

**The University of Edinburgh**  
**Internal Periodic Review 2019/20**  
**Internal Periodic Review of**  
**School of Informatics (Postgraduate Research provision)**

**12 & 13 March 2020**

**Final report**

## Section A- Introduction

### Scope of the review

Range of provision considered by the review: See Appendix 4.

The Internal Periodic Review of Informatics (postgraduate research provision) consisted of:

The University's remit for internal review: see Appendix 1.

The subject specific remit for the review, consisting of the following items:

- Supporting postgraduate research mental health and wellbeing
- Provision of teaching support and management of teaching opportunities
- Enhancing the learning and research environment

The Reflective Report and additional material provided in advance of the review: see Appendix 2.

The visit by the review team including consideration of further material: see Appendix 2.

The final report produced by the review team.

Action by the Subject Area/School and others to whom recommendations were remitted following the review.

#### Membership of review team

Convener	Dr Linda Kirstein
External member	Professor Neil Audsley (University of York)
Internal member	Dr Angus Macbeth
Student member	Benjamin Thomas
Administrator	Susan Hunter

The School of Informatics is part of the College of Science and Engineering and is located in the Informatics Forum in the University's central campus.

The Informatics Forum hosts teaching and research facilities alongside a commercialisation hub in the adjoining Bayes Centre. The School is organised into six research institutes and centres and five Centres for Doctoral Training (CDT).

Date of previous review: 3 and 4 March 2014

The Reflective Report was prepared by Professor Nigel Topham, Director of the Graduate School, Professor Alex Lascarides, Deputy Director of the Graduate School and Dr Lindsey Fox, Graduate School Manager, in consultation with Dr John Longley, School Director of Quality Assurance and the Student Staff Liaison Committee.

## Section B - main report

### 1 Strategic overview

- 1.1 The School of Informatics offers postgraduate research (PGR) programmes of MSc by Research, MPhil and PhD in its research institutes and centres. It also offers two PhD models in its Centres for Doctoral Training (CDT): 1+3 MSc by Research and PhD programmes and 4 year PhD with integrated study programmes. In addition to research-led doctoral study these programmes include intellectual, experiential and transferable skills training.
- 1.2 Although the gender split within the School remains predominantly male, in 2019/20 there was an increase in the number of applications received from females to 29% (up 6% from the previous year). The School is a popular choice for international postgraduate research applicants and the current population is largely European and overseas students. The majority of students are studying full time.
- 1.3 The Head of School has overall responsibility for academic leadership, however management of postgraduate research programmes is devolved to the Informatics Graduate School (IGS). The IGS Director is responsible for recruitment and student funding arrangements and the IGS Deputy Director is responsible for on-course student support. There are two PGR Personal Tutors who provide pastoral support. The Graduate School Manager has oversight of the administration of the Graduate School and CDT administration.
- 1.4 The School has experienced rapid growth over the past five years and although this is now slowing there are plans for further expansion. The School intends to maintain its ratio of ~1:4 staff to postgraduate students. The increase in undergraduate recruitment means that the School needs more PhD level students to help with tutorial groups. In the longer term, the School has been promised more space through expansion into the Dugald Stewart Building (adjacent to the Informatics Forum), however in the short to medium term this means that there will be further pressure on space in the existing building. The School has initiated some short term changes to the physical environment to address issues with air quality and also plans to introduce changes in the way that desk space is allocated. The review team **commends** the Building Manager and Senior Team for engaging with Estates Department to ensure building work is undertaken to address issues in terms of heat and air quality. The review team **recommends** that efforts to move forward rapidly with this are supported by the College.
- 1.5 Recruitment for CDTs is managed by the Graduate School, and the research institutes and centres manage their own postgraduate research recruitment. Currently there is a misalignment of deadlines for applications and therefore planning for space management is challenging. The review team **recommends** that the School consider alignment of recruitment processes and moving to two or three fixed intakes per year. The School and Graduate School should plan for limiting the number of intakes of students it operates in order to help balance workload in the Graduate School office. Furthermore awareness of space resource needs to be carefully considered during the intake process.
- 1.6 The review team **commends** the School's positive and passionate staff. The professional services, supervisors and management provide a stimulating environment for students. The research institutes have an important role in the School's structure, however there is a lack of consistency in processes and student experience across institutes. The review team **recommends** that the School's structure and organisation needs to keep pace with the increase in size. Further expansion should take into account the physical limitations of the building and

avoid further impact on the student experience. The review team **commends** the School's engaged management team's recognition of the need for structural reorganisation and evident will for change which will be essential for continued growth. The review team **recommends** the School take advantage of the strong institute structure and ensure consistency of provision across the institutes.

