



# Tennessee Valley Chapter

<http://www.iss-tvc.org/>

April  
2010

## Tennessee Valley Chapter Executive Officers

**President:** Pam Kniess,  
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**President-Elect:** Mike Pessoney,  
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**Treasurer:** Phil Eder,  
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**Secretary:** Myris Dowdy,  
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**Past President:** Donald Hanline,  
256-842-3248, [Donald.s.hanline@us.army.mil](mailto:Donald.s.hanline@us.army.mil)

**Special Events Coordinator:** Jim Blanteno  
256-313-2090, [James.s.Blanteno@us.army.mil](mailto:James.s.Blanteno@us.army.mil)

**Webmaster:** Don Swallom  
256-842-8641, [swallom@iss-tvc.org](mailto:swallom@iss-tvc.org)

## AWARDS

The Awards Committee is working to ensure that our outstanding members are recognized. Please assist them by nominating deserving individuals. Award nominations are due by 5 May 2010. Forms are located on the society website at <http://www.system-safety.org/development/societyawards.php> or can be obtained from Melissa Emery, Awards Committee Chairperson, [memery@apt-research.com](mailto:memery@apt-research.com).

## ELECTIONS

The chapter nominations committee is now accepting applications to be placed on the May ballot.

2010 Nominations Committee:

Pam Kniess (Chapter President)

Mike Pessoney (Chapter President-Elect)

Don Swallom (Previous Chapter President).

ALL NOMINATIONS ARE DUE 1 May 2010 to allow for formation of the ballot for distribution at or before the May 19 chapter meeting.

Available Positions Include:

**President-Elect (3-Year Term): (1st Year)** The president-elect shall perform duties delegated by the president and in the absence of the president shall assume the duties of the president. The president-elect shall function as the program chairperson unless a program chairperson is appointed by the president. This includes scheduling the monthly meeting speaker, location and refreshments. **(2nd Year)** The president shall submit a written report to the president of the System Safety Society by July 1st summarizing the accomplishments during the Chapter year and publish a newsletter every other month. At the Annual Meeting ending the term of office, the president shall submit the same report to the membership. **(3rd Year)** Executive Committee membership.

**Secretary (1-Year Term):** The secretary shall prepare and appropriately distribute minutes of all Chapter and Executive Committee meetings and shall maintain all the records of the Chapter. The secretary shall maintain a membership roster containing such information as name, address, affiliation, and telephone number of individual members. The secretary shall prepare and distribute other correspondence as and in a manner directed by the president; and shall be an ex-officio member of the Membership Committee.

**Treasurer (1-Year Term):** The treasurer shall maintain custody of all monies of the Chapter in a manner approved by the Executive Committee and shall pay all authorized bills against the Chapter. At the Annual Meeting ending the term of office, the treasurer shall submit a brief report on the financial status of the Chapter and, within 15 days after that meeting, shall submit a written financial report and the chapter's books for audit. Upon final audit, the treasurer will then turn over all funds, financial records and other properties of the Chapter to their successor. The treasurer shall be an ex-officio member of the Finance Committee.



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Other positions include:

**Special Events Coordinator (1-Year Term - Appointed by President):** Coordinate the funding request of any special event attendance as requested by the community, for example, the Moon Buggy Race, Northern Alabama Science Fair, and Future City Competition. Assignment is part of the Finance Committee under Treasurer's guidance. Voting on Executive Committee of the Special Events Coordinator is at discretion of president.

**Webmaster (1 year Term - Appointed by President):** Updates the website with current information, posting of meetings, upcoming conferences, etc. Voting on Executive Committee of the Special Events Coordinator is at discretion of president.

## Secretary's Meeting Minutes

### **17 February 2010 TVC SSS Meeting**

Mr. Mike Pessoney presented the Software Safety Assessment Report to 21 members and 9 guests. Qinetiq provided the facility and drinks. Thanks to Mr. Jim Covan for helping with collection of money for the food that was delivered. The TVC SSS Special Events Coordinator presented a SSS Award at the Future City Competition to Hampton Cove School for their Safety Analysis and Planning efforts during construction of their city. Jim Blanteno's report on the Future City Competition will be published in the Feb Newsletter. Don Swallow, Webmaster, has populated the Tennessee Valley Chapter System Safety Society website. It is up and running at <http://www.issc-tvc.org>. Mike's presentation discussed a way of managing software safety efforts in an Access Database. The database links software related hazards to software requirements, sorts and reports all software safety information in a way that describes the level of assurance of the mitigation of each software related hazard. Mr. Pessoney identified the activities and products necessary and methods for melding products into the database that supports assessment of hazard risk for software related hazards.

