

<b>Institution: The University of Edinburgh</b>
<b>Unit of Assessment: 35 Music</b>
<p><b>a. Overview</b></p> <p>The Reid School of Music (RSM) has a long and distinguished history, dating back to the bequest from General John Reid that led to the appointment of the first Reid Professor of Music in 1839, the building of the Reid School of the Theory of Music in 1859, and the foundation of Edinburgh University's outstanding Museum of Musical Instruments. Today RSM is an integral part of the <i>Edinburgh College of Art</i> (ECA), situated within the <i>College of Humanities and Social Science</i> (CHSS) following ECA's merger with the University of Edinburgh in 2011. RSM's founding purpose was to combine the theory and practice of music with the scientific study of sound, in the context of a strong commitment to public engagement, and this continues to be its mission. This interdisciplinary approach is central to the research centres associated with RSM: <i>The Institute for Music in Human and Social Development</i> (IMHSD) and <i>Live Music Exchange</i> (LMX) based within RSM; the <i>Acoustics and Audio Group</i> (AAG) based in the Department of Physics; the <i>Centre for Film, Performance and Media Arts</i> (CfPMA) which is organised across ECA and CHSS; and the <i>Musical Instrument Museums Edinburgh</i> (MIMEd) based at St Cecilia's Hall and the Reid Concert Hall.</p>
<p><b>b. Research strategy</b></p> <p>Since its inception, the Reid School of Music has been committed to two goals, which remain the core of our research strategy: supporting our staff in carrying out cutting-edge, interdisciplinary research; and ensuring our work engages with a broad public. Over the REF period, we have introduced a number of measures to enable staff to realise these two goals (see section c). Most notably, this has involved a successful policy of encouraging and mentoring research grant applications, leading to a five-fold increase in our research grant income (from £69k average p.a. in RAE 2008 to £334k average p.a. in the current period). The strategy has been to draw on both RSM and ECA research incentive funds to enable staff members to organise exploratory seminars and workshops that then become the basis for external funding applications to support research networks, leading in turn to fuller research projects and research grant applications.</p> <p>At the same time, we have sought to develop modes of collaborative and shared thinking by clustering research around four main themes: <i>Music, Sound and Technology</i>; <i>Musical Practice</i>; <i>Music and the Human Sciences</i>; <i>Music and Social Institutions</i>. These themes bring together people with overlapping research interests but contrasting research methodologies. Although our research centres support these themes they do not map onto them entirely, allowing individual researchers to benefit from the connections and support offered by more than one grouping. Key to our success in generating grant income has been a comprehensive system of research mentoring and peer review, which supports staff in planning research and provides detailed advice on draft applications. More experienced researchers in the School support less experienced researchers, reading and discussing research proposals, advising on writing up and publishing, and supporting postdoctoral and research grant applications. Such mentoring is also available to more established staff members and in this period, for example, Davison, Kitchen, Overy and Parker all benefited from this system.</p> <p>Across these four themes, staff in the RSM share a broad view of music, not confined to one kind of musical genre or tradition but engaging with classical and popular music, Western and non-Western music, professional and amateur music making. We believe that music is centrally important to understanding what it means to be human, and to the practices that underpin the ways in which people live together in societies. This belief underpins our strategies for dissemination and public engagement.</p> <p><b>Research Themes</b></p> <p><b>Music, Sound and Technology</b> brings together staff from RSM, the University's Musical Instrument Collection (MIMEd) and the Schools of Physics, Engineering and Informatics. A five-year ERC Starting Grant (£488k) to support the Next Generation Sound Synthesis (NESS) project, involving staff drawn from RSM and Edinburgh Parallel Computing Centre (EPCC), has supported the continuation of research in musical acoustics. This project involves five academic staff and four doctoral students working in computational acoustics, focused on sound synthesis, virtualisation</p>