## 2.1 The approach to enhancing learning and teaching

Research training has developed within the School with the increase in the number of CDTs and the 4 year integrated PhD programmes. Students can take advantage of some excellent training and industry internship opportunities. The review team heard from both students and professional services staff that there was some confusion on the requirements for degree awards, particularly in relation to the compulsory taught elements included in the CDT and integrated PhD programmes. Information and processes differ between institutes and this leads to an inconsistent student experience. The review team **commends** the School on its high performing academic staff, generating multiple CDTs and great opportunities for research students. The review team **recommends** that further support for professional services staff is needed, given the increasing complexity and volume of programmes and students.

The review team heard that there was variable access for the wider School community to the training opportunities provided by CDTs, for example research integrity training. Some training was being developed in association with the Institute for Academic Development to provide research integrity training that is suitable for all students in the School and the review team **suggests** this is supported by the School management team.

The review team **commends** the research provision provided by the School of Informatics. The unfavourable comparison by staff and PhD students of the Edinburgh PhD to that of American competitors should be avoided as it appears to devalue the offering. The review team **recommends** that the Graduate School and Careers Service work with students in recognising the value of their PhD work.

## 2.2 Assessment and feedback

The School clearly recognises that the postgraduate community are essential to the research and teaching provision in the School. They provide a vital role in tutoring and demonstrating and undertake marking. The review team **commends** the horizontal marking practice evidenced by postgraduate tutors. This ensures a consistent approach to marking for coursework and examinations. Final course moderation practices were not clear. The review team **recommends** that each course is clearly moderated by the course organiser in line with University and College guidance.

## 2.3 Supporting students in their learning

### Academic and student support structures and mechanisms

The supervisory relationship is key for postgraduate research students for academic and pastoral support. The School recognises that there are times when the supervisory relationship may not run smoothly and also provides two Postgraduate Research Personal Tutors who offer pastoral support. However, the review team found that there was a lack of awareness of these roles by both students and staff. There was clear awareness and appreciation of the pastoral support provided by the Deputy Director of the Graduate School, however the review team thought there was overreliance on a single point here in terms of pastoral support. The review team **recommends** that the School ensures that both students and staff are made better aware of the Postgraduate Research Personal Tutors, that awareness is assessed after a suitable period, and that Postgraduate

Research Personal Tutor resource is increased to a level appropriate to the number of research students in the School.

The review team heard evidence from students that they have inconsistent experience of supervision. Consistency of milestones and expectations around progression is required, not least to help professional services staff support the student journey. Annual progression monitoring is managed within the research institutes, centres and CDTs. Progression reviews include a panel member who is external to the supervisory team. The external member provides students with an opportunity to speak confidentially about their supervisory experience. Students also have the opportunity to meet informally with the external panel member for academic advice. The review team **recommends** that the external member of the progression review panel is formally recognised by the School for the important role they play in the student experience and that the external, if at all possible, should be the same person for the duration of the PhD.

The review team were concerned to hear evidence of unacceptable comments made by some academic staff to students for example 'this institute offers success, money and women'. The review team **recommends** that supervisor training is enhanced. Induction of new supervisors is important, but ongoing supervisor training is needed in addition to the normal five year cycle, particularly in areas such as diversity and respect. Cultural issues need to be addressed around gender, equality and diversity. It would also support the School's remit item on supporting postgraduate research student mental and wellbeing if mental health training is included as part of a suite of supervisor training enhancements. Transparency on how issues are dealt with within the School must be increased and inappropriate behaviour must be dealt with. The School must ensure safe mechanisms for reporting inappropriate behaviour are in place and communicated clearly to students and staff. The School should explore alternative mechanisms so that students have greater confidence in the system and will not worry about retribution. The black listing of staff from supervision should be more transparent. The review team **commends** the School's bystander approach, where members of the School community are encouraged to speak out on inappropriate behaviour, as an area of **good practice**.

