



A Forum for Friendship in a Summer of Space

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The International Space University's Space Studies Program is no stranger to the pages of Ruimtevaart. The nine week summer program centred around outer space has been described in detail by previous articles. Thanks to a hard-working Local Organising Committee, the recently concluded 31st SSP was hosted in cooperation with the Netherlands Space Office, Delft University of Technology, Leiden University, and the European Space Agency's Research and Technology Centre (ESA-ESTEC). Though the program itself has come to an end, the friendships that were formed during the summer have now taken on a life of their own.

Picture of The Netherlands made by NASA astronaut Ron Garan used for ISU SSP18 promotion. [NASA]



Full Class of 2018 at the library of the Delft University of Technology [ISU]

Nights of Culture

In summer 2018, a university building in Delft, typically empty in the summer months, is unusually lively. Laughter, chatter, and a contagious energy fills its walls, as an excited crowd of people engage with a presentation. This presentation is far from your average promotional power point, but filled with images of scenic destinations, traditional clothing, and trivia-like quizzes. There are multiple presentations with different presenters, yet each one adds to the collective ambiance of the space, and a sense of solidarity amongst the building's guests. Such a scene describes the vibrant 'Culture Nights' that were staple to the 2018 edition of the Space Studies Program (SSP18) of the International Space University (ISU). These Culture Nights were formative because they helped the program's 135 international participants learn more about one another. With over 34 nationalities represented, participants got the opportunity to share a glimpse into their home-countries with their fellow peers each week. This often meant an exchange of dancing, music, language learning, and food-tasting after a long week of space-focused workshops and lectures.

An International Approach

Reading about Culture Nights here may sound out of place, especially in the context of an academic program dedicated to outer space studies. However, these

nights highlight the cultural diversity of the participating individuals, including the variety of educational and professional backgrounds of those present. For example, at SSP18, you could easily stumble across satellite engineers, lawyers, rocket scientists, psychologists, architects, economists, artists, medical professionals, air force pilots, students of all these fields, and more, all together with a shared passion for space.

The global mixture of the participants is no coincidence. Instead, it is the result of the 3 'I's that are central to ISU and its teaching philosophy i.e. 'Intercultural', 'Interdisciplinary', and 'International'. This year's program was no exception, as SSP18 truly was a melting pot. In fact, the celebration of diversity amongst the participants is a testament to the global nature of the space sector as a whole. Many of the most innovative space-related projects, whether that be the International Space Station, the Rosetta spacecraft, or the United Nations Committee on the Peaceful Uses of Outer Space, could not have been achieved without the collaboration of different countries.

SSP18 was fortunate to be hosted in the Netherlands for nine weeks. Though small in size, the country packs a punch when it comes to space affairs, with it being the home to a myriad of small, medium, and large space companies. Amongst this setting, SSP participants experienced what can only be described as a fitness boot camp for space enthusiasts. Hence,

though nine weeks sounds like a long time, lectures, exams, workshops, excursions, group projects and social activities makes time move much faster (especially when hours spent asleep are considerably reduced).

Fostering Friendships

Just as the time was accelerated, so were the connections between the 2018 class. Most participants began as strangers, at the very most as acquaintances when they arrived for registration on the first day in June. Individuals coming from different places, with different life experiences, and in different stages of life; some of us were seasoned professionals looking for a new challenge, whilst others were inexperienced but bright-eyed students with fresh ideas. Regardless of which category we fell into, we were all excited to be amongst an environment of like-minded people.

Whether our participation was initially driven by the opportunity to fill knowledge gaps or as a way to branch into a new sector and network, in the end, many of us could not understand how we had lived without knowing one another up until now. This feeling was only intensified by the thrilling activities we were participating in. Highlights included watching the Hubble Telescope Movie at Omniversum after hearing from astronaut Jeff Hoffman himself, operating a rover analogue mission, and the unprecedented access to ESA facilities in Europe like ESTEC and the European Astronaut Centre. Many of



SSP18 Team Project Final Report Covers [ISU]



Astronaut Jeff Hoffman at NVR sponsored

these activities would not have been possible without the dedication of the Local Organising Committee.

Challenges of Diversity

It can be said that the space sector is meaningful because it is international. One look at almost any corner of the globe and it is easy to be inspired by the likes of SpaceX's reusable launch systems in North America, ISRO's PSLV-C37 launch vehicle from India, which successfully deployed 104 small satellites or China's ambitious Tiangong space station to name a few examples. Nevertheless, much like how nationalistic interests can challenge international collaboration in space, so did the cultural diversity amongst SSP participants.

