

SCC Messenger

Space Coast Chapter of the International Council on Systems Engineering (INCOSE)

Newsletter for April 2007

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Next Meeting – May 3, 2007

The Hubble Telescope and the Hubble Deep Field

Dr. Donald R. Hodge will briefly describe how our perception of the Hubble Telescope has changed over the years from being an example of an Engineering Disaster to being an example of an outstanding systems engineering success. He will introduce the geometry relevant to “the Hubble Deep Field.” Dr. Hodge will then introduce a 30-minute video presentation “Onward to the Edge” by Neil de Grasse Tyson, Ph.D. In the presentation, Dr. Tyson wonders at the enormity of the cosmos and questions our place in it. He describes how, since the 1960s, people have been inspired and uplifted by images brought back from space. These same images have deepened our conception of the universe, bringing us to the realization that Earth is just one world among worlds unnumbered [a System of Systems on a cosmic scale]. The Hubble Deep Field takes us to the limit of our vision and Tyson asks what questions remain once we reach those limits.

Dr. Donald R. Hodge has over 30 years experience in systems engineering mostly in identifying and documenting requirements, functional analysis, and architecture analysis of communications, computer, and information systems. For the last 10 years with Harris Corporation, he has been a Systems Engineer and used DOORS extensively in support of several programs, typically involving new pursuits or advanced satellite ground terminal programs. He is one of a small number of systems engineers listed in the premier edition of Who’s Who in Science and Engineering. Don served as Vice President of the Space Coast Chapter of INCOSE during 2000 and 2001, as President during 2002 and 2003, and Past-President 2004 to Present.

As always, an invitation is extended to potential new members, friends of the Space Coast Chapter and anyone generally interested in the theory and practice of engineering a system. Active membership in INCOSE is not required for attending the Chapter meetings.

Future Meetings (*Mark your calendar*)

(Check the “Events” section of our web site for details at www.incose-scc.org)

The following meetings are planned. Announcements will be sent out a week prior to each meeting with specific details as to location, time and presentation topic.

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| May 3, 2007 | The Hubble Telescope and the Hubble Deep Field, including a video presentation by Dr. Neil deGrasse Tyson, Director of the Hayden Planetarium |
| June 7, 2007 | Systems Engineering - New Opportunities in Air Transportation |
| July 2007 | No meeting in July |

Last Meeting (April 5, 2007)

The FAR Approach – Functional Analysis/Allocation and Requirements Flowdown Using Use Case Realizations & Lessons Learned from the Applications of QFD to the Definition of Complex Systems

Stephen Kropp and Julie Turner, graduate students at Embry-Riddle Aeronautical University presented papers that had been originally presented and had won best paper awards at the INCOSE 2006 Symposium in Orlando. Stephen presented “The FAR Approach – Functional Analysis/Allocation and Requirements Flowdown Using Use Case Realizations” which was authored by Magnus Eriksson, Kjell Borg, and Jürgen Börstler, and Julie presented “Lessons Learnt From the Applications of QFD to the Definition of Complex Systems” which was authored by Dr. Amihud Hari, Prof. Joseph E. Kasser, and Prof. Menachem P. Weiss. Both Stephen and Julie augmented the original presentations with additional material.

The Chapter presented each of them with a Certificate of Appreciation for their presentations.

Events of Interest

12 May 2007: EnergyWhiz Olympics at Florida Solar Energy Center in Cocoa, FL www.fsec.ucf.edu

24-28 June 2007: INCOSE International Symposium in San Diego, CA <http://www.incose.org/symp2007/>

24-27 September 2007: SETE 2007 Systems Engineering/Test and Evaluation Conference in Sydney, <http://www.sesa.org.au/sete/>

17-19 October 2007: 15th IEEE International Requirements Engineering Conference in New Dehli, India visit www.re07.org

22-25 October 2007: (NDIA) 10th Annual Systems Engineering Conference in San Diego, CA. Abstracts due April 28. <http://www.ndia.org>

28 October - 02 Nov., 2007: ICCS 2007 - International Conference on Complex Systems in Boston, MA <http://necsi.org/events/iccs7/>

12-15 Nov. 2007: (NDIA) 7th Annual CMMI® Technology Conference and User Group in Denver, CO. Abstracts due April 27. <http://www.ndia.org>

15-19 June 2008: INCOSE International Symposium, 30 minutes from downtown Amsterdam in the Netherlands. Theme: “Systems Engineering for the Planet”



INCOSE International Symposium 2007

Registration is now open with reduced fees for senior members and even deeper discounts for students.