#### [Support for key stages and transitions in the student journey](#)

The School provides induction information for all new students through the Graduate School and CDTs. There are welcome events during the key intake months of September and February and the review team **commends** the School on its induction activity. The review team also **commends** the School on co-locating the Graduate School office in the Informatics Forum building, thus giving more visibility for the Graduate School and ease of access for students. Both staff and students highly value the support received and work done by the Graduate School, however the Graduate School is currently working at capacity. The review team **recommends** that the School gives consideration to the impact of increased growth on the Graduate School as part of the School's structure and organisation plans discussed above and works with current staff to identify ways forward.

#### [Peer support and any examples of good practice](#)

The School has introduced a questionnaire on expectation at induction which is completed by both supervisors and students. Results are then exchanged so both groups can see the differences. The School has found this very useful in establishing clear expectations between students and supervisors and the review team **commends** this as an area of **good practice**.

#### [Engagement with the \[Student Mental Health Strategy\]\(#\)](#)

The School had asked the review team to look at supporting postgraduate research mental health and wellbeing as part of this review. The University's Director of Mental Wellbeing has developed a training programme for Schools on boundaries and their role in supporting mental wellbeing, however there have been issues in getting staff from

across the University to attend. The review team encourages the School to include mental health training as part of a suite of supervisor training enhancements as noted above.

The student supervisor relationship has a power dynamic that is, by its nature, imbalanced. This can impact on a student's ability to air concerns. The review team **recommends** that student pastoral support is strengthened particularly for low-level issues, with better awareness of available support structures amongst staff and students.

The review team found that there was a difference between School perceptions on pressure points for students and what the students the review team met reported. The students suggested they largely pressure themselves or experience peer to peer pressure, for example on publishing conference papers, rather than specific pressure from supervisors. The review team **recommends** that the School provides appropriate funding and opportunities for students to take the lead in organising to self-support and build resilience, particularly around coping with failure.

#### 2.4. Listening to and responding to the student voice

The review team **commends** the School's enthusiastic, high quality students who are keen to contribute to research and teaching.

The review team **commends** the effectiveness of the Student Staff Liaison Committee as a communication mechanism. The review team heard evidence from students that other clear and more transparent communications to students were needed. The review team **recommends** a "you said we did" approach, transparent communication on important issues (for example, air quality issues in the building) and involving students in planning (to take advantage of engaged and enthusiastic students).

The review team **recommends** that the School facilitate the formation of a student body that makes the most of the Institute representative system so that greater communication between students from institutes is achieved and opportunities for collaboration enhanced. This would also help address issues around acceptable behaviours.

#### 2.5 Accessibility, inclusivity and widening participation

The School clearly values its diverse population and recognises the opportunities provided by this diversity. As discussed above, the review team found evidence that further training on equality and diversity would be of benefit to some staff and students. The review team heard from students that, although it could be challenging settling in when arriving from a different culture and if English was not their first language, they felt well supported by their research groups and peers. Some issues around gender and cultural attitudes were persistent. Setting up a student body (see 2.4) could help address these issues around acceptable behaviours.

The School is working on renewing its Athena SWAN Silver Award, originally obtained in 2013.

#### 2.6 Development of employability and graduate attributes

The majority of graduates are employed in industry, particularly the information and communications sector. The School has strong industry links and students have the opportunity to apply for a variety of industry internships, for example with technology companies such as Google and Facebook. Students are also encouraged to attend key conferences and to submit papers which can be a prerequisite for employment in some fields. The School provides funding for students to attend national and international conferences.

The School provides a wide range of teaching opportunities to postgraduate research students, discussed below. Postgraduate tutors recognise and appreciate the skills they develop from teaching, such as public speaking and problem solving, which will be useful in future careers either in industry or academia.

## 2.7 Supporting and developing staff

The School line management structure for academic staff has been reorganised so that staff are more appropriately supported by their Head of Institute. This makes it easier for academic staff development to be supported and continuing professional development opportunities to be identified.