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and high performance computing, and it continues RSM's long association with EPCC. The project also involves international collaboration with the École Nationale Supérieure de Techniques Avancées, in Palaiseau, France, and the Aalto University of Technology, in Espoo, Finland. Further collaboration between MIMEd and Professor Murray Campbell in Physics includes Kitchen's AHRC-funded (£14.5k share of £344k) work on the effect of mechanical pipe action on performance, and Myers' and Newton's work on brass instruments which also contributes to the NESS project. Williams' work on the reconstruction of the performance apparatus of Karlheinz Stockhausen involves the fabrication and curatorial skills of MIMEd and the science-based approach of Physics within a Humanities context of social history. This work has resulted in seminars at the Stockhausen Stiftung für Musik in Kürten, Germany, and in a number of funded performance and manufacturing projects, including a new realisation of Stockhausen's "Studie II" undertaken using 1950s technology and practices. This included collaboration with a PhD candidate, utilising a physically modelled reverberation processor as part of the NESS project. Organology has been developed through individual research projects, for example those of Martin and Nex on harpsichord manufacture, and has been broadened by Brennan's work on the social history of the drum kit, and by the recent appointment of Nex. Emerging research areas being developed by early career members of this research grouping, such as Newton's work on timbre and neural coding and Williams' work on early electronic instrument performance, also benefit from cross-disciplinary co-operation and mentoring from colleagues in Music and the Human Sciences, and Musical Practice, respectively.

**Musical Practice** covers the various approaches to music making in **composition, improvisation** and **performance** research. Creative practice has always been central to the work of RSM, and successive Reid Professors, including Nigel Osborne (Reid Professor until 2012) have been distinguished composers. This creative environment attracts a strong group of research students. For example, the opera, *Ghost Patrol*, written by a PhD student, Stuart MacRae, in his first year of studies, was awarded a 2013 South Bank Show Sky Arts Award. Edwards' work for piano and computer *altogether disproportionate* was nominated by the jury for the Prix Ars Electronica 2013, and his AHRC-funded (£119k) development of algorithmic software for computer-based composition and performance (*Slippery Chicken*) continues an already strong link between creative practice research and informatics. The NESS project includes eight residencies for composers of electro-acoustic music that also contribute to the creative practice research of this group. Creative output has a strong impact through public performances, as in Edwards' recent commission from *Ensemble Aventure* Freiburg, Nelson's work with *Hebrides Ensemble* and Parker's work with *Music at the Brewhouse*. The recent appointment of renowned British composer, Julian Anderson as Visiting Professor of Composition, has strengthened links with institutions such as the London Symphony Orchestra and the Scottish Chamber Orchestra. A further extension of our range of creative practice into the area of improvisation is supported by the appointment of Professor Raymond McDonald to a chair in Music Psychology and Improvisation. Since RAE 2008 we have developed a new research focus on improvisation, whether in the context of new technologies (Edwards, Nelson, Parker) or as a matter of performing practice and psychological and gestural research (MacDonald, Moran). This extends through the community-based work and recordings of MacDonald's *Glasgow Improvisers Orchestra* and Edwards' *EdImpro*.

**Music and the Human Sciences** builds on the pioneering work of Professor Nigel Osborne, (see Case Study on the Skoog). Its research is focused within the IMHSD under the direction of Overy, which has developed a strong interdisciplinary research environment. IMHSD has become a key partner in two FP7-funded networks: EBRAMUS (Europe, Brain and Music), which supported a PhD scholarship (£157k), and Music Moves (£154k), which supported a Marie Curie Senior Research Fellow. The IMHSD focus on topics such as music therapy, dyslexia, aphasia, autism and problems of communication, already well-established in RAE 2008, has been broadened by the recent appointment of MacDonald to include research into music and health (MacDonald's work with cancer and stroke patients) and into music cognition and brain processes including work on sound perception (Newton, Overy), embodied cognition (Moran), and empathy and the mirror neuron system (Overy). Overy's work on the 'musical brain' has involved new collaboration with the Clinical Research Imaging Centre (CRIC) at the Queen's Medical Research Institute, where local expertise in fMRI scanning has opened up new avenues of work and developed collaborative

possibilities for the future. There is also strong support for networking activities both within and beyond the academy, through IMHSD workshops like *Approaches to Rhythm and Timing in Scotland Today* (ARTiST) (2012), and through regular IMHSD interdisciplinary conferences at Herstmonceux Castle, in collaboration with Queen's University Kingston, Ontario (2008, 2010, 2012).