### **24 March 2010 TVC SSS Meeting**

On March 24<sup>th</sup> 2010, SAIC hosted the monthly TVC SSS meeting. Twenty TVC members and 6 guests enjoyed the food and drinks provided by SAIC (thanks to Dave West) while APT-Research provided the Webcast via "GoToMeeting" (Thanks to Troy Farmer). Two guests, that were unable to be physically present, attended on-line. Members and guests gathered to hear a Webcast presentation on Structured Assurance Cases: Three Common Standards presented by Scott Ankrum and Dr. Alfred H. Kromholz of Mitre. For safety-, mission-, or security-critical systems, there are typically regulations or acquisition guidelines requiring a documented body of evidence to provide a compelling justification that the system satisfies specified critical properties. Current frameworks suggest the detailed outline of the final product but leave the truly meaningful and challenging aspects of arguing assurance to the developers and reviewers.

We began with two major hypotheses. We selected a software notation suitable for building structured safety cases and applied it to three disparate assurance standards. Each of the three standard mapping efforts is discussed, along with the problems we encountered. In addition to the standards, we used the notation to structure an assurance case for a practical security-critical system, and we describe the lessons learned from that experience. We conclude with practical options for using our mappings of the standards and how well our initial hypotheses are borne out by the project.

## Vice President's Corner

21 Apr 2010 meeting will be held at A-P-T Research. The speaker will be Stan Hamilton and he will be discussing "Lessons Learned in Software Safety of Medical Devices."

19 May 2010 meeting will be a "Quick tour of the APEX Laboratory by Joseph P. Creekmore, Jr. with focus on how they are involved in Pre-Milestone A Development of Requirements for



new technologies; a "spin-up" the cockpit simulator and there will be a chance for people to fly the helicopter (The aircraft cockpit simulators are made from actual cockpits that fly inside a room with a 180 by 70 degree arched screen that displays an VERY realistic cockpit terrain display)."

## Special Events Corner

The 2010 North Alabama Regional Science and Engineering Fair was held 3-5 March at UA Huntsville. For the 6th consecutive year, the Tennessee Valley Chapter has sponsored 3 age group awards (a certificate and a \$200 savings bond) for the best safety related projects. This year awards were given in the elementary (5<sup>th</sup> grade), junior (6<sup>th</sup>-8<sup>th</sup> grade), and senior (9<sup>th</sup>-12<sup>th</sup> grade) divisions. The projects are evaluated on 4 criteria:

- The safety-relatedness of the project (40%)
- Display (20%)
- Write-up (20%)
- Discussion with judges (20%)

The winners for 2010 are as follows:

Elementary Division – Paige Sander, Columbia Elementary, "How Pure is the New Fallen Snow". This project examined the purity of snow samples taken from multiple areas in Huntsville and the surrounding areas to determine if it was safe to eat the new fallen snow.

Junior Division – Amy Baer-Peckham, Hampton Cove Middle School, "Safety of Housepaints When Burned". This project examined the burning rate and ease of combustion of paper coated with different types of interior paint.

Senior Division – Christian Posey, Athens Bible School, "Is Food Safe That has Been Heated In Plastic". This project tested different types of plastic containers to determine if toxic material leached from the containers after heating water in a microwave.

The 17<sup>th</sup> Moonbuggy race was held on the 9<sup>th</sup> and 10<sup>th</sup> of April. The weather was beautiful and everything went like clockwork. They had moonbuggies from Romania, India, Puerto Rico,

Germany as well as Washington, New York, Florida, Alabama, Colorado and many other states. The best times were posted by Puerto Rico for High Schools and Germany for Colleges. The judges for the System Safety Society were Jim Blanteno, Phil Eder and Gary Braham. For the High School, we picked Romania Team 2 because we felt that they had a good understanding of writing a system safety plan, and for College we picked UAH because they used the Mil Spec and rated with numbers and categories. We had 7 entries this year. It is growing every year. We congratulate everyone who participated. Our thanks to APT Research who was a co-sponsor.