### Support and training for tutors and demonstrators

The School had asked the review team to look at the provision of teaching support and management of teaching opportunities as part of this review. The School is reliant on its postgraduate tutors and demonstrators to deliver its teaching but felt that there was an issue with attracting sufficient numbers to undertake these roles. The review team **commends** the School for provision of teaching opportunities to students across a broad spectrum of courses. The review team found that there was no underlying problem with students rejecting opportunities to teach and **recommends** that the School delivers teaching, including postgraduate support for teaching, within the available teaching resources and GTA resource budget, and that students are allowed freedom to pursue the teaching that interests them. Course Organisers should work with the Informatics Teaching Organisation to advertise teaching opportunities.

The review team **commends** School engagement with the Edinburgh Teaching Award and encourages all staff including University Teachers and students to obtain formal recognition of their teaching efforts. Leadership by the University Teachers in engaging PhD students in professional development is **good practice**.

Large classes offer particular challenges for tutoring and demonstrating and are reliant on having engaged Course Organisers who clearly understand their role in leading and training support. Large teams of 20+ are utilised which means that clarity on role expectations and leadership are important.

The review team heard evidence of inconsistency in support given to tutors, particularly on the smaller courses. The review team heard that postgraduate tutors valued the training provided in the tutoring essentials programme but that they would like some more specific training, for example what to expect from a first year class. The review team **commends** the **good practice** in tutor training and materials provided by Course Organisers in the larger courses for example, Machine Learning and Pattern Recognition (INFR11130). The review team **recommends** that the School consider ways this good practice can be shared with other Course Organisers.

## 2.8 Learning environment (physical and virtual)

The School had asked the review team to look at opportunities for enhancing the learning and research environment as part of this review. The School perceived that students experience difficulty in accessing computing equipment, however the review team did not hear any evidence from students that this was an issue. Some staff expressed concern that budget for procurement of equipment was no longer available without College approval. The review team **recommends** that the Head of School and School Management Team ensures clarity for staff on financial routes and what can and cannot be achieved. If particular operational difficulties are incurred, College should work with the School to resolve these.

The School were aware that the building environment and space issues were affecting the student experience. Students that the review team met did raise building issues, such as air quality and temperature; the School is taking steps to remedy these as discussed above. The review team **commends** the School's commitment to a single desk policy so far, noting that this cannot be maintained due to space restrictions in the short term; managing space allocation appropriately is key to a positive student experience. Students

were aware of variable occupancy of postgraduate research student offices and the impact growth is having. There were also tensions around different expectations of office etiquette. The review team **recommends** the School supports students to develop a set of student-led, shared values, particularly in terms of office etiquette.

### 3 Assurance and enhancement of provision

#### 3.1 Setting and maintaining academic standards

The School has effective processes in place for admissions and recruitment, assessment and progression and annual progression review. As discussed above, consideration of moving to three admission points per year may be beneficial.

#### 3.2 Key themes and actions taken

The School has implemented successful tracking of review submission which has contributed to improvements in completion rates. The School continues to encourage timely completion of annual reviews and thesis submission.



## Section C – Review conclusions

### Confidence statement

The review team found that the School of Informatics has effective management of the quality of the postgraduate research student learning experience, academic standards, and enhancement and good practice.