**Music and Social Institutions** involves individual and collaborative research on both historical and contemporary subjects. This theme has capitalised on the presence of Frith, appointed to the Tovey Chair in 2008, to develop a more sociological turn and a broader focus for RSM's research culture. For example, Kelly's work on musical culture in the German Democratic Republic, supported by an AHRC Early Career Fellowship and primed by an earlier Carnegie Grant, has resulted from Frith's mentorship. Collaborative projects with researchers both within CHSS and in other institutions have also developed strongly, generating AHRC support with total funding of £1,027k. These projects include research into the music of the Wode Psalter (O'Regan), the sound of early cinema in Britain (Davison) and the history of live music in Britain since 1950 (Frith, Brennan). Individual research covers a broad range of topics, all focussing on musical institutions. These include O'Regan's work on early modern Rome, which has resulted in several recently published articles and a volume for the new international Palestrina edition sponsored by the Italian government, and Taylor's work on Sullivan and Mendelssohn (published by Cambridge University Press) which engages with notions of popularity in music, resulting in a recent commission for a monograph. Davison's work on music in theatre and on film has recently engaged academic and industry interest in the importance of teasers and trailers to both film and television, resulting in the formation of a new research network.

While the work across our research groupings is necessarily diverse, there are a number of ways in which research within RSM has a distinctive character. First, the cross-disciplinary nature of our research profile has meant a tendency towards revisionism, challenging existing disciplinary orthodoxies. This is apparent in Davison's work on the sound of early British cinema, in Brennan and Frith's work on the history of popular music, and in Kelly's work on the Romantic tradition in post-war East Germany. Second, the interest in music technology, linking practice-led and acoustic research, has meant the development of not just new compositions but also new devices such as the *Skoog* (see Case Study 1), computer programmes such as Edward's *Slippery Chicken* (released 2013) and sonic environments, developed in the work of Bilbao, Parker and Williams. Third, the emphasis on collaboration has meant that our research has involved working with colleagues from a wide variety of disciplines and institutions, for example O'Regan's collaboration with the School of Divinity, and Moran's work with the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig.

A key component of all our research is **Public Engagement**. Researchers are expected to treat public engagement as an essential part of the research process. This is evident in the IMHSD's work with the state sector, such as *Dance for people with Parkinson's Disease* (2013), and through the organisation of public events such as *Edinburgh Game Symposium*, a seminar workshop and concert event in collaboration with the Edinburgh International Film Festival (2013) involving industry professionals, students and a general audience. Events such as Overy's *Reel Science, Music Neuroscience*, at the Edinburgh International Film Festival (2011) brought the excitement of research to a general audience, while Davison's *Titles, Teasers and Trailers* (2013) incorporated a masterclass in making trailers, as well as presentations from trailer makers and producers from BBC Worldwide, Channel 5 and Red Bee/PBS, establishing this topic as a new and important field of research. Similarly O'Regan's collaboration on the *Wode Psalter* project was awarded funding by the AHRC (£42.5k share of £360k award) to develop a public exhibition of manuscripts and artwork in the gallery of the University Main Library, accompanied by a series of concerts of relevant choral music, inaugurated by the Scottish composer, James MacMillan, as well as Follow-on Funding (£116.5k) to make editions and recordings of much of the music freely available as downloads from the internet.

Finally, our successful **Funding Strategy** has been modelled on practices that have been developed and tested within the IMHSD. This institute was established in 2005 as a forum for researchers to meet across the usual arts/social sciences/natural sciences disciplinary divisions. During this period, IMHSD has been particularly concerned to encourage new kinds of collaborative research on music and the brain by holding regular seminars, workshops and

conferences, such as the biennial international IMHSD event at Herstmonceux Castle, and through membership of the EBRAMUS (Europe, Brain and Music) young researchers network, funded under the EU FP7. The aims of this network are to strengthen, quantitatively and qualitatively, the human potential in R&D in Europe by encouraging European researchers to stay in Europe, by attracting international researchers to Europe, and particularly by increasing the participation of women researchers. The IMHSD model of developing networks through small grants, which then lead to larger funding applications, has been followed in developing other cross-disciplinary research networks in RSM, each of which has supported successful bids for research funding: The Sounds of Early Cinema in Britain (AHRC £10.2k share of £59.8k), The Business of Live Music (AHRC £553k), and NESS (ERC £488k).

Future research initiatives will seek to extend established projects, such as NESS, which is starting to build creative links with composers and music practitioners, as well as developing its mathematical and informatics-based approach into areas such as architectural modelling. The link with CRIC will also be expanded, and an MSc student, jointly funded by RSM and CRIC is currently working to consolidate a project begun under the EC PF7 project *Music Moves*, for future development. RSM will also seek to establish new themes, capitalising on new appointments such as MacDonald, Brennan and Taylor. Improvisation has already emerged as a key element of both creative practice and scholarly and scientific research, and RSM is well placed to build strongly on this theme in the future. Research in Music and the Moving Image has also grown across ECA and CHSS, and is a priority for research development within RSM. This will build on recent network events on film and TV trailers, videogames, and interactive performance with sound and image, and will also link with other recent appointments across ECA (Davis, Bastian).

