



# SE REVIEW



March 2010

Volume 10, Number 3



## President's Perspective

Colleagues,

Although we have started off relatively quiet in the first quarter, I can assure you that the Chapter has not been dormant. The Board of Directors (BOD) has taken time to develop an INCOSE Southern MD Chapter Strategic Plan, Operating Plan, Communications Plan, and Metrics Plan which will guide us in the months and years ahead. As these documents are completed, we will post these out at INCOSE Connect for all to see. In addition, we have also updated the Chapter Bylaws and provided this back to members for approval.

A number of members made it out of our snowy winter season in February and headed out to Arizona for the 2010 International Workshop. This is a working session where members can engage with INCOSE International and the many working groups that they have established. These focus on key areas of interest to the systems engineering community including topics like Accreditation, Architectures, Cost Engineering, Human Systems Engineering, Model-Driven Systems Design, Net Centric Ops, Standards, and V&V, just to name a few. The opportunities are diverse in many systems engineering functional areas, and we encourage our members to get connected if practical and pertinent to the work that you perform.

We successfully judged the St. Mary's County Science and Engineering Fair and will have our awards luncheon on 13 April at the River's Edge. Students, parents and exhibits will be there, and we encourage you to come out and discuss science projects with these worthy students! There are further details furnished later in this newsletter. We have started to coordinate with AUVSI and the upcoming Student Unmanned Air Systems competition. The Chapter has also had a preliminary meeting with the local Robotics team as well. In addition, we have two dates for networking social events at the Blue Crabs Stadium for 2010. Tickets are offered at a discount to members and potential members, and we're hoping for a good turn-out for the May and August dates that we have selected.

So although it "seems" like things have been quiet, I can assure you that this is not the case. You can look forward to an active luncheon speaker program to resume its regular schedule. We will be conducting a couple of focused tutorials in 2010, and planning activities are underway for a fall conference. We will look for members to join the planning sessions for a fall conference in the weeks ahead.

Respectfully,

Steve McKeown  
President, Southern Maryland Chapter  
301-862-7033  
[Mckeown\\_steve@bah.com](mailto:Mckeown_steve@bah.com)

**Next Board Meeting**  
22 April 2010  
Booz Allen Hamilton  
Expedition Bldg  
1630

**Next Chapter Meeting**  
13 April 2010  
Science Fair  
Awards Luncheon,  
Rivers Edge  
1115-1245

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# INCOSE News

## Foundation Now Accepting 2010 Scholarship Applications

The INCOSE Foundation is pleased to announce that the application cycle is now open for the 2010 Stevens Institute of Technology and Johns Hopkins Applied Physics Laboratory (JHU/APL) awards. The INCOSE Foundation bestows these awards annually.

The Stevens Institute of Technology Doctoral Award carries a US \$5,000 grant to a doctoral student along with a plaque and recognition at the annual INCOSE International Symposium.

The Johns Hopkins University / Applied Physics Laboratory Alexander Kossiakoff Scholarship, in partnership with the INCOSE Foundation, carries an award of \$5,000, a plaque and recognition at the annual INCOSE International Symposium. The awardee is also offered a paid summer internship at JHU / APL working on relevant systems engineering problems.

Follow these links to learn more about these awards and application procedure. Questions can be submitted to Dr. William Ewald, Chief Executive Officer of the INCOSE Foundation, at [William.m.ewald@macrointernational.com](mailto:William.m.ewald@macrointernational.com), <http://www.incose.org/about/foundation/doctoralaward.aspx>, <http://www.incose.org/about/foundation/doctoralawardjhu.aspx>.

## INCOSE Version 3.2 of the Systems Engineering Handbook Available on Connect

A new version of the INCOSE Systems Engineering Handbook is now available for download on INCOSE Connect in the Products Area. The primary purpose of the Version 3.2 update was to:

- Bring the handbook into alignment with the latest 2008 version of ISO/IEC 15288 international standard
- Resolve inconsistencies in Version 3.1, primarily in the areas of terminology, figure-to-figure and figure-to-text consistency
- Consolidate related process information throughout the text to remove the multiple treatment of topics
- Minimize impact to the INCOSE CSEP/ASEP certification exam

Version 3.1 of the INCOSE Systems Engineering Handbook remains the sole basis for the INCOSE CSEP/ASEP exam until further notice. An announcement will be made when Version 3.2 can also be used. For planning purposes, an exam update is currently scheduled for late April 2010, after which time both Version 3.1 and 3.2 may be used.