### Key Strengths and Areas of Positive Practice for sharing more widely across the institution

No	Commendation	Section in report
1	The review team <b>commends</b> the Building Manager and Senior Team for engaging with Estates Department to ensure building work is undertaken to address issues in terms of heat and air quality.	1.4
2	The review team <b>commends</b> the School's positive and passionate staff. The professional services, supervisors and management provide a stimulating environment for students.	1.6
3	The review team <b>commends</b> the School's engaged management team's recognition of the need for structural reorganisation and evident will for change which will be essential for continued growth.	1.6
4	The review team <b>commends</b> the School on its high performing academic staff, generating multiple CDTs and great opportunities for research students.	2.1
5	The review team <b>commends</b> the research provision provided by the School of Informatics.	2.1
6	The review team <b>commends</b> the horizontal marking practice evidenced by postgraduate tutors. This ensures a consistent approach to marking for coursework and examinations.	2.2
7	The review team <b>commends</b> the School's bystander approach, where members of the School community are encouraged to speak out on inappropriate behaviour, as an area of <b>good practice</b> .	2.3
8	The School provides induction information for all new students through the Graduate School and CDTs. There are welcome events during the key intake months of September and February and the review team <b>commends</b> the School on its induction activity.	2.3
9	The review team also <b>commends</b> the School on co-locating the Graduate School office in the Informatics Forum building, thus giving more visibility for the Graduate School and ease of access for students.	2.3
10	The School has introduced a questionnaire on expectation at induction which is completed by both supervisors and students. Results are then exchanged so both groups can see the differences. The School has found this very useful in establishing clear expectations between students and supervisors and the review team <b>commends</b> this as an area of <b>good practice</b> .	2.3

11	The review team <b>commends</b> the School's enthusiastic, high quality students who are keen to contribute to research and teaching.	2.4
12	The review team <b>commends</b> the effectiveness of Student Staff Liaison Committee as a communication mechanism.	2.4
13	The review team <b>commends</b> the School for provision of teaching opportunities to students across a broad spectrum of courses.	2.7
14	The review team <b>commends</b> School engagement with the Edinburgh Teaching Award and encourages all staff including University Teachers and students to obtain formal recognition of their teaching efforts. Leadership by the University Teachers in engaging PhD students in professional development is <b>good practice</b> .	2.7
15	The review team <b>commends</b> the <b>good practice</b> in tutor training and materials provided by Course Organisers in the larger courses for example, Machine Learning and Pattern Recognition (INFR11130).	2.7
16	The review team <b>commends</b> the School's commitment to single desk policy so far, noting that this cannot be maintained due to space restrictions in the short term; managing space allocation appropriately is key to a positive student experience.	2.8

### Recommendations for enhancement/Areas for further development

Priority	Recommendation	Section in report	Responsibility of
1	<b>School structure and organisation</b>		
	The research institutes have an important role in the School's structure, however there is a lack of consistency in processes across institutes. The review team <b>recommends</b> that the School's structure and organisation needs to keep pace with the increase in size. Further expansion should take into account the physical limitations of the building and avoid further impact on the student experience.	1.6	Head of School/School Management Team
	The review team <b>recommends</b> the School take advantage of the strong institute structure and ensure consistency of provision across the institutes.	1.6	
	The review team <b>recommends</b> that further support for professional services staff is needed, given the increasing complexity and volume of programmes and students.	2.1	
	The review team <b>recommends</b> that the School gives consideration to the impact of increased growth on the Graduate School as part of the School's structure and organisation plans above	2.3	

	<p>and works with current staff to identify ways forward.</p> <p>Recruitment for CDTs is managed by the Graduate School, and the research institutes and centres manage their own postgraduate research recruitment. Currently there is a misalignment of deadlines for applications and therefore planning for space management is challenging. The review team <b>recommends</b> that the School consider alignment of recruitment processes and moving to two or three fixed intakes per year. The School and Graduate School should plan for limiting the number of intakes of students it operates in order to help balance workload in the Graduate School office. Furthermore awareness of space resource needs to be carefully considered during the intake process.</p>	1.5	School Management Team/Graduate School
2	<p>The review team heard evidence from students that they have inconsistent experience of supervision. Consistency of milestones and expectations around progression is required, not least to help professional services staff support the student journey. The review team were concerned to hear evidence of unacceptable comments made by some academic staff to students for example 'this institute offers success, money and women'. The review team <b>recommends</b> that supervisor training is enhanced. Induction of new supervisors is important, but ongoing supervisor training is needed in addition to the normal five year cycle, particularly in areas such as diversity and respect. Cultural issues need to be addressed around gender, equality and diversity. It would also support the School's remit item on supporting postgraduate research student mental and wellbeing if mental health training is included as part of a suite of supervisor training enhancements. Transparency on how issues are dealt with within the School must be increased and inappropriate behaviour must be dealt with. The School must ensure safe mechanisms for reporting inappropriate behaviour are in place and communicated clearly to students and staff. The School should explore alternative mechanisms so that students have greater confidence in the system and will not worry about retribution. The black listing of staff from supervision should be more transparent.</p>	2.3	Head of School/School Management Team
3	<p><b>Enhancing the learning and research environment</b></p> <p>The review team <b>commends</b> the Building Manager and Senior Team for engaging with Estates Department to ensure building work to</p>	1.4	College Estates Officer