### c. People, including:

#### i. Staffing strategy and staff development

RSM has made five new appointments since 2008, including two tenure-track Chancellor's post-doctoral fellows, two early career lectureships, and one professorial appointment. Edinburgh University's Quality People policy informs staff development strategy across the University. ECA encourages a strong commitment from staff across all areas of activity, and has the staff development structures and rewards to support that commitment. Enabling structures include:

**Individual researchers at the start of their research careers:** RSM actively supports early career researchers, and since 2011 we have hosted three Leverhulme Early Career Fellows, one of whom has moved to a University Chancellor's Fellowship, a highly competitive five-year research-focused appointment leading to an open-ended academic appointment. A workload allocation model operates throughout ECA, adjusted for early career staff through the subject head. These staff benefit from a structured programme of academic development, affording them time to enhance their research, teaching and leadership skills through the Institute for Academic Development (IAD). All new staff are assigned a mentor to help them develop research and publication plans, and establish research networks. Research only staff and research assistants are fully incorporated into these structures.

**Research Leave and Sabbatical Policy:** Research active staff are eligible for one semester's paid research leave every seven semesters, which is awarded on the basis of a research plan provided in advance and monitored through outcomes in retrospect. The operation of the policy is the responsibility of the ECA Research and Knowledge Exchange (RKE) Committee in conjunction with the head of RSM. This committee has administrative resources within ECA to support all aspects of research and knowledge exchange. Staff are encouraged to apply for external funding to support sabbatical leave, and mentoring and peer review of all applications for funded research is co-ordinated by the RKE office. In this period, for example, Davison, Kitchen and Parker all benefited from this system. We also have funds available (c. £10k) to support teaching buy-outs when they are needed in the research cycle (during the preparation of a major research bid, for example, or to enable the completion of a major publication).

**Procedures for career progression:** All staff take part in Annual Review in line with University-wide HR policy. Career development issues, including progression, are a core part of this review. The review results in a Personal Development Plan drawn up by both parties involved. The Annual Review system is integral to the operation of university research policy. In addition, all ECA staff submit a research review/plan each year to the RKE Committee, on the basis of which staff receive

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an annual sum of at least £750 to meet research costs such as archive and field trips, conference organisation and attendance, research materials and equipment, laboratory expenses, and to contribute to the costs of record production, publication and performance.

**Equal opportunities:** Working, with the rest of ECA towards submission for the Bronze award of the Equality Challenge Unit, RSM monitors the proportion of women and ethnic minorities, and the spread of ages in senior positions in line with UoE equal opportunities policy. Staffing changes since RAE 2008 have improved the proportion of female academic staff from 31% to 38% and recent promotions have resulted in a change to the age profile of the unit and an increase in the number of women holding senior positions (two women out of four in RSM's management team). ECA has policies in place to ensure that staff with caring responsibilities or who have recently returned from maternity leave are supported and continue to benefit from research leave arrangements. In the REF period, two staff were able to co-ordinate a period of research leave following their maternity leave, in order to consolidate their research; one with a supported extension of her British Academy award. Two members of staff were recruited from outside the UK.

**Evidence of exchange between academia and other sectors:** Knowledge Exchange is integral to the research culture of the RSM. Researchers on our three most recently completed AHRC-funded projects (Edwards, Frith, O'Regan) were all awarded Follow-on Funding by the AHRC to develop such work (see further the LMX and Botanic Case Studies).

**Concordat to support the Career Development of Researchers:** Since the RAE2008, the University has been signatory to the Concordat in CHSS, and an Associate Dean was appointed in 2010 to oversee compliance and to promote the development of research careers, with the assistance of the Institute for Academic Development (IAD), the University's training and development organisation. At ECA level, the RKE support staff scrutinise all applications for funding involving research staff for compliance with the Concordat. Those staff responsible for supervising researchers are required to attend IAD-run training to ensure their compliance with the Concordat in practice.

**Future Plans:** The University will be making a further 50 tenure-track Chancellor's Fellows appointments in early 2014 (in addition to the 200 already appointed). In 2014 we envisage attracting a further Chancellor's Fellow to RSM in addition to the two we currently host, focussed on creative practice. These prestigious, internationally competitive posts are anticipated to lead to a permanent lectureship. This is part of the University's mission to be the UK's leading institution supporting the development of early career academic staff, reinforced by our >30FTE staff IAD.

