SPRINT (SPace Research and Innovation Network for Technology) Launch Event

26th February 2019
University of Southampton

Ian Williams
Associate Dean (Enterprise)
Faculty of Engineering & Physical Sciences
@SPRINTForSpace  #SPRINT

• Use of “space skills” to assist SMEs
• Data; manufacturing; facilities; etc
SPRINT

Is a space sector high-growth programme for SMEs to:

• Innovate and develop technologies for SMEs
• Enter the growing space sector with existing and new products
• Use technologies or data from space to innovate products for your markets
SPRINT

Gives funded access to the expertise and equipment of leading UK universities to support your new product and market programmes

- It will support 150 projects over 3 years
- Delivered by 5 universities: Leicester; Open University, Southampton, Surrey and Edinburgh
- It can support businesses across the UK
SPRINT

Projects can include:

- Materials and equipment for any aspect of the sector supply chain
- Satellite sensor systems
- Innovative processing and visualisation of satellite-derived data
- Application of satellite-derived data in ANY industry or sector
- Proof of concept studies
- Exploring entry to the space sector
TODAY’S AGENDA

10:30-11:00  *Introduction to Southampton SPRINT*
  Format of the session
  Ian Williams

11:00-11:30  *Overview of Programme*
  Ross Burgon; Head of Sprint Programme
TODAY’S AGENDA

11:00-13:00  Round Table discussions
             6 tables; 10 people per table
             20 mins discussion at each table

13:00-14:00  Networking lunch
             Drones tour (Andras Sobester)

14:00-14:20  Closing Remarks
             Ian Williams
FACILITIES TOUR

14:30  Leave Boldrewood
14:45  Arrive at Clean Rooms
       Meet tour guide James outside building
15:15  Arrive at Eng. Design + Manufacturing Centre
       Meet tour guide
15:30  Arrive at Testing + Structures Research Lab
       Meet tour guide Andy
15:45  Arrive at Propulsion Labs
       Meet tour guide Angelo
TABLES AND FACILITATORS

Table 1 Dr Catriona Jackman (Associate Prof Space Physics)

Table 2 Prof. Hugh Lewis (Head of Astronautics Research Grp)

Table 3 Prof. Joerge Fliege (Head of Operational Research within Mathematical Science)

Table 4 Prof. Otto Muskens (Integrated Nanophotonics group)

Table 5 Dr Ali Masoudi (Optoelectronics Research Centre)

Table 6 Prof. Jadu Dash (Professor in Remote Sensing in Geography and Environmental Science)
RESEARCH AND INNOVATION SERVICES STAFF

Table 1 Diana Galpin (Head of Technology Transfer and Impact Programmes)

Table 2 Frances Clark (SPRINT Innovation Advisor from 4th March)

Table 3 Chris Lord (Head of Corporate Partnerships)

Table 4 Amir Kayani (Corporate Partnerships Manager Aerospace)

Table 5 Michelle Limbert (Business Engagement Manager)

Table 6 Kerrie Bayliss (Business Engagement Manager SET Squared Scale Up)
Access a wide range of space expertise

- **Spacecraft Structures** – design, development, test and simulation of deployable structures for harsh environments
- **Space Situational Awareness and Space Intelligence** – predicting behaviour of objects in space and responses
- **Space and Earth Systems** - interactions between natural environment on Earth/ climate change/ natural hazards and Space Environment & remote sensing
- **Exploitation of Space Data** - real time intelligence from complex satellite sensor data
- **Space and Society** - advancement of future innovations in space activities/ challenges and societal impacts
Access specialist units and facilities

Specialist Consulting Units
- **Geodata** – environment data management, analysis and processing
- **Wolfson Unit** – Marine technology and industrial aerodynamics
- **ISVR Consulting** – noise and vibration
- **nC2** - tribology, surface & materials
- **RIfI** – cryogenics, structural analysis, experimental mechanics
- **Cornerstone** – silicon photonics fabrication

Facilities
- Cleanrooms
- Silica Fibre, Nanofabrication
- Wind Tunnels
- High Resolution auroral imager
- Structural shaker
- Large thermal vacuum chamber
Case Study: Monitoring crops

The Challenge: With an increasing world population comes an increase in food demands.

The Opportunity: To develop cost-effective, near real time and reliable methods to map and monitor cultivated areas using satellite imagery. Two existing optical sensors, Sentinel-2 from the European Space Agency (ESA) and the Landsat-8 from NASA have the capability to retrieve biophysical characteristics of crops.

The sticking point: Technical differences between these sensors prevents merging two sources of data.

The Project – development of an algorithm to be incorporated into a platform for image normalisation which combines the two sources of satellite data..... Potentially providing a resource for governments, policy-makers and non-governmental organisations for timely country level information on crop monitoring.
Corporate Partners – supporting their supply chain
Accessing Talent – Our Students

**Business Innovation Programme**
- Offer a research and recommendation project to a team of students
- Next round of projects start in Feb
- Students work remotely on their projects alongside their studies over 6 weeks
- Brilliant way to generate ideas & receive insightful proposals
- No financial cost for organisations
- **Deadline: 18th Jan 2019**

**Excel Southampton Internships**
- Appoint an intern for between 70 and 420 hours
- Part-time working during the term and full-time in vacation periods
- Students apply to your Job Description and Person Specification they bring the skills you need
- Deliver a project benefitting you now and potential identifying a new recruit
- Minimum salary is £8.44 per hour and we provide 30% of that up to 420 hours
- **Deadlines:** 30th Jan 2019 for Easter internships, 24th April 2019 for Summer internships

**9 universities (Kent, Herts, OU, Portsmouth, Queen Mary, Royal Holloway, Southampton, Surrey & Sussex)**
- Excellence in physics through industrial collaboration, research, training and student placements
- A Graduate School to develop skills of postgraduate research students
- Employer engagement programme to develop employability skills
Companies with strong growth ambitions and a current track record of year on year growth of 20% and 10+ Employees looking to collaborate with a SetSquared University to strengthen their innovation strategy

Business mentoring & support; Introductions to corporates and investors; bid and funding support; access to talent