

UK-Japan Workshop on Composites

(PLT, ACCIS, Queens Building, University of Bristol, 25 March 2013)

9:30	Arrival, registration, posters, tea/coffee (CDO)
	Opening and Welcome, Chaired by: <i>Prof. Wisnom, University of Bristol</i>
10:00	Welcome from Pro V-C, Prof. Guy Orpen, University of Bristol
10:10	Introduction – Prof. Wisnom/Takeda
	Morning Session, Chaired by: <i>Prof. Nobuo Takeda, The University of Tokyo</i>
10:20	<ul style="list-style-type: none"> • <i>Evaluation of effect of voids on initial failure in CFRP laminates</i> Prof. Masaki Hojo, Kyoto University
10:45	<ul style="list-style-type: none"> • <i>Predicting failure in composites</i> Prof. Michael Wisnom, University of Bristol
11:10	<ul style="list-style-type: none"> • <i>Analytical study on Compressive Strength of Composite Laminates with Impact Damage</i> Prof. Hiroshi Suemasu, Sophia University
11:35	<ul style="list-style-type: none"> • <i>Prediction, measurement and significance of reinforcement permeability</i> Prof. Andrew Long, University of Nottingham
12:00	<ul style="list-style-type: none"> • <i>Effects of Anisotropic Architecture of Fiber Mat on Void Formation in RTM Process</i> Prof. Ryosuke Matsuzaki, Tokyo University of Science
12:25	<i>Networking Lunch & Posters (70 mins)</i>
	Afternoon Session-I, Chaired by: <i>Prof. Okabe, Tohoku University</i>
13:35	<ul style="list-style-type: none"> • <i>Recent development of morphing composites</i> Prof. Paul Weaver, University of Bristol
14:00	<ul style="list-style-type: none"> • <i>Multi-objective optimization of curvilinear fiber shapes for laminated composite plates</i> Prof. Shinya Honda, Hokkaido University
14:25	<ul style="list-style-type: none"> • <i>Self-healing fibre reinforced polymer composites</i> Prof. Ian Bond, University of Bristol
14:50	<ul style="list-style-type: none"> • <i>Japanese R&D Activities for Carbon Fiber Innovation</i> Prof. Kazuro Kageyama, The University of Tokyo
15:15	<i>Break for 15 mins</i>
	Afternoon Session-II, Chaired by: <i>Prof. Minakuchi, The University of Tokyo</i>
15:30	<ul style="list-style-type: none"> • <i>From a water-epoxy slurry to hierarchical composites containing high loading fractions of CNTs</i> Prof. Alex Bismarck, Imperial College
15:55	<ul style="list-style-type: none"> • <i>Processing and properties of aligned carbon nanotube /polymer matrix composites</i> Dr. Toshio Ogasawara, JAXA
16:20	<ul style="list-style-type: none"> • <i>Monitoring cure in high performance composites</i> Prof. Ivana Partridge, University of Bristol
16:45	Closing remarks, Prof. Michael Wisnom
17:00	Optional ACCIS lab tour (Sign for at registration)

Tuesday 26th: Workshop Session:

9:00-9:25	Invited Talks (ACCIS2)	<i>Multiscale modeling of fiber reinforced plastic composites</i> Prof. Tomonaga Okabe, Tohoku University			
9:50-9:50	(Chair: Prof. Peng)	<i>Life cycle monitoring and quality assurance of curved composite part using embedded fiber-optic sensor</i> Prof. Shu Minakuchi, The University of Tokyo			
9:50-9:55	Brief introduction to the Topic Discussion Sessions – H-X Peng Proceed to respective sessions -Session Leaders				
		Session -I: Leader: Allegri (Failure/testing/Manufacturing) (ACCIS-1)		Session-II: Leader: Peng (Function, sensing, novel fibres, nano) (ACCIS-2)	
10:00-11:30	Topic 1	Tensile failure	Wisnom*/Okabe*	Self-sensing and healing	Bond/Takeda
<i>Break for 15 mins</i>					
11:45-13:15	Topic 2	Virtual testing / CAI	Hallett/Suemasu	Nanocomposites, Nanocoating and toughening	Peng/Ogasawara
<i>13:15-14:00 Lunch break</i>					
14:00-15:30	Topic 3	Delamination fatigue	Allegri/Hojo	High performance fibres	Bismarck/Kageyama
<i>Break for 15 mins</i>					
15:45-17:15	Topic 4	Manufacturing process modelling	Partridge/ Matsuzaki	Tow-steering	Kim/Honda
19:00	Dinner				

* Denote topic discussion leaders. (Please see next page for suggested guidelines)

Wednesday 27th: National Composites Centre Session.

09:30 arrival, tea/coffee

10:00-10:30: NCC introduction and research overview (Mike Hinton, Technology Director)

10:30-11:20: Tour of NCC facilities

11:20-12:20: Structural Health/Manufacturing Process Monitoring of Aerospace Composite Structures (Prof. Nobuo Takeda, Tokyo University)

12:20-13:15 Lunch and networking

13:15-14:00 Wrap up session (Feedback and actions)

14:00 Heading for Heathrow airport for 19:00 hr Flight.

Suggestions for running the Topic discussions:

AIM: To engage ACCIS members (Staff, RA, PhDs) in detailed discussions in order to identify tangible collaborative research areas/projects; mechanism of collaborations.

1. Following the two invited presentations, preceding into two parallel Sessions:

Session –I: (ACCIS-1), Leader: Allegri, focusing on Failure/testing/Manufacturing

Session-II: (ACCIS-2), Leader: Peng, focusing on Function, sensing, novel fibres, nano.

2. Session Leaders: are to oversee the session topics and take notes of tangible outcomes, e.g., *areas of research; possible exchange; funding opportunities.*

3. Topic leaders have the freedom of how to run the discussion, possibilities are:

- a. A couple of short summary presentations; one about the current research work at Bristol, other addressing activity in Japan?
- b. Any presentations to cover the first half hour of the session maximum, with the remaining time allocated for discussions.
- c. Identify common/complementary research areas,
- d. Mechanisms to set up collaborations (student exchanges, visits, joint applications for funding).
- e. Key challenges / open research questions in the topic area.
- f. Topic leaders could invite other collaborators to join the discussion should they wish.