	<p>address issues in terms of heat and air quality. The review team <b>recommends</b> that efforts to move forward rapidly with this are supported by the College.</p> <p>The review team heard evidence from students that other clear and more transparent communications to students were needed. The review team <b>recommends</b> a “you said we did” approach, transparent communication on important issues (for example, air quality issues in the building) and involving students in planning (to take advantage of engaged and enthusiastic students).</p>	2.4	School Management Team/Graduate School
4	<p><b>Supporting Postgraduate Research Mental Health and Wellbeing</b></p> <p>The review team <b>recommends</b> that student pastoral support is strengthened particularly for low-level issues, with better awareness of available support structures amongst staff and students.</p> <p>The review team <b>recommends</b> that the School provides appropriate funding and opportunities for students to take the lead in organising to self-support and build resilience, particularly around coping with failure.</p>	2.3 2.3	School Management Team/Graduate School
5	<p><b>Provision of teaching support and management of teaching opportunities</b></p> <p>Final course moderation practices were not clear. The review team <b>recommends</b> that each course is clearly moderated by the Course Organiser in line with University and College guidance.</p> <p>The review team found that there was no underlying problem with students rejecting opportunities to teach and recommends that the School delivers teaching, including postgraduate support for teaching, within the available teaching resources and GTA resource budget, and that students are allowed freedom to pursue the teaching that interests them. Course Organisers should work with the Informatics Teaching Organisation to advertise teaching opportunities. The review team <b>commends</b> the <b>good practice</b> in tutor training and materials provided by Course Organisers in the larger courses for example, Machine Learning and Pattern Recognition (INFR11130). The review team <b>recommends</b> that the School consider ways this good practice can be shared with other Course Organisers.</p>	2.2 2.7 2.7	School Management Team School Management Team/Teaching Organisation School Management Team



No	Suggestion	Section in report
1	The review team heard that there was variable access for the wider School community to the training opportunities provided by CDTs, for example research integrity training. Some training was being developed in association with the Institute for Academic Development to provide research integrity training that is suitable for all students in the School and the review team <b>suggests</b> this is supported by the School management team.	2.1

# Appendices

## Appendix 1 – University remit

The University remit provides consistent coverage of key elements across all of the University's internal reviews (undergraduate and postgraduate).

It covers all credit bearing provision within the scope of the review, including:

- Provision delivered in collaboration with others
- Transnational education
- Work-based provision and placements
- Online and distance learning
- Continuing Professional Development (CPD)
- Postgraduate Professional Development (PPD)
- Provision which provides only small volumes of credit
- Joint/Dual Degrees
- Massive Open Online Courses MOOCs (even if non-credit bearing)

### 1. Strategic overview

The strategic approach to:

- The management and resourcing of learning and teaching experience,
- The forward direction and the structures in place to support this.
- Developing business cases for new programmes and courses,
- Managing and reviewing its portfolio,
- Closing courses and programmes.

### 2. Enhancing the Student Experience

The approach to and effectiveness of:

- Supporting students in their learning
- Listening to and responding to the Student Voice
- Learning and Teaching
- Assessment and Feedback
- Accessibility, Inclusivity and Widening Participation
- Learning environment (physical and virtual)
- Development of Employability and Graduate Attributes
- Supporting and developing staff

### 3. Assurance and Enhancement of provision

The approach to and effectiveness of maintaining and enhancing academic standards and quality of provision in alignment with the University Quality Framework:

- Admissions and Recruitment
- Assessment, Progression and Achievement
- Programme and Course approval
- Annual Monitoring, Review and Reporting
- Operation of Boards of Studies, Exam Boards, Special Circumstances
- External Examining, themes and actions taken
- Alignment with SCQF (Scottish Credit and Qualifications Framework) level, relevant benchmark statements, UK Quality Code
- Accreditation and Collaborative activity and relationship with Professional/Accrediting bodies (if applicable)

