@incose.org](mailto:steve.durso@incose.org)

**Directors (08/09):**

Chris Johann  
[christopher.johann@incose.org](mailto:christopher.johann@incose.org)

Steve Recker  
[steven.recker@incose.org](mailto:steven.recker@incose.org)

**Past President:**

Mason Myers, Jr.  
[mason.myers@incose.org](mailto:mason.myers@incose.org)



## *Midwest Gateway Chapter Members that have INCOSE CSEP certification*



### **Dr. Richard Mayer**

The Boeing Company  
(314) 232-1268  
[richard.c.mayer@boeing.com](mailto:richard.c.mayer@boeing.com)

Dr. Richard Mayer has 31 years experience with Boeing/McDonnell Douglas with 25 years in Laser Communications Systems. Currently he is a system architect on the TSAT program for the Satellite Development Center, El Segundo, CA.

Richard served on the INCOSE Midwest Gateway Chapter board of directors for 4 years and was Chapter President in 2004.

Richard has a BA (philosophy) from Quincy University, an MS (physics) from the University of Illinois, and a D.Sc. (applied mathematics) and MBA (Knight Fellow) from Washington University, St. Louis. He is a Boeing Technical Fellow, an INCOSE Certified Systems Engineering Professional, and a Senior Member of IEEE and AIAA. He has several publications and presentations, a patent, and a patent pending in the area of lasercom.



### **Michael D. Mobley**

The Boeing Company  
(314) 777-0659  
[michael.d.mobley@boeing.com](mailto:michael.d.mobley@boeing.com)

Mr. Mobley holds a BS in Physics from Denver University, a MSEE from Southern Illinois University at Edwardsville, and a Masters in Systems Engineering from University Missouri Rolla.

Michael has been employed by the McDonnell Douglas Corporation and the Boeing Company for 30 years, working in aided inertial navigation, avionics flight test, and systems engineering. He became a Certified Systems Engineering Professional in October 2007.

Recent publications include "Heuristics and Genetic Algorithms," *INCOSE 2006 International Symposium Proceedings*.



### **Dana Peterson**

DRS SSI  
(314) 553-4599  
[dpeterson@drs-ssi.com](mailto:dpeterson@drs-ssi.com)

Mr. Peterson has worked in the Defense Industry for over 35 years including 5 years in the USAF Armament Research Lab, Eglin AFB, FL as a Project Manager. Focus and expertise has been in the areas of system design & development, systems engineering, and systems integration primary on US Army contracts.

Dana holds a Master's degree in Engineering Science and has worked for DRS as a Senior Engineering Scientist for the past 27 years.

Dana is an INCOSE Certified Systems Engineering Professional (CSEP). He enjoys motorcycling in his spare time. He is a Life Member of the American Motorcycle Association (AMA) and is an accomplished musician and songwriter.



... **Election Time**  
from page 1

Systems Engineering (INCOSE) is pleased to invite nominations or self-nominations of candidates for the following four (4) seats on its Board of Directors for calendar year 2009:

**President-Elect: 1 yr. term  
(will be President in 2010 and  
Past President in 2011):**

The President-Elect shall assist the President and shall assume the duties of the President when the President is unable to perform these duties. The President-Elect shall succeed to the position of the President upon completion of his/her term of office or if the President vacates the office.

**Secretary: 2 yr. term (2009 - 2010):**

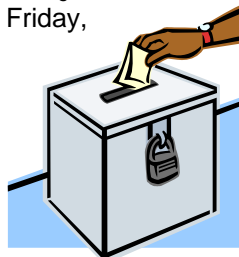
The Secretary shall prepare minutes of all meetings of the MIDWEST CHAPTER and the Board and maintain all permanent records. The Secretary shall prepare, maintain, and publish the chapter calendar. The Secretary shall provide communication between the Board, INCOSE, and the MIDWEST CHAPTER membership.

**Director 1: 2 yr. term (2009 - 2010)**

**Director 2: 2 yr. term (2009 - 2010)**

To nominate one or more members for an available office, submit:

- 1) nominee name(s),
- 2) the office for which they are being nominated, and
- 3) your name as the nominator to  
Bob Scheurer  
robert.p.scheurer@boeing.com,  
by 6:00 p.m. on Friday,  
Oct. 17, 2007.