It would be naïve to expect 135 different people to work together without disagree-

ments and misunderstandings. One project which illustrates this challenge was the task of constructing a giant Rube Goldberg machine. For those unfamiliar with the concept, a Rube Goldberg machine is an overcomplicated construction of random pieces of hardware that is purposefully designed to perform a simple task. Though originally divided into smaller groups, complications still arose with how to best design the machine, and how to efficiently build it during our busy schedule; this project occurred simultaneously with the first three weeks of academic lectures before a final exam.

Even sharing ideas could at times lead to misunderstandings between participants. An example of this is the headshaking gesture that is known in Western-Europe as a sign of disapproval. However, this same gesture indicates the opposite and is a po-

sitive sign of affirmation in parts of India. Moreover, deciding on project management leaders was also sometimes a source of tension because certain participants felt very strongly about everyone exercising their right to vote. Others on the other hand, were less interested in voting for project leaders and more concerned about how to divide the work.

However, it was in overcoming those more tense moments that people truly bonded during the SSP. Each of us learned to have more patience with one another. As a result, we came to better understand the different cultural values we all possess, and the good intentions behind our actions. Doing so culminated in four successful team projects each comprising of a visually intensive executive summary brochure, a 120 page report, and a 1.5 hour presentation that focused on 1 of 4 space-related



event in Omnisum [ISU].

topics – power generation on the moon to withstand chilling lunar nights; eco-designing space debris removal solutions; creating small satellite constellations for more accurate weather forecasting; or incorporating space applications as a means of promoting climate change adaptation measures.

At first it was hard to imagine it would be possible to harmonise all our ideas into cohesive projects. During moments of stress, we could sometimes lose sight of the privileged position we were in as SSP participants. Especially, when language barriers and alternative working styles made collaboration particularly difficult. In reflecting on the process afterwards, you really do get the sense that you benefited from working with people from all over the world, not just like buzz words that are commonly advertised in most job

vacancies today. Considering the time constraints and initial communication difficulties, there really was the feeling of accomplishment when we all realised that together we managed to overcome the challenges; this is the foundation for lasting connections.

Lasting Connections

The connections we have gained over the summer are truly bonds that can endure our return to different homes across the globe. Though we are unlikely to ever all be in the same place at once again, aspects of our summer continue to thrive. Whether that be an online group dedicated to space-themed memes and quotes or reuniting at the 69th International Astronautical Congress in Bremen to support the SSP18 alumni presenting papers.

Though precious, the friendships produced

at SSP18 are not isolated. Instead, they join a legacy of summer programs stretching back 31 years. With three decades worth of space bonanza comes an enthusiastic alumni network that we are now a part of, and which embraces us. Here, the achievements of past members mix with the promise of present ones, ultimately laying the foundation for future friendships because one summer program connected a collection of enthusiastic strangers. Ask any one of the SSP participants, and you will surely hear that each individual left with far more than when they first arrived.

More information

A space adventure in Israel, SSP2016, K.k Kumar, Ruimtevaart 1, 2017.

A Sizzling Summer of Space, ISU SSP 2018 in the Netherlands, G. Blaauw, Ruimtevaart 3, 2017.

ISU Achievements after 30 years of operations, W. Peters, Ruimtevaart 4, 2017.

Stichting Space Professionals Foundation

The Local Organising Committee was responsible for many of the stand out activities we experienced during the SSP. The Organising Committee's members are also engaged with the Stichting Space Professionals Foundation (SSPF). This foundation helps fund the space education of (aspiring) space professionals. This year the SSPF helped support a record number of 14 NL-based participants with a portion of their tuition fees. What was special is that receiving SSPF support was not dependent on possessing Dutch nationality. Therefore, the Dutch delegation at SSP18 was a diverse group of talented individuals from various countries, who live in the Netherlands. The SSPF continues to fund promising future applicants, so all those interested in obtaining co-funding for SSP19 or other programs should not hesitate to learn more from their website: www.sspf.nl/welcome.html. SSP19 will take place from 24 June to 23 August in Strasbourg, France. For more information, follow this link:

www.isu.net.edu/about/space-studies-program/current-ssp/265.



The SSPF & NL participants. [Deepika Jeyakodi]