## Appendix 2 Additional information considered by review team

### Prior to the review visit

- School Quality Assurance Reports 2016-19
- School organisational chart
- Current Graduate School staff information
- Programme handbooks
- EPSRC Centre for Doctoral Training in Robotics and Autonomous Systems
- PhD Supervisor Handbook
- Programme specification information
- Applications by year of entry
- Offers by year of entry
- Ratio of offers to application by year of entry
- Acceptances by year of entry
- Percentage high classification awards
- Progression and outcomes
- Completion rates of MSc by Research entrants
- Entrants report
- Equality and diversity student report
- School background data for first destination statistics (DLHE)
- Postgraduate Research Experience Survey results and reflection
- Student Staff Liaison Committee minutes (previous academic year)
- Edinburgh University Students' Association school report

## Appendix 3 Number of students

### Entrants by programme/year of entry

#### Postgraduate Research

	2015/6	2015/6	2016/7	2016/7	2017/8	2017/8	2018/9	2018/9	2019/0	2019/0
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
MScR in Biomedical Artificial Intelligence									10	1
MScR in Data Science	9		11		17		13			
MScR in Informatics	4		2		4		4		3	1
MScR in Pervasive Parallelism	12		12		10		8			
MScR in Robotics and Autonomous Systems	17		11		14		15			
PhD in Data Science	10		8		11		16		13	
PhD in Data Science and Artificial Intelligence									4	
PhD in Informatics	37	1	42	2	60	1	56	1	48	2
PhD in Neuroinformatics					1					
PhD in Pervasive Parallelism	9		12		12		8		6	
PhD in Robotics and Autonomous Systems	11		19		12		14		28	
<b>TOTAL</b>	<b>109</b>	<b>1</b>	<b>117</b>	<b>2</b>	<b>141</b>	<b>1</b>	<b>134</b>	<b>1</b>	<b>112</b>	<b>4</b>

#### Postgraduate Research Visiting

	2015/6	2015/6	2016/7	2016/7	2017/8	2017/8	2018/9	2018/9	2019/0	2019/0
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
NGR in Visiting Research	2	14	1	11	3	7	3	12	4	5
<b>TOTAL</b>	<b>2</b>	<b>14</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>12</b>	<b>4</b>	<b>5</b>



## Appendix 4 List of programmes included in the review

Biomedical Artificial Intelligence: MSc by Research, PhD  
Data Science and Artificial Intelligence: PhD  
Data Science: MSc by Research, PhD  
Informatics: ANC: Machine Learning, Computational Neuroscience, Computational Biology: MSc by Research, MPhil, PhD  
Informatics: CISA: Automated Reasoning, Agents, Data Intensive Research, Knowledge Management: MSc by Research, MPhil, PhD  
Informatics: Doctoral Training Centre in Neuroinformatics and Computational Neuroscience: MSc by Research  
Informatics: ICSA: Comp. Architecture, Compilation & System Software, Networks and Communication: MSc by Research, MPhil, PhD  
Informatics: ILCC: Language Processing, Speech Technology, Information Retrieval Cognition: MSc by Research, MPhil, PhD  
Informatics: ILSI: Modelling, Simulation, Formal Methods in Synthetic Biology, Systems Biology and Complex Systems: PhD  
Informatics: IPAB: Robotics, Computer Vision, Computer Graphics and Animation: MSc by Research, MPhil, PhD  
Informatics: LFCS: Foundations of Computer Science, Databases, Software & Systems Modelling: MSc by Research, MPhil, PhD  
Informatics (PhD) (with Beihang University)  
Natural Language Processing (PhD with Integrated Study)  
Neuroinformatics PhD (Joint with Albert-Ludwig University of Freiburg)  
Neuroinformatics PhD (Joint with KTH Royal Institute of Technology)  
Neuroinformatics PhD (Joint with National Centre for Biological Science Bangalore)  
Neuroinformatics PhD  
Pervasive Parallelism: MSc by Research, PhD  
PhD Communicating and Collaborative Systems (Informatics) with Macquarie University  
Robotics and Autonomous Systems (joint with Heriot-Watt University): MSc by Research, PhD