The University Of Sheffield.

Department Of Computer Science.

Minutes   Meeting of Industrial Advisory Board

Date	10 May 2017		
Attending	Guy Brown	[GJB]	Head of Department, Chair, TUoS
	Sarah Ashworth	[SA]	Sky Betting and Gaming
	Claire Berry	[CB]	NCC Group
	Ashley Bridgeman	[ABr]	Sky Betting and Gaming
	John Brown	[JB]	Ask4
	John Clark	[JC]	Head of Security Group
	Craig Elliot	[CE]	ARM Ltd
	Andy Fawkes	[AF]	Bi Simulations
	Mark Hepple	[MRH]	Accreditation and BCS contact
	Matt Hughan	[MH]	Sky Betting and Gaming
	Claire Johnstone	[CJ]	Sky Betting and Gaming
	Aiden Lockwood	[AL]	AMRC
	Steve Maddock	[SCM]	Chair of Strategic Review Teaching Group
	Phil McMinn	[PM]	Director of Teaching, TUoS
	Jonny Rippon	[JR]	Hive IT
	Ben Short	[BS]	Employability Placement Manager
	Tony Simons	[AJHS]	Director of UG admissions, TUoS
	Lucia Specia	[LS]	Professor of Language Engineering
	Mike Stannett	[MPS]	Accreditation and BCS contact, TUoS
	Tom Thomas-Litman	[TTL]	Student rep, TUoS
	Alice Tucker	[ABT]	Minutes, TUoS
	Gavin Watson	[GW]	NCC Group
	Ash Young	[AY]	Evoluted
Apologies	Eva Barabas	[EB]	NHS Digital
	Malcolm Beattie	[MB]	IBM
	Kirill Bogdanov	[KB]	Placements Officer
	Sam Chapman	[SC]	The Floow
	Mandy Chessell	[MC]	IBM
	Fabio Ciravegna	[FC]	Chair of Industrial Liaison, TUoS
	David Forrester	[DF]	Lightwork designs
	Ed Holdsworth	[EH]	Practical Control Ltd
	Harriet Holman	[HH]	epiGenesys
	Paul Hill	[PH]	GS
	Andy Mayer	[AM]	Yoomee

1. **Welcome and apologies**

   Noted: GJB welcomed the committee and acknowledged apologies.

   Noted: GJB explained that this is the first of two meetings this year with today's focus on Teaching to coincide with the UG Poster Session. The second meeting of the year in September will focus on Research.

2. **Minutes of last meeting**

   Noted: It was agreed that the minutes of the last meeting were a fair and accurate record. There were no actions to discuss.

3. **Head of Department update (GJB) Presentation (**hod-slides.pptx)
   http://staffwww.dcs.shef.ac.uk/people/Alice.Tucker/IAB_170510.zip

Departmental update:
COM was rated 5th out of 89 Computer Science Departments in the last REF exercise and this has prompted investment. We are a relatively small department so this is an opportunity to grow in both staff and student numbers in coming years.
Some central areas need strengthening to support the growth that is anticipated. Security was an area that needed developing and this has resulted in a new group being created. Professor John Clark has joined the department and we are in the process of advertising new lecturer posts. There is currently very little recruitment being approved in the University so we are proud of this growth and investment.
We are also advertising for a Senior University Teacher (Industry experience is desired). We have separate course codes for year in industry students and we have seen an 18% growth in these applications. This is leading to us moving from being a recruiting department to being a selective department. We plan to increase grade requirements in 2019 and this will put us more in line with other Russel Group University's.
The Data Analytics Course has led to an increase in our PGT home admissions. We have had 12 students this year and that is expected to double. These students are often from a mathematics background and not necessarily a computer science background but all have been very strong students.
We have very active student groups – HackSheffield are competing nationally.
We have gained a Silver Athena SWAN award (only 5 other CS departments nationally have a Silver award and nobody has a Gold award.
Going forward we have seen relatively few UG student applications from overseas.

Action: GJB to provide slides regarding course content for Data Analytics

4. **Cyber Security Presentation (JC) (**IAB_Security_May17)
   http://staffwww.dcs.shef.ac.uk/people/Alice.Tucker/IAB_170510.zip

Our new Professor of Cybersecurity, JC, introduced himself. JC gave an overview of his appointment, career so far, and the vision for the group. The Faculty of Engineering is sponsoring the Security group for its first 3 years. There has been lots of interest in collaboration from other areas such as AMRC, Astronomy and Robotics. The group aims to become a world leading, distinctive research group. We plan to position ourselves apart from other institutes and believe that with existing staff expertise we can provide something that no one else can (Robotics, Industrial Automation at a new level, something unique to Sheffield). We will also launch a Cybersecurity and AI MSc by 2019. SA asked if there is anywhere else in the world that can offer what we can. JC said not that we are aware of, we have a natural traction for this and we are good at it.

