



# WUSAT-3 Newsletter

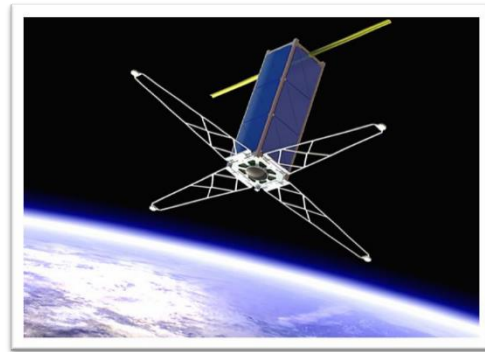
25/08/2017

Pre-Term Update

## New WUSAT Team for 2017-18!

A new multi-disciplinary team of seven students have attended WUSAT handover events and are ready to continue the excellent work completed by last year's WUSAT-3 team. They are....

**Ben Olsen** (Mechanical Eng)  
**Dan Tough** (Mechanical Eng)  
**Frazer Briggs** (Mechanical Eng)  
**Marina Shcherbakova** (Systems Eng)  
**Naomi Dobson** (Systems Eng)  
**Sam Croote** (Electronic Eng)  
**Sophie Clarke** (Electronic Eng)



New team photos will be forthcoming once term starts in October. However, we are already off to a flying start in terms of events we are attending prior to the start of term (see below).

## Naomi Dobson selected for ESA Concurrent Engineering Challenge!

We are really excited to announce that Naomi Dobson – one of our new systems engineers for 2017-18 – has been chosen to take part in ESA's Concurrent Engineering Challenge at the ESA Academy's Training and Learning Centre in ESA Redu Centre, Belgium.



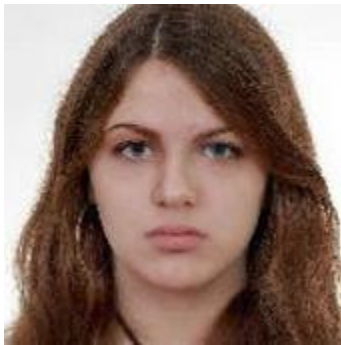
Naomi was selected as part of a group of only 22 European students to take part in this Space Design Challenge during September 2017. This is a wonderful opportunity for Naomi, and will be of enormous benefit to WUSAT. We entirely endorse Concurrent Engineering as the prime design methodology for Space Technology. It is the gold standard used by ESA and other Space agencies. Her experience through attending this ESA programme will help to shape how we develop WUSAT-3 to ESA standards. Naomi is now sponsored by ESA to attend this programme.

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## WUSAT to Attend 6th International Bio-Logging Science Symposium

WUSAT Co-Director, Prof Julia Hunter-Anderson, and Systems Engineer, Marina Shcherbakova, will be attending the above event in Konstanz, Germany from 25<sup>th</sup> to 27<sup>th</sup> September 2017. Hosted by our collaborating partner, the Max Planck Institute for Ornithology, this event will provide a valuable opportunity to gain knowledge of our end-user requirements (i.e. people who will use Space systems to monitor animal movement and behaviour). This information will form a vital part of our Systems Engineering planning for the further development of WUSAT-3 and most end-users will be at this event.

The Max Planck Institute for Ornithology are expecting to launch their ICARUS wildlife monitoring system to the International Space Station in October 2017. ICARUS will be deployed directly on the ISS. We are hoping to launch our complementary system, WUSAT-3, to the ISS on completion of an ESA launch programme in approximately three years time. WUSAT-3 will be deployed into a Low-Earth Orbit from the ISS.



**Marina Shcherbakova**

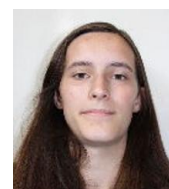


**Prof Julia Hunter-Anderson**

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## 3<sup>rd</sup> Year Project to Investigate WUSAT-3 Antenna Arm Material

Mechanical Engineering student **Ellen Daly** will undertake a 3<sup>rd</sup> Year project to investigate the potential use of PCB materials (either wholly or partly) in the construction of WUSAT-3's deployable antenna arms. Supervised by Prof Shanwen Tao, and assisted by our collaborating partners **Eurocircuits**, Ellen will test a variety of materials to determine their suitability for use in the construction of the antenna arms. Considerable advantage in the conduction and protection of the received antenna signal could be achieved if a suitable material can be found to meet the arduous conditions of both the launch and Space environment.



**Ellen Daly**



**Prof Shanwen Tao**

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## 2017-18 – Expected Developments for WUSAT-3 Programme

### ESA ‘Fly Your Satellite Programme’

We are expecting the call to this launch programme to occur anytime soon. We will be making a very strong submission based on the high-level of progress already made by two WUSAT-3 teams, the support of our excellent collaborative partners (see below), and the sort of activity that you see in this newsletter.

2017-18 will be our 12<sup>th</sup> Year of operation, and we are expecting it to be a very important year – not only for the continued progress of the WUSAT-3 satellite, but also for the development of WUSAT into a wider programme of activity, potentially incorporating research, 3<sup>rd</sup> Yr and MSc projects, and a continued programme of outreach and promotional activity for the greater benefit of the School of Engineering, the University of Warwick, and all of our collaborating partners.

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## WUSAT Tribute to Alan Bond

**Alan Bond**, one of the founders of Reaction Engines Ltd and a renowned aerospace engineer (*Project Daedalus, Blue Streak missile, HOTOL, Reaction Engines Skylon and the Reaction Engines A2 hypersonic passenger aircraft.*), was awarded an honorary Doctor of Science at this year’s Engineering graduation ceremony. WUSAT Director **Bill Crofts** was delighted to be asked to make the oration for Alan’s award. WUSAT will be keen followers of the continued success of Alan and Reaction Engines Ltd.



(L to R)  
VC Stuart Croft with  
Alan Bond and  
Dr Bill Crofts