The 2007 International Symposium will be held at the Town and Country Resort in San Diego, California on June 24-28. The theme “Systems Engineering: Key to Intelligent Enterprises” highlights the dramatic expansion of opportunities available to those who learn to see and treat enterprises as systems and systems as enterprises. With a record number of proposals for papers, presentations, panels and tutorials, we are looking forward to a high quality program full of engaging, informative material. See the IS2007 website at <http://www.incose.org/symp2007> for more information.

About Dr. Neil deGrasse Tyson

From <http://research.amnh.org/~tyson/>

Neil deGrasse Tyson was born and raised in New York City where he was educated in the public schools clear through his graduation from the Bronx High School of Science. Tyson went on to earn his BA in Physics from Harvard and his PhD in Astrophysics from Columbia. Tyson is also the recipient of eight honorary doctorates and the NASA Distinguished Public Service Medal. His contributions to the public appreciation of the cosmos have been recognized by the International Astronomical Union in their official naming of asteroid "13123 Tyson". On the lighter side, Tyson was voted "Sexiest Astrophysicist Alive" by People Magazine in 2000. Tyson is the first occupant of the Frederick P. Rose Directorship of the Hayden Planetarium where he also teaches. Tyson lives in New York City with his wife and two children.

Tyson's professional research interests are broad, but include star formation, exploding stars, dwarf galaxies, and the structure of our Milky Way. Tyson obtains his data from the Hubble Space Telescope, as well as from telescopes in California, New Mexico, Arizona, and in the Andes Mountains of Chile.

In 2001, Tyson was appointed by President Bush to serve on a 12-member commission that studied the Future of the US Aerospace Industry. The final report was published in 2002 and contained recommendations (for Congress and for the major agencies of the government) that would promote a thriving future of transportation, space exploration, and national security. In 2004, Tyson was once again appointed by President Bush to serve on a 9-member commission on the Implementation of the United States Space Exploration Policy, dubbed the "Moon, Mars, and Beyond" commission. This group navigated a path by which the new space vision can become a successful part of the American agenda. And in 2006, the head of NASA appointed Tyson to serve on its prestigious Advisory Committee, which will help guide NASA through its perennial need to fit its ambitious vision into its restricted budget.

Tyson's recent publications include:

Death by Black Hole And Other Cosmic Quandaries (Jan, 2007) - Anthology of the best essays that have appeared in Natural History magazine under the title "Universe."

Origins: Fourteen Billion Years of Cosmic Evolution (Sep, 2005) - Origins explores cosmic science's stunning new insights into the formation and evolution of our universe: of the cosmos, of galaxies and galaxy clusters, of stars within galaxies, of planets that orbit those stars, and of different forms of life that take us back to the first three seconds and forward through three billion years of life on Earth to today's search for life on other planets.

The Sky Is Not the Limit: Adventures of an Urban Astrophysicist (Jan, 2004) -. Autobiographical reflections.

Tyson's publisher (W. W. Norton) describes him as "Known for his ability to blend content, accessibility, and humor, Tyson is a natural teacher who simplifies some of the most complex concepts in astrophysics while simultaneously sharing his infectious excitement about our universe."

INCOSE Membership Renewal Period Starts

You should shortly receive your renewal notice for INCOSE membership in the mail. The INCOSE membership year runs from June 1 to the following May 30. At \$105 per year, your INCOSE membership provides you with access to a network of over 5,000 SE professionals in more than 30 countries. INCOSE has two quarterly publications: Systems Engineering, the Journal of INCOSE and INSIGHT. In addition to the print editions, you can access current and back issues on-line. Through i-Pub, you can access all symposia abstracts from 1991-2006. In addition all papers from INCOSE/NCOSE symposia from 2001 are available as well as papers from European Systems Engineering Conferences (EuSEC). Your membership supports annual international symposia, local Chapter operations, the INCOSE Connect collaboration space, the discussion email reflector for online discussions, and INCOSE representation on standards committees. INCOSE also offers special rates for Seniors (you must be at least 64 years and a member for the past five years) and Students (carrying a 3/4 full time course load in an engineering or related field). You can get more information and also renew on-line at www.incose.org.