**ii. Research students**

RSM is committed to research-led teaching and we regard our students as key beneficiaries of our research activities; the combination of teaching and research activity is thus central to our people strategy. We have a flourishing graduate school as measured not simply by the number, range, international background and quality of individual PhD students (33.7 have successfully completed their theses during the REF period, from countries including USA, Canada, EU, Taiwan and Japan) but also by their collective contribution to the research environment. During the REF period, seven research students have been supported by full AHRC scholarships. In addition, 20 students were supported by university scholarships, including three fully funded Principal's Career Development Scholarships and a further two from RSM bequests. A further four PhD studentships were supported from research grants. With the 2013 award of the Scottish Consortium AHRC Block Grant, we are confident our students will be successful in obtaining this competitive funding. We support our students by ensuring that our staff regularly refresh their training as supervisors. Support is available for research students to organise their own conferences, workshops, concerts and recordings (using internal ECA funding). Examples of such activities include *Europa Edition*, a successful music publishing company established in 2006 to issue new works of music by contemporary composers, primarily in the concert tradition, and the International Conference on Music Semiotics, launched by postgraduates in Edinburgh in October 2012, with a further conference planned in Sao Paulo in 2014.

Our PhD programmes are underpinned by taught Masters courses. The Acoustics MSc, for example, has a long track record of placing graduates in PhD programmes both in Edinburgh and worldwide. Our taught MMus degrees in Musicology, Composition, Musical Instrument Research

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and Keyboard Performance Skills are all designed to prepare students for future research work, and many students continue to PhD study at Edinburgh. All research students have to complete research training courses provided both by ECA – to establish an interdisciplinary context - and RSM before being allowed to proceed to the doctoral programme. Each student is assigned two supervisors and has an annual progress review, designed to uncover and address obstacles to the timely completion of their theses. RSM has various seminar series: a weekly research meeting which discusses papers from both visiting scholars and graduate students themselves; a weekly popular music seminar focused on methodological issues and work in progress; a weekly composers seminar focused on issues of music creation, with frequent visits from professional composers and performers such as Visiting Professor Julian Anderson and regular workshops with the Diotima Quartet and the Edinburgh Quartet; an IMHSD programme of workshops and conferences; the Muslca seminar programme co-organised with Informatics; and the annual Soundings and Dialogues festivals and Composers' Orchestra concerts, which bring together composers, performers and practice-led researchers in the fields of electro-acoustic, computer and contemporary musics. Funds of around £10k are available to allow students to give papers at conferences, and routinely participate in the graduate-oriented events organised by the Royal Musical Association, the Galpin Society, the American Musical Instrument Society, the International Association for the Study of Popular Music and the Art of Record Production. Current PhD student Tom Western won this year's British Forum for Ethnomusicology's prize for the best student paper presented at the annual conference, supported by RSM funds.

All our graduate students have the opportunity to be teaching assistants so as to get teaching experience preparatory to pursuing academic careers, and we support them in this through training via IAD. Our support of research students in all these dissemination activities is an aspect of our broader research strategy, designed to ensure that, even while they are pursuing the individual path of PhD research, students are involved in interdisciplinary exchange and public engagement. Zack Moir's PhD work on cochlear implants and music listening, for example, involved not just collaboration with NHS Special Interest Groups and teachers of the deaf but also a public concert and associated CDs, while a number of our most recent PhDs are now developing Edinburgh's cross-disciplinary research approach elsewhere: Mary Fogarty teaching music and dance at York University, Toronto; Thomas Seltz teaching contemporary music and popular entertainment at the University of Southampton; and Karen Ludke helping to coordinate the international project on Advancing Interdisciplinary Research in Singing (AIRS), with Dr. Annabel Cohen at the University of Prince Edward Island, Canada. Another recent composition PhD, Shiori Usui, was selected in 2013 to be a BBC Performing Arts Fund Music Fellow, placed with the Scottish Chamber Orchestra to develop its outreach work, and awarded a Sound And Music Embedded Composer's Residency with Birmingham Contemporary Music Group.