## INCOSE Announces the Expert Systems Engineering Professional (ESEP) Designation

INCOSE is pleased to introduce the ESEP certification. ESEP is targeted towards senior Systems Engineers who have significant Systems Engineering experience, demonstrated systems accomplishments, and are recognized leaders within their organizations.

For more information on the INCOSE certification program and to review the ESEP requirements, including all of the necessary application forms, please use the following link: <http://www.incose.org/educationcareers/certification/>.



## Schedule of *INSIGHT* Deadlines

The following is a list of upcoming INCOSE *INSIGHT* deadlines:

Issue	Submission Date for General Articles / Deadline for Theme Article Proposals*	Theme	Theme Editor
2nd Qtr 2010	15 May 2010	The Best of Loughborough: Highlights from the Conference on Systems Engineering Research and SEANET	<a href="#">Roy Kalawsky and Ricardo Valerdi</a>
3rd Qtr 2010	8 Aug 2010*	2010 International Symposium Coverage: Chicago, Illinois, USA	<a href="#">Jack Stein</a>
4th Qtr 2010	15 Oct 2010	Systems Development from Deep Sea to Deep Space: Lessons from the Johns Hopkins Applied Physics Lab	<a href="#">Mike O'Driscoll and Sam Seymour</a>
1st Qtr 2011	15 Feb 2011	Knowledge Management for Systems Engineering	<a href="#">Regina Griego</a>

\* Submission deadline moves according to International Symposium date.

\*\* Please contact the theme editor by 21 May 2010 to propose a theme article

## Renew Your Membership

Don't forget to renew your membership. Your annual membership now expires 12 months after your enrollment anniversary. If you want to know what your enrollment date is and when your current membership will expire, just view your member profile <https://www.incose.org/membersOnly/memberInfo/updateMemberInfo.cfm>. Should you have problems or questions, e-mail Central Office (<mailto:info@incose.org>).

## Update your membership profile

Did you know that you have the ability to reset your own password, change your address, phone number and employer, and even change the e-mail addresses you want your incose.org e-mails to go to? Did you know that you can also update your biography and even your picture? To keep your membership information up to date, just go to [www.incose.org](http://www.incose.org). On the left side, select the option to View / Update Member Record.

## Chapter Highlights

### SoMD Chapter Member Karl Geist Achieves INCOSE's Highest Certification

Gryphon Technologies employee and the Southern Maryland Chapter member recently earned Expert Systems Engineering Professional Distinction. Mr. Karl C. Geist has been recognized by the International Council on Systems Engineering (INCOSE) with its highest level of certification, an Expert Systems Engineering Professional (ESEP).

On 8 February 2010, Gryphon Technologies, a CMMI Level 3 rated firm providing Project Management, Financial Analysis, and Systems Engineering, announced that the company's Webster Field based Program Analyst and Systems Engineer, Karl C. Geist, has been recognized by the International Council on Systems Engineering (INCOSE) at their International Workshop with their highest level of certification, an Expert Systems Engineering Professional (ESEP). The new ESEP certification is targeted towards systems engineers with significant work experience and demonstrated systems engineering accomplishment. To achieve this prominent level of certification,

## Chapter Highlights (cont.)

candidates' career accomplishments, experience and education are reviewed and qualified. It is an honor that has been achieved by less than half of one percent of all Certified System Engineer Professionals (CSEP).

Eileen Arnold, INCOSE Certification Advisory Group Chair and Leader told Mr. Geist "Your ESEP is an achievement you can be proud of throughout your distinguished career. It is a testimonial and tribute to your experience and lifelong learning as an expert Systems Engineer." Mr. Geist has been a strong supporter of the INCOSE Certification Program for systems engineering professionals since before its launch in 2004. Mr. Geist was a founding member of the program as part of his role in the Systems Engineering Certification Working Group. Since 2004 over 400 systems engineering professionals have achieved certification, giving credence to the international acceptance this program has received throughout the systems engineering community.

A renowned expert in systems engineering and a leader in CSEP certification, Mr. Geist is a six-year member of the INCOSE Certification Advisory Group, and contributing author and reviewer of INCOSE's Systems Engineering Handbooks v2a and 3.0. Celebrated in the industry with over 35 years experience in Systems Engineering, Software Engineering, and Program Management in government and commercial business developments, Mr. Geist 's efforts have encompassed research projects, to development efforts, through to full-scale production implementation and training.

