

News and Announcement

- [SATC]:** SATC Brochure "[How to become a Space Architect](#)" updated.
- [SATC]:** Next SATC teleconference is scheduled on Dec 5.
- [SATC]:** [Minutes](#) of the SATC Oct 10 Teleconference is now available.
- [SATC]:** SATC presents the [Year In Review on Aerospace America](#).
- [AIAA SPACE]:** **31 Aug–2 Sep:** [SPACE 2015](#) at Pasadena Convention Center, Pasadena, California, USA.
- [ICES]:** **12–16 Jul:** the [45th ICES](#) at [Hilton Bellevue](#), Bellevue, Washington, USA.
- [IAC]:** **12–16 Oct:** the [66th IAC](#) at Jerusalem, Israel. [Call for Abstracts](#) open.

Mailing list highlights:

- [NASA's study of putting spaceship crew in a deep sleep while on route is just a dream?](#)
- [New book "AD Space Architecture" is out now.](#)
- [Some discussions on the crashed Virgin Galactic test flight.](#)

Other items of interests:

- [ESA is recruiting a Young Graduate Trainee in Space Architecture & Infrastructure for 2015.](#)
- [Opportunity for PhD studentship on extra-terrestrial construction processes at the Open University, UK.](#)
- ["McMurdo on the Moon":](#) next installment in NASA SSERVI's workshop series [Space Horizons 2015](#).

Event Summary : the 65th IAC

The 65th International Astronautical Congress (IAC) convened in Metro Toronto Convention Centre, Toronto, Ontario, Canada, 29 September - 3 October 2014. SATC members Barbara Imhof, Jackelynne Silva, Olga Bannova and SATC Alumni Susmita Mohanty co-chaired the two Space Architecture sessions at the congress. In total eleven papers were accepted and presented and both sessions were fairly well attended in overall. A more detailed report can be found [here](#).



photos: iac2014.org

If you would like to discuss or comment on any of the news items You can start a discussion thread [here](#).

The Orbit Interview - Theodore Hall

Theodore W. Hall is well known to the Space Architecture community as a long-time leader of the SATC and specialist in modeling of artificial gravity environments. He is one of the developers of the University of Michigan virtual reality environment MIDEN (Michigan Immersive Digital Experience Nexus) where he integrates digital models and custom codes and the interactivity of the environment. His roots are connected with development of early tools for Computer Aided Design (CAD) and Building Information Modeling (BIM) systems development as well as visualization.



He was the AIAA DETC Aerospace Architecture Subcommittee Chair from 2006 till 2008, SATC Vice-chair from 2008 till 2010 and SATC Chair from 2010 till 2014. He also co-chaired the 1st Space Architecture Symposium in 2002 (with Marc Cohen and Scott Howe), and chaired the space architecture sessions at the International Conference on Environmental Systems (ICES) in 2007-2010 and 2013-2014. He managed to transform and lead SATC into a fully sustainable body providing a unique networking and collaborative platform for the next generations of space architects.



Photos by Ondrej Doule

The interview was conducted by the current SATC chair Ondrej Doule.

The Orbit: [When have you started to be interested in architecture or space architecture?](#)

The Orbit: [Who or what influenced you the most in pursuing the artificial-gravity space-architecture topic during your studies or work?](#)

The Orbit: [Space architecture is a very divergent field. It is tightly bound with physics but also with ethics and real human needs that are not always considered priorities. It may be difficult to find balance between objective and subjective design criteria. How do you perceive it?](#)

The Orbit: [Artificial gravity – Why do you think there is no centrifuge on orbit yet?](#)

The Orbit: [Why has architecture been introduced in the space sector? Can't its purpose be served by system engineering or mission architecture? Why should the space sector care about having a more traditional architectural approach?](#)

The Orbit: [What is your realistic vision for space architecture in 20-50 years?](#)

[The full transcript of the interview can be found here.](#)

Poll of the Orbit

2014/3rd Poll Results

The poll result is not decisive, however it does indicate a slight preference towards two options - "more proactive interactions with other AIAA TCs", and "fulfilling its role as an information hub for space architecture", of which represent over half of the total votes.

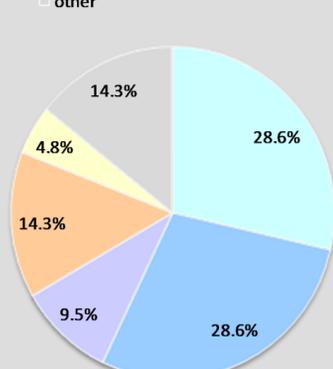
Unfortunately the similar poll question for the position of spacearchitect.org did not receive sufficient votes to be statistically representative (only 5 votes received), and therefore had to be abandoned.