## Chapter Leaders Perform a Variety of Duties

Adapted and updated from an article originally written by Carol Wilke, former INCOSE MWGC Director, Volume 6, Issue 1, Mar. 97

The Midwest Gateway Chapter of INCOSE consists of the general membership and a Board of directors. The Board of directors meets monthly to direct the affairs of the chapter. The board consists of nine elected officials:

- President
- President-Elect
- Past President
- Secretary
- Treasurer
- 4 Directors

and several standing and ad hoc committees. Chapter elections for officers of the chapter are held in the fall of each year, with the new Board taking office in January of the next year.

Members of the standing and ad hoc committees are appointed by the president and approved by the Board. Here's a quick synopsis of each office and committee.

### The Board

#### President / President-Elect / Past President

Election to the office of president is a three year commitment. When elected, the member first serves a year on the Board as President – Elect. Duties for this position include those normally associated with a vice-president position – i.e., stand in for the president when the president is unable to perform the required duties. In addition, the president – elect provides general supervision of all chapter standing committees and working groups. After one year, the president-elect becomes the president of the

chapter. At this point the duties include general supervision of chapter affairs, presiding at chapter and board meetings and representing the chapter to the larger body of INCOSE. In the third year, the then president becomes the past-president. The main duties of the past-president are to supervise the chapter's ad hoc committees, including the Nominations committee, and to serve as the chapter's historian.

On the current Board of Directors, Brian Beyer serves as president-elect, Marcos Chu serves as president, and Mason Myers serves as past-president.

#### Secretary

The office of secretary is a two year position on the Board. The secretary prepares minutes of all chapter and board meetings, maintains the permanent records of the chapter, prepares the chapter calendar, and prepares the chapter's article for the INCOSE publication INSIGHT. The secretary also receives and distributes the chapter mailings from the International Board.

On the current Board of Directors, Tariq Ashraf is serving as secretary through the end of 2008.

#### Treasurer

The treasurer of the chapter also serves a two year term. The primary duties, are of course, financial in nature, and include preparing the yearly chapter budget, receiving all funds paid to the chapter, maintaining financial records and paying bills, and serving as the point of contact with the International Board on financial

(see **Chapter Leaders...** on page 5)



## Chapter Leaders...

From page 3

matters. The treasurer also serves as the main point of contact with the International Board for membership services and chairs the Membership committee.

The terms for secretary and treasurer are staggered by one year, so that the chapter will elect either the secretary or the treasurer at each annual election. On the current Board of Directors, William Schoening is serving as treasurer through the end on 2007.

### Directors

The four directors provide general oversight of chapter affairs and help implement chapter policies and events. Each director is elected for a two year term, with two directors up for election at each annual chapter election. The chapter directors are the direct representatives of the chapter membership, and serve as ambassadors for INCOSE and our local chapter in the local community. The current directors and their term of office are:

- Chris Johann, serving through 09
- Steve Recker, serving through 09
- Bill Gold, serving through 08
- Steve D'Urso, serving through 08

### The Committees

The Midwest Gateway Chapter has four standing committees:

- Ways and Means
- Communications
- Programs
- Membership



Washington



Jefferson



Grant



Anthony



Roosevelt



Kennedy

And two ad hoc committees:

- Nominations
- Audit

In addition, the chapter by-laws allow for the establishment of working and interest groups to work particular systems engineering issues.

### Standing Committees

The **Ways and Means** committee is chaired by the president-elect. This committee has responsibility for maintaining the chapter constitution and by-laws, and considering other rules of chapter business.

The **Communications** committee is responsible for publishing the Midwest Gateway newsletter and notices of chapter programs along with managing the chapter website.

The **Programs** committee plans and coordinates chapter program meetings. This committee, appointed by the chapter president, prepares a master schedule for the year, contacts speakers or instigates preparation of special programs, arranges halls and dinners, and manages the programs budget.

The Membership committee is responsible for recruiting and retaining individual and corporate chapter members. This committee, chaired by the treasurer, serves as the point of contact with the INCOSE Membership committee.

### Ad Hoc Committees

The **Nominations** committee is chaired by the past-president, and is responsible for managing the chapter elections. This committee is created in the latter half of each year to seek qualified candidates for each office, prepare and present the candidates to the chapter membership, conduct the elections and collect and tabulate the results.

The **Audit** committee is responsible for conducting an annual audit of the chapter's finances. The committee consists of three chapter members that do not serve on the Board of Directors. The committee members are appointed by the president. Audits are generally done in late in the fiscal year to supply data needed by the international Board at their fiscal year-end.

### Working and Interest Groups

Each of the committees is constituted to help the chapter run smoothly. Working and Interest Groups, on the other hand, are the vehicles for technical systems engineering work to be performed by the chapter for the benefit of its membership.

*"Leaders are like eagles,  
they don't flock,  
You find them  
one at a time."*