Mr. Geist is one of the plank holders in the founding of INCOSE's Southern Maryland Chapter, which is INCOSE's most celebrated Chapter with a President's Award and nine Gold Circle Chapter Awards. Mr. Geist has been on the Board of Director's for all eleven years of the Chapter's existence having acted as President, President-Elect, Past President, four-time Treasurer and four-time Director. Mr. Geist has also played a vital role in the Chapter's outreach program, which sponsors events such as the annual St. Mary's County Science and Engineering Fair, the annual Student Association for Unmanned Vehicles Systems International (AUVSI) Competition, the annual National Engineering Week's Future Cities Competition, Regional Systems Engineering Conferences, and local Systems Engineering Conferences and Tutorials.

### **St. Mary's Science and Engineering Fair**

**By John Walker**

Our chapter participated in the St. Mary's Science and Engineering Fair again this year. All the snow caused a delay in the fair this year, so we missed the window to have our award luncheon in March. We will be having it on April 13 at the Rivers Edge Catering and Conference Center, or more commonly known as the new O'Club. With all the great projects, our judges Dawn Jaeger, Chris Utara, Dale Raney, Ted Warren, John and Judy Walker worked hard to decide on the best. Our Senior First award went to Kelles Gordge. You may remember Kelles from previous years winning with her global warming simulator. This year she tackled the problem of helicopter and ambulance medics listening for heart sounds with her project "Take a Deep Breath!" Besides winning our award, she went on to win a St. Mary's Fair Grand Award, a Prince George's Area Science Fair 1<sup>st</sup>, and many other special awards from the St. Mary's and Prince George's Fairs. She is certainly a person to watch in the future. Skipping our second for now, we gave a Senior Award to Daniel Bolton who wanted to locally generate electricity from the city noise. His project "Sound to Electricity Generator II" is his 2nd year working in this domain and his first INCOSE award. We gave two Junior First Awards. One went to Sarah Carty, who was looking at material tradeoffs for astronaut gloves for use on Mars. Her project "Give Me A Hand on Mars" showed her passion for exploration and engineering. A First also went to the project "Pain in the Glass!" from Sara Moore for her research into breaking down glass with acoustics for recycling. A Second went to a project by Noah Varner, "Get Rid of your GAS". Noah did an at-cost powers analysis on three electric producing prototypes using hydro electric, wind and solar technologies. A Junior Award went to Harrison Hope for his project "Solar Enhancer", which looked at different engineering techniques to get the most power from solar cells. I skipped over our Senior 2<sup>nd</sup> Award. It was won by last year's Senior 2nd Award winner Mark Ragland. Some may also remember Mark from his Junior First award in 2006. Last year, Mark project looked at the efficiency of transmitting audio water using laser light. Over the summer, he had an internship with

## Chapter Highlights (cont.)

the Navy and was able to expand his project. This year's project "Simulating Ocean Water for Video Laser Communications" helped him win a scholarship from the Realtors of St. Mary's County and many special awards at the Prince George's Area Science Fair. He also won the First Grand award, so for the 4<sup>th</sup> year in a row one of our Senior Award winners will be competing at the International Science and Engineering Fair in May.

Please come and support our Award winners to see and discuss their projects at our luncheon on April 13.

### **Job Seekers**

The SoMD Chapter's SE "Job Seekers" Column is provided to Chapter Members who may be looking for employment or for Chapter Member's companies who may be seeking employees. Currently, this Member service of the Chapter is provided at no cost to either the Member or the Company soliciting employees. The Chapter's Job Coordinator (Karl Geist) provides contact information between the two parties concerned. All communication will be kept in strict confidence.

This month's ad features a company who is seeking an employee with Systems Engineering skills and background for a position in Lexington Park, Maryland.

**CO1MH10** Seeking a Senior Systems Engineer to support an ACAT 1D Naval Aviation Program Systems Engineering Team providing technical integration; engaging in systems engineering processes such as verification execution; risk assessment; configuration management processes including functional and physical configuration audits; system and software integration; new capabilities assessment and integration; SOW development and proposal reviews; discrepancy report coordination and oversight; and technical review board participation.

Requirements include: Undergraduate degree in Engineering or a related discipline along with 4-8 years of experience in Systems Engineering in an aerospace environment. The successful candidate will possess strong interpersonal and communication skills. A Master's degree in Systems Engineering or related discipline, experience with aviation development programs, and familiarity with DOD/NAVAIR processes, including the SETR process are also highly desirable.