**Romainian Moonbuggy**



**First Place High School - Romania**



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**Moonbuggy First Place College -  
UAH**

## 2010 International System Safety Society Conference



The 28th International System Safety Conference (ISSC) will bring practitioners and foremost thought-leaders of the system safety discipline together for an exchange of ideas, knowledge and experiences in Minneapolis, Minnesota. The conference will be held in the beautiful Hyatt Regency Hotel in downtown Minneapolis. The conference theme, “**Building Bridges to a Safer Future,**” embodies the principle that system safety is the key to creation of safer systems, services and products for the future. The conference will

emphasize topics to enhance the knowledge and skills of new and experienced system safety professionals.

This is the major conference for system safety and related professionals, with a week of technical sessions with full peer-reviewed papers and “just-in-time” forum papers, tutorials, workshops, panel discussions, special events, social affairs, luncheons, and the Society's awards banquet. The conference proceedings are the premier collection of work in the system safety field.

**Training/Tutorials:** Hazard Classification Software Safety Process; WISE (WSESRB Interactive Safety Environment); FESWG Guidelines (PLDs and Fuze); SD Qualification; GEIA Standard 0010; MDA Materiel Release Process.

**Roundtables/Discussions:** Joint Software Safety Reviews; UMS Weapons Integration; Directed Energy.

**Sessions:** Hazard Classification; Explosive Safety; Lessons Learned; Joint Programs/Joint Review Process; Insensitive Munitions; Unmanned Systems; Software; MIL-STD-882D Rev 1/Risk Matrices.

<http://issc2010.com>

**Deadline for early bird discount is 15 May 2010**

## Forum/Training Corner

**NASA/Army Systems and Software Engineering Forum** will be held May 11-12 2010 in Huntsville, AL. The sessions are free to all. Software Engineering, Engineering Management, Systems Modeling and Simulation, Systems Engineering Methods, Processes and Tools, Six Sigma and Complex Electronics are just some of the topics that will be briefed. Question and answer panels are also being scheduled. More info will be provided in the next Newsletter.



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**Fourth IAASS Conference 19-21 May 2010,**  
Huntsville AL. The 4<sup>th</sup> IAASS Conference  
“Making Safety Matter” is sponsored by NASA,  
ESA and JAXA. Main topics of the conference  
include:

- Designing safety into space vehicles
- Safety on long duration manned missions
- Safety of extravehicular activities
- Launch range safety (current and future)
- Spacecraft re-entry safety
- Payload safety
- Nuclear safety for space systems
- Human factors and performance for Safety
- Safety critical software design and IVV
- Safety risk management
- Probabilistic risk assessment
- Organizational culture and safety
- Regulations and standards for safety
- Space-based safety critical systems
- Space traffic management
- Space materials safety
- Safety & Rescue
- Private spaceflight safety

Conference website <http://www.congrex.nl/10a06>

A system safety engineering tutorial is being offered by Dr. Nancy Leveson on 18 May 2010 and is associated with the IAASS Conference. The tutorial addresses a new hazard analysis technique

and safety-driven design approach called STPA. STPA is based on Dr. Leveson's safety model called Systems-Theoretic Accident Model and Processes (STAMP).

You do NOT have to register for the conference if you want to attend this tutorial. Costs are \$195 for non-Conference attendees and \$25 for Conference attendees. Registration will be through the ESA Conference Bureau at

<http://www.congrex.nl/10a06> click on training.

While the tutorial is 'tweaked' for the space domain, the concepts behind STPA/STAMP are applicable across a wide range of domains as evidenced by her applications of them in military operations, chemical processing plants and aviation domains.

**APT is offering Training Courses – all classes will be at APT Research, Huntsville AL.**

Upcoming courses include: Institutes of Makers of Explosives Safety Analysis for Risk (IME SAFR) - April 27<sup>th</sup> to 29<sup>th</sup>; Explosives Safety Course - May 10<sup>th</sup> to 13<sup>th</sup>; System Safety Engineering Course - June 7<sup>th</sup> to 11<sup>th</sup>; and Safety Assessment for Explosives Risk (SAFER) - June 15<sup>th</sup> to 16<sup>th</sup>.

Course descriptions can be obtained at APT's web site - [www.apr-research.com](http://www.apr-research.com)

Registration Info 256-327-3396