A full transcript of the comments could be found [here](#).

If you would like to discuss or comment on this topic, you can start an email discussion thread [here](#).

Poll: How should SATC position itself in relation to other related professional groups & industries?

- interacts with other AIAA TCs
- fulfill role as information hub
- networking industries/agencies
- networking terrestrial architecture
- support collaborative research
- other



poll counts =21

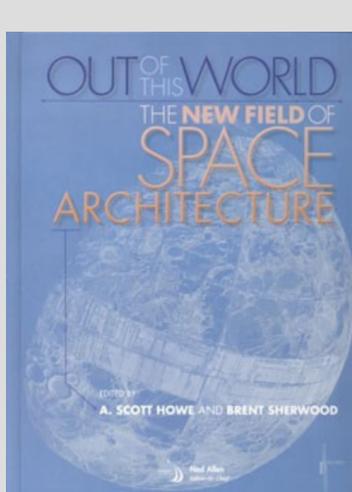
2014/4th Question:

There have been many well written books related to the subject of space architecture. While there are some which are useful tool books and act as reliable references, there are also many that are fictional and feature an inspirational story about space habitation in the future. Some may focus explicitly on the field of space architecture, while other may only tread lightly on the subject but make a significant impression nevertheless.

What is your favourite space architecture related book(s) and why? You may nominate technical reference books, fictional stories, or other written document, so long as they are deemed to provide a significant link to the subject of space architecture. The poll results will be used to compile the list of "SATC's favourite space architecture books" in the next issue of the Orbit.

[Please answer the poll question here.](#)

You can also start a discussion thread on this topic [here](#).



Out of this World: the new field of Space Architecture
edited by A. Scott Howe and Brent Sherwood

Theme of the Orbit: *Safety*



Tycho Deep Space / Launch escape system. Picture: [Copenhagen Suborbitals](#)

11 articles can be found within the [spacearchitect.org publication archive](#) by searching under the keyword: "safe*".

Baroff, Lynn; Dischinger, Charlie; Fitts, David (2009 July). [Human-rating Automated and Robotic Systems – How HAL can Work Safely with Astronauts](#) (SAE 2009-01-2527).

Cohen, Marc M. (2000). [Mars 2008 Surface Habitation Study – Part 3, Safety Philosophy](#) (AAS 93-883A). In P. Boston (Ed.), *The Case For Mars V* (American Astronautical Society, Science and Technology Series, Vol. 97, p.471-472)

Cohen, Marc M.; Junge, Maria K. (1984 October). [Space Station Crew Safety: Human Factors Model](#). In, *Proceedings of the Human Factors and Ergonomics Society 28th Annual Meeting* (vol. 28, no. 10, p.908-912)

Dudley-Rowley, Marilyn; Cohen, Marc M.; Flores, Pablo (2004 May 18). [1985 NASA-Rockwell Space Station Crew Safety Study: Results From Mir.](#)

IISTF (2007 February). [Final Report of the International Space Station Independent Safety Task Force.](#)

Miller, James; Leggett, Jay; Kramer-White, Julie (2008). [Design Development Test and Evaluation \(DDT&E\) Considerations for Safe and Reliable Human Rated Spacecraft Systems](#) (NASA TM-2008-215126, Vol. I).

Miller, James; Leggett, Jay; Kramer-White, Julie (2008). [Design Development Test and Evaluation \(DDT&E\) Considerations for Safe and Reliable Human Rated Spacecraft Systems](#) (NASA TM-2008-215126, Vol. II).

NASA, International Space Station Program (2002 December 18). Payload [Flight Equipment Requirements and Guidelines for Safety-Critical Structures](#) (SSP 52005 Revision C).

Percy, R. L., Jr.; Raasch, R. F.; Rockoff, L. A. (1985). [Space Station Crew Safety Alternatives Study, Vol. I: Final Summary Report](#) (NASA CR-3854).

Percy, R. L., Jr.; Raasch, R. F.; Rockoff, L. A. (1985). [Space Station Crew Safety Alternatives Study, Vol. IV: Appendices](#) (NASA CR-3857).

Quintana, Rolando; Deliwala, Bhupendra (2003 September). [Use of Barrier Analysis to Identify and Treat Human Factors Safety Threats](#) (AIAA 2003-6241).