Interest persons should provide their contact information with the position code to Karl Geist at 301-872-5243 or [k.geist.incose@gmail.com](mailto:k.geist.incose@gmail.com).

### **Member Profiles**

Please welcome our new members:

**Don Manning** joined on 10 March. He is a Senior Program Management Analyst with System Planning Corporation.

**Joe Schaff** joined on 22 March. He is an Engineer with AMEWAS, Inc.

## Chapter Highlights (cont.)

### Member Contributions & Support Needed

We are in desperate need of more help, more involvement, more members, and more leadership from our current members to maintain our ambitious schedule of events. Also please send news on your projects at work, on your personal or professional achievements, any notable upcoming events the membership should know about, etc. Send electronic pictures, too! We continue to request that each of the Chapter members provide us with a brief bio, so everyone will get to know you a little better. This will also make it easier to network with other Chapter members. Please include items such as where you went to school and any degrees, current and past positions, INCOSE activities, and any other information you would like to share. Our newsletter can use your articles and your support. Please send all contributions to Karl Geist at [kgeist@md.metrocast.net](mailto:kgeist@md.metrocast.net), Dawn Jaeger at [Dawn.Jaeger@navy.mil](mailto:Dawn.Jaeger@navy.mil), or Steve McKeown at [mckeown\\_steve@bah.com](mailto:mckeown_steve@bah.com). If you have any questions, please send an e-mail or call Dawn at 301-342-9095, or Steve at 301-862-7033. So, please consider volunteering and being part of the exciting opportunities in Systems Engineering. As current members, the Chapter Board of Directors (BOD) welcomes your feedback to the chapter's plans. Address these comments to any of the Chapter's BOD members found at the end of this newsletter. Thank you!

### Upcoming Events

#### Southern Maryland Chapter Meeting

*Hosted by INCOSE SoMD Chapter in Patuxent River, Maryland*

**When:** 13 April 2010, 1130-1300

**Where:** Rivers Edge Catering and Conference Center

**Theme:** St. Mary's County Science Fair Awardees

**Info:** [www.incose-somd.org](http://www.incose-somd.org)

**Speaker:** Pete Williams / Awardees

**POCs:** John Walker at 301-342-2348 [John.Walker@incose-somd.org](mailto:John.Walker@incose-somd.org) or Judy Walker at 301-342-2161 [Judy.Walker@incose-somd.org](mailto:Judy.Walker@incose-somd.org)

**Venue:** Buffet and beverages

**Cost:** \$12.00 for SoMD INCOSE Chapter members, \$15.00 for Non-members

**Description:** Late February 2010, members of INCOSE SoMD learned first-hand that innovation is alive and well in St. Mary's County. More importantly, county high school and middle school students were given an opportunity to challenge themselves in a friendly competition with their fellow county students in presenting their individual science and engineering projects. Why is this big deal? These young people are the future of our profession. Please come and show your support for our county youth by seeing the prize winning exhibits and talking with their creators. This should be a very interesting event! Mr. Pete Williams will be our guest speaker and the Master of Ceremonies.

#### 22nd Annual Systems & Software Technology Conference (SSTC 2010)

*Co-sponsored by United States Army, United States Marine Corps, United States Navy, United States Air Force, and Defense Information Systems Agency (DISA)*

**When:** 26-29 April 2010

**Where:** Salt Lake City, Utah

**Theme:** Technology: Changing the Game

**Info:** <http://www.sstc-online.org/>

**POC:** [sstc-info@ext.usu.edu](mailto:sstc-info@ext.usu.edu) or 435-797-0423

**Description:** This year, the SSTC will explore various technologies that are expected to make abrupt changes to common thought. We will explore the tools, the processes, and the ideas, which will "change the game" and make the way we have done things in the past - obsolete.

Remember just a few years ago, office staff were content to use a document creation method that required a specific keyboard layout, a QWERTY keyboard. The keyboard was designed to minimize the number of key collisions and improve typing efficiency. Although we have maintained the QWERTY interface, the computer and word processing software have changed the game. Typewriters are now museum relics.

## Upcoming Events (cont.)

According to Dr. Alex Roland and Dr. Wayne Lee, several historical innovations and technologies have demonstrated radical game changing differences to conduct war. They suggest items like gunpowder, aircraft, radar, and GPS have rewritten many aspects of war. In a recent survey conducted by IBM, top-level executives of various corporations revealed a common concern that somewhere in a garage or dorm room, another game changing technology is about ready to burst onto the scene.