We are supported in the recruitment of high quality research students by scholarship schemes funded by the College, ECA and our own endowments, and we have been able to use the Principal's new Career Development Scholarships to attract two outstanding musicians to our PhD programme: the composer, Stuart MacRae, who has already received commissions from both the BBC Proms and the Edinburgh International Festival and is Composer-in-Association with the BBC Scottish Symphony Orchestra; and the trumpet player, Tom Arthurs, a BBC New Generation Artist.

**d. Income, infrastructure and facilities**

**Income** Our total external research income in the REF period was £1.669m, compared to £345k in RAE2008. This is a result of our strategic focus on project funding and maintains the major growth in research income noted in RAE 2008. This represents growth by a factor of five in average research income across the REF period, largely as a result of successful EU funding bids. All staff members are active in bidding for research funding, with support from mentors and the infrastructure outlined below. Major grants in this period were used to expand innovative research initiatives and to build international networks. Thus for example, Bilbao's ERC grant (£488k) supported major change and development in the Acoustics and Audio Group, and Overy's EC PF7 People (IEF): 'Music Moves' (£157k) and EC PF7 People (ITN): 'EBRAMUS: Europe, Brain and Music' (£157k) grants have developed international links in music neuroscience. Davison's position as Co-I on AHRC Research Network (Beyond Text) 'The Sounds of Early Cinema in Britain' (Jan 2009–June 2011), £59.8k; PI: Dr Julie Brown, RHUL) established strong links with other UK institutions, in support of strategic development of the area of film studies across ECA and CHSS.

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Crucial grants to support and develop research concepts were also obtained by Brennan, Edwards, Kelly and Moran.

**Infrastructure** The ECA's Research and Knowledge Exchange Office (RKEO) and its associated committee, as outlined above, support research in RSM. Funding applications are scrutinised by support staff and are put through a process of peer review, in line with CHSS policy. RKEO together with the support provided by the University's wholly owned subsidiary Edinburgh Research and Innovation (ERI) provide invaluable expertise for external funding bid preparation (as was the case for Bilbao, Edwards, Frith and O'Regan, for example) as well as an enhanced system of mentoring, drafting and budgeting advice and the benefit of their wide knowledge of best practice (particularly in terms of research impact). They also offer workshops and training programmes, especially useful at the early stages of research preparation, and for new researchers. Provision of funds, particularly important in the preparation of research bids and for the completion of individual research projects, is administered through RKEO committees. RKEO officers, liaising with the University's Finance Office, handle the financial management of research grants. RKEO and ERI keep staff informed about new research schemes and funding opportunities. Within the RSM itself, there is a Director of Research and a research budget, which includes income from endowments given for the purpose of supporting students' research activities. These funds (c. £10k p.a.) are used to support the School's seminar programmes, research conferences and other research events, and, on formal application, the individual research needs (such as travel) of both staff and research students.

A significant amount of research in RSM is concerned with music technology, sound storage and computational work. We have an audio studio management committee (supported by two dedicated technicians) to ensure maintenance and regular upgrades of audio equipment in the light of research needs. We also benefit from first rate IT support through the University Information Services, whose IT support team is available to provide advice on the technical aspects of research bids and on the development of project websites. For example, a recent PhD project on the history of the Reid Concerts (Fiona Donaldson) is developing a web-based, accessible database as a research resource for primary materials with the active support of IS technical staff. RSM also designed and launched in 2008 an online open-access peer-reviewed journal, *Scottish Music Review*, together with the other Scottish university music departments.

**Facilities** Currently, RSM has access to an excellent range of research resources, including historical collections in the Reid Music Library; the extensive Historical Collection of Musical Instruments in the St Cecilia's and Reid Halls (MIMEd); the recordings archive in the School of Scottish Studies; and contemporary collections within the Edinburgh University Library and the National Library of Scotland. MIMEd is recognised by the Scottish Government as a significant collection, and is the focus of a new development initiative, Building a Sound Future, with a first round of Heritage Lottery Funding. As well as our own studio facilities, which include a newly established, multi-channel digital sound recording studio in the Reid Hall designed for live music recording and resourced from internal CHSS funds, we have access to the Acoustics Laboratory in Physics, to specialist computing facilities in Informatics and EPCC, to sound design and graphics facilities in Architecture, and to fMRI scanning and laboratory services in CRIC. These resources are vital for our research on music and the brain and sound synthesis, as well as for computer-based composition and performance. ECA has specialist digital-visual equipment and film making/showing resources, which will support the future development of our research on music and the moving image. The Inspace facility within the School of Informatics also provides an important cross-disciplinary environment, for example hosting the recent LLEAPP (Laboratory for Laptop and Electronic Audio Performance Practice) event including 14 participants, 5 from University of Edinburgh, others from De Montfort Leicester, UEA, City University, RCM, Oxford University and Hamburg.