5. **New approaches to digital skills training –(GJB) (**hod-slides.pptx)
   - HEFCE Institute of Coding Competition, see https://goo.gl/HFzh7t
   - Degree apprenticeships

http://staffwww.dcs.shef.ac.uk/people/Alice.Tucker/IAB_170510.zip

AF discussed Industry 4.0 and the moving and scaling up of this, the increasing standards and full fact automation that is happening. As a Department we want to position ourselves at the advanced end of scale – we have the kit and we have expertise to do it. GJB asked what direction in general companies are going, and if ML is being applied. GW said NCC Group had nothing truly practical in place and that they do need and want to get involved.

GJB reported that 2 years ago £2m funding for a 'National Institute of Coding' was announced. HEFCE have now put out a call with a deadline of 31st July 2017 for applications. Sheffield intends to make a bid (but part of a larger consortium). Matched funding would be required from industry for any bid. The feeling in the room was that there was high demand for these types of qualified students but that there is high unemployment due to a mishmash of student skills and requirements in the workplace.

The Sky Betting team reported that recruiting women was a particular issue for them. MH asked how we know statistics on Women. From AF's point of view, he often sees mainly men at talks and job applications are often male only. AJHS indicated that women tend to apply for courses with a body of knowledge. GJB agreed that there does seem to be a lack of planning from Government (the new curriculums in schools have been launched but schools are ill equipped to teach these courses). **JB** said students are required to develop roles, they need experience; fresh programmers are usually not quite ready. AF said just having the capability to work with others, to be able to deliver, is a good base. JR said it was a good idea to develop these experiences.

GJB asked if companies were involved in degree apprenticeships. Are they working? Are they a better alternative to student recruitment? The Sky Betting team reported that they have had some and they have worked well and led to employment but Sky want to do more, to try and catch women sooner. Their experience is that Hallam are moving on this. Sky also reported that they find that terminology often needs to be more flexible as the language used does not always match up with the student/company. The training gap between student and company needs was discussed. GJB asked if companies had a flexible framework and were able to have people 'learning on the job'. **Sky** reported that people often have to work in collaboration as they can't fulfil the needs of a complete role. The feeling was that companies that are able to have people learning as they go along are able to provide a more flexible framework and that means that there is less importance placed on languages etc and that students are able to complement each other's strengths.

JC asked what is implied by 'coding' in terms of the 'National Institute of Coding'. Coding is carrying lots of weight now but it is a broad area. AF said that this should have more diversity, a distinctive edge in coding. GJB reported that COM already had a good idea of what should shape the bid. The feeling is that the government is looking for ideas/solutions – multi threads – teaching technologies and how it can be delivered.

Action: GJB to send a follow up email with slides and ask for requests for collaboration in the 'National Institute of Coding' bid, and for interest in mentoring and a steering group.

6. **Faculty of Engineering Employability Team (BS) (**IAB_Employability_Team_May17)
7. **http://staffwww.dcs.shef.ac.uk/people/Alice.Tucker/IAB_170510.zip**

BS's message was 'come and speak to us, we want to work with you'. Students generally perform much better after a year in industry.

The Sky team asked if graduates wanted to be on Grad Schemes or if they wanted to go straight into job roles. BS replied that most Grads look for schemes as these are the most obvious and most widely advertised option but that is not to say that jobs are not popular.

8. Round Table

GJB asked for comments and general feedback regarding posters. CE said that security is interesting (verification IP), code resilience, but that some students had tested but this was lacking in many. This was GW's first time at the meeting but he was impressed with the poster session and that one dissertation had solved issues that they had also been working on. He reported that it was good to see proper training in problems. GW also reported that the Ninja challenge is to be advertised and he would send details of this on. Places tend to be filled by Jan/Feb time.

The Sky team reported that they liked that students had researched technologies to solve problems. Sky's recruitment office has moved to Leeds so they feel they have more of a presence in Leeds and need to be publicised earlier to Sheffield. The balance is currently in Software Engineering and Testing and Sky require well-rounded graduates not just the best coders. GJB clarified that COM feels that the '' Institute of Coding' is wrongly named and is misleading.

AF said that he felt this was an exciting direction for COM. As an SME he is worried that they might not have a good position for future years so is interested to take the 'Institute of Coding' back to BI Solutions. AF also reported that some projects were impressive – one game was basic but could teach coders to generate code. Student may need more practise at pitching projects though – not simple enough for a lay person and often too quick. JB reported that very few students send projects but it is good to see who can actually code and has logic. This would be better than just a CV.

ACTION: JC to arrange a visit to NCC Group

9. AOB
GJB thanked everyone for their attendance and contributions and reiterated that he would be in touch regarding expressions of interest for the 'Institute of Coding' bid.

10. Date of next meeting: 6 September 2017.