What are these new game changing technologies going to be? Where will they come from? Will the near future bring a war fought in Cyberspace?

Join us in sharing your insights and work at SSTC 2010 and help us answer which technologies will Change the Game. We invite you to submit, for consideration, your abstracts detailing your work related to Technology: Changing the Game. Mark your calendar now and plan to join us for excellent, quality presentations and networking with colleagues from military/government, industry, and academia.

In addition, the INCOSE Tutorial on the SE Handbook in Preparation for SE Certification will again be offered at the SSTC on Saturday and Sunday, April 24-25, 2010. See the SSTC web site for more information and to register.

### **7th European Systems Engineering Conference (EuSEC 2010)**

*Hosted by Swedish Chapter of INCOSE and INCOSE Region III Chapters*

**When:** 23-26 May 2010

**Where:** [Royal Institute of Technology](#) (KTH), Stockholm, Sweden

**Theme:** Systems Engineering and Innovation

**Info:** <http://www.incose.se/eusec2010/>

**POC:** Jonas Andersson

**Description:** The 7th bi-annual EuSEC aims to bring practitioners and researchers together to discuss systems engineering and innovation. It is designed to inspire its attendees by providing practitioners with insights from systems engineering research and practice, and researchers with an exposure to real-world challenges and examples. Following the successful tradition of EuSEC, we will provide its participants 2010 with a plethora of enlightening technical papers and tutorials, panel discussions, and exciting speeches, but also with an infrastructure for successful business and working group meetings, all in the inspiring environment of Stockholm, the "Capital of Scandinavia". Participants should leave the conference with a unique understanding of the challenges of handling innovation in Systems Engineering, the research and solutions currently available, as well as future solutions and pointers to research directions in the area.

We warmly welcome you, your colleagues and everyone you bring along, to a thrilling event in the beautiful Nordic spring in Stockholm!

### **International Symposium**

*The 20th International Symposium -- Hosted by Region IV Chapters*

**When:** 12-15 July 2010

**Where:** Hyatt Regency O'Hare, Chicago, Illinois

**Theme:** 20<sup>th</sup> Anniversary

**Info:** <http://www.incose.org/symp2010>

**POC:** INCOSE Central Office, [info@incose.org](mailto:info@incose.org), 800-366-1164

**Description:** The 2010 technical program is shaping up to be one of the most, if not the most, exciting and progressive ever. INCOSE and systems engineering stand at the gateway of the new millennium, ready to bring the world into the Systems Age that is upon us.

Our wonderful civilization is at a turning point that will require ever more systems thinking and well-guided application of systems engineering principles. Smart grids, alternative energy, medical systems interoperability, integrated military systems of systems, intelligent transportation systems, integrated mass transit, aerotropolis cities, colonization of space! These are just a few of the undertakings that are just around the corner. They are complex; and they must be engineered for success. We are here, and we are ready!

## Upcoming Events (cont.)

### 4th Asia-Pacific Conference on Systems Engineering (APCOSE 2010)

*Hosted by INCOSE Taiwan Chapter*

**When:** 4-6 October 2010

**Where:** National Taiwan Ocean University, Keelung, Taiwan

**Theme:** Systems Engineering: Collaboration for Intelligent Systems

**Info:** <http://www.incose-taiwanchapter.org/APCOSE2010/>

**POC:** [apcose2010@gmail.com](mailto:apcose2010@gmail.com)

**Description:** The APCOSE 2010 will provide a forum for researchers, engineers, and managers to exchange the latest development and applications of systems engineering in order to enhance local/regional, human/environmental, and academic/industrial collaborations for better and intelligent lives.

Topics include:

- Design for Environment and End-of-Use Deposition
- Safety and Risk Management
- Acquisition and Lifecycle Management
- Systems Engineering Education/Research
- Human Factors/Systems Interfacing Issues
- Systems Engineering Management
- System of Systems

### 2011 INCOSE International Workshop

**When:** TBD February 2011

**Where:** TBD

**Theme:** Various Committees, Working Groups, and Certification Beta Test

**Info:** <http://www.incose.org/>

**POC:** PCMI, (858) 565-9921

**Description:** The workshop features many committee and working group meetings such as the Certification Working Group, Handbook Working Group, INCOSE Fellows, the Corporate Advisory Board, Certification Advisory Group, Certification Beta Test, etc.

## SoMD BOARD OF DIRECTORS

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