For practice-led research, the School has access to a variety of performance spaces: the historic St Cecilia's and Reid Halls provide traditional settings for chamber and orchestral concerts; Inspace (in the Informatics Building) provides a contemporary setting for electronic and experimental work; the Talbot Rice Gallery provides space for performances and exhibitions, for example hosting a current project on the graphic and performance aspects of music notation. ECA also has a studio culture and spaces, such as the Sculpture Court, that are open to future developments. Thus Bilbao's NESS project is developing a sound-art facility within a studio space

in ECA.

Planning for estates across ECA includes a commitment to the relocation of all disciplines within ECA on two sites, enabling a better use of resources and more opportunities for research developments of an interdisciplinary nature. This would co-locate RSM with other disciplines, enabling the development of a richer research environment, within the context of RSM's already existing links with other parts of the university, notably the Schools of Psychology, Informatics, Physics and Astronomy, the College of Medicine and Veterinary Medicine, and the University of Edinburgh Special Collections. The vision is to create maximum public impact for the research activities of ECA by locating teaching and research resources within a public-facing environment, as well as providing support for existing links with a wide range of institutions such as the Scottish Chamber Orchestra, Creative Scotland, War Child, Edinburgh International Festival, Edinburgh Festival Fringe and the Edinburgh International Film Festival. RSM is central to this planning in view of the importance of RSM's community-based, performance and interdisciplinary activities.

#### **e. Collaboration or contribution to the discipline or research base**

Recent and current research projects on music and the brain (Overy), sound synthesis (Bilbao), the art of record production (Frith), and sound in early cinema (Davison) were all designed to develop new research areas through the bringing together of researchers from different disciplines and institutions. The results have been either the publication of books (on the art of record production and the sound of early cinema), which make a significant contribution to the development of the discipline; or the establishment of major cross-European funded research networks (as in the case of music and the brain and sound synthesis), which open up new research areas, issues and methodologies. The importance of Frith's work in the disciplinary development of popular music studies was also marked by his election as a Fellow of the British Academy in 2011.

Examples of collaboration include, within Edinburgh University: projects with Divinity (O'Regan), Physics (Bilbao, Kitchen, Myers, Newton), Informatics (Bilbao), Film Studies (Davison), German (Kelly), Psychology, Clinical Psychology, Scottish Studies, Law and Medicine (Overy) and Architecture (Parker) and, outwith Edinburgh: projects with colleagues at Glasgow University (Brennan, Frith), Glasgow Caledonian University (MacDonald), Royal Holloway (Davison), and the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig (Moran) as well our role in cross-European funded projects (Bilbao, Overy).

Creative practice research projects were designed to be collaborative in a number of ways: by using innovative engagements with artists in other media to develop new approaches to music and sound (Parker); by developing new creative methodologies involving computation (Edwards); by developing close associations with established national and international performing artists and institutions in developing new commissioned work, involving a questioning of artistic engagement in a public arena (Edwards, MacDonald, Nelson, Parker).

Our belief in the research value of networking means that we also encourage and support staff to engage with the wider national and international academic research community through such activities as Nelson's editorship of *Contemporary Music Review*, MacDonald's just completed editorship of *Psychology of Music*, Frith's membership of the British Academy Publications Committee and editorship of the new *Journal of the British Academy*, Myers' role as Communications Manager of the Galpin Society, Brennan's chairmanship of the UK and Ireland branch of the International Association for the Study of Popular Music, and Davison and Kelly's recent election to the Council of the Royal Musical Association.

Most members of staff are active as peer reviewers and as examiners of PhDs with around 40 external appointments both nationally and internationally. Two are members of the AHRC Peer Review College, and Nelson is a member of the Panel. RSM has successfully hosted a number of major academic conferences, including the fourth meeting of The Neurosciences and Music - on Learning and Memory, and the 17<sup>th</sup> Biennial International Conference on 19<sup>th</sup> Century Music. Smaller events, including two International Conferences on Early Keyboard Music, the first of which led to an edited volume of essays published by Ashgate, and events initiated by research fellows and research students including the International Conference on Music Semiotics in Memory of Raymond Monelle, and a workshop on Bodies in Movement.