Skjemainformasjon

Skjema	SFU
Referanse	1006613
Innsendt	11.05.2013 20:47:01

Host

Information about host institution and center

Name of centre	ceMus -Centre of Excellence in Music Education
Host institution	University of Oslo
PO Box address	Department of Musicology PB 1017 Blindern
Postal code / City/place	0315 OSLO
Telephone	22854750
E-mail address	henvendelser@imv.uio.no

Contact person

Contact person

Name	Alexander Refsum Jensenius
Title	Head of Department
Telephone work / mobile	22844834 95129232
E-mail address	a.r.jensenius@imv.uio.no

About the centre

About the centre

Is the centre already established at the time of application	No

Describe briefly the plans for establishing the centre (maximum 1500 characters)

The CEE will be established at the Department of Musicology, University of Oslo in January 2014. The aim is to have an international kick-off seminar June 2014, and that the CEE will start its educational activities from the autumn semester 2014. The current Head of Department Alexander Refsum Jensenius will act as the CEE leader, and the current Head of Education Hans T. Zeiner-Henriksen will be the CEE deputy leader and leader of one of the work packages. A full-time administrative manager will assist in the day-to-day operation of the CEE. Four other leading researchers in the Department will serve as leaders for work packages in the CEE (Danielsen, Godøy, Kvalbein, Edwards). Additionally, several other researchers and teachers from the Department and from our partner institutions nationally and internationally will be involved in the different work packages. The recruitment of these members will be based on gathering excellent researchers that are also open for thinking outside the box, and with a strong interdisciplinary inclination. The CEE members will cover different musical genres ("popular", "experimental", "classical"), different methodological approaches (historical, cultural, cognitive), and have different practical expertise (analysis, ear training, composition, production, performance, etc.). One postdoctoral researcher and a number of invited guest researchers will be recruited to assist in the development and evaluation of the educational activities.

Describe briefly the aims and current as well as planned activities of the centre (maximum 1500 characters)

Most music education programmes in Norway and beyond are discipline-oriented, rarely research-based, and with a strong separation between theory and practice. The proposed CEE will break new grounds in both a national and an international context, proposing a radical reorganisation of the way music is taught. The music programme that the CEE shall develop is competency-oriented, strongly research-based, and with a tight connection between theory and practice. This will require the development of new teaching skills, course plans, and educational tools. The activities of the CEE will be carried out within five work packages: (1 Listen) the experiential and theoretical knowledge of musical sound. (2 Create) the practical and theoretical knowledge related to the creation and analysis of musical events organised in time. (3 Perform) the embodied and theoretical knowledge of performing and perceiving music. (4 In/Out) the interdisciplinary nature of music and its interaction with other disciplines. (5 Apps) the development of textbooks, educational software/apps, etc. Concepts will be tested in an experimental music programme within the frame of the CEE, and with the aim of expanding to partner institutions nationally and internationally. We envision a paradigm shift in music education, breaking down barriers between different musical genres and musicological disciplines, and with a focus on uniting thery and practice, science and the arts.

Application Document

Application Document

Upload application document	profile_ceMus_application.pdf

Timeline and budget

Timeline and budget

Upload planned timeline and the activities to be conducted	timeline_ceMus_timeline.pdf
Upload plan for financial resource acquisition	financial_ceMus_funding_plan.pdf
Upload budget	budget_ceMus_cost_plan.pdf

Attachments

Attachments

- CV_Danielsen.pdf
- CV_Zeiner_Henriksen.pdf
- CV_Jensenius.pdf
- budget_ceMus_cost_plan.pdf
- financial_ceMus_funding_plan.pdf
- timeline_ceMus_timeline.pdf
- profile_ceMus_application.pdf
- CV_Godoy.pdf

Comments

Comments to the application form (maximum 1500 characters)

UiO : Department of Musicology
University of Oslo

ceMus –Centre of Excellence in Music Education

Proposal for a CEE at the Department of Musicology, University of Oslo

1. Profile and vision

1.1. The centre's profile regarding educational and R&D activities

The proposed Centre of Excellence in Higher Education (CEE) will build on one of the most successful study programs in the Faculty of Humanities at University of Oslo, and the blossoming research activities at the Department of Musicology, including the fourMs research group that was a finalist to become a Norwegian Research Centre of Excellence in 2012. Based on these educational and research achievements, we envision the establishment of a CEE with the overall aim of:

- developing a new, integrated, interdisciplinary, and research-based model for music education, suitable for the needs of 21st century music teachers and professionals.

Most music education programmes in Norway and beyond are discipline-oriented, rarely research-based, and with a strong separation between theory and practice. The CEE will break new grounds in both a national and an international context, proposing a radical reorganisation of the way music is taught. The music education model that the CEE shall develop is competency-oriented, strongly research-based, and with a tight connection between theory and practice. This is an entirely new way of thinking about a music education program, and will require the development of new teaching skills, course plans, and educational tools and materials. The main contributions of the CEE shall be:

- a model for the **involvement** of students in the latest research results and methods from the first day of their studies. This challenges the current lack of research-based approaches in many music introduction courses. A research-based and research-involved approach will show students that our knowledge of music is continuously in change.
- a model for the **integration** of theoretical and practical skills. This challenges the current way of teaching theoretical and practical music skills in separate courses, and reflects the interdisciplinary environment that candidates face when they start to work.
- a model for the **inclusion** of different musical genres in all courses. This challenges current genre-specific approaches to teaching music ("classical" vs. "popular"), and reflects the wide variety of musical genres present in our modern society.

- a model for creating a **meeting point** between scientific and artistic knowledge. This challenges the idea of teaching music as either only an academic or only a performance-based subject. Creating such a meeting point between the sciences and the arts may help bridge the gaps between the "hard" and the "soft" also outside of the field of music.
- **Dissemination** of knowledge through new study plans, textbooks, audio and video based course material, and software/apps for music teaching and learning. Additionally, all researchers involved will use knowledge gained in the CEE in their on-going research, and publish results in relevant conferences and journals.

1.2. Core visions of the activities

The activities of the CEE will be organised around three musical core competencies, each of which will also be the main work packages (WP) of the project:

- **WP1 Listen**: the experiential and theoretical knowledge of musical sound. This includes practice-based topics formerly taught separately in the fields of classical notation-based ear training and sound-based ear training, as well as theoretical topics such as acoustics, psychoacoustics, sound analysis, sound aesthetics, and contextual and cultural perspectives on listening.
- **WP2 Create**: the practical and theoretical knowledge related to the creation and analysis of musical events organised in time. This includes practice-based topics formerly taught separately as courses in music composition and arranging, music recording and production, as well as theoretical topics related to the analysis of both notation-based and sound-based musics, and the historical and genre-related aspects of such musics.
- **WP3 Perform**: the embodied and theoretical knowledge of performing and perceiving music. This includes practical topics such as instrument performance, interpretation, and ensemble/band performance, as well as the theoretical studies of music performance, performativity, music cognition, and the historical and social perspectives on performance and perception.

The idea is that these core components, and related work packages, will be the foundation for the entire study programme. This means that the main musicological disciplines (historical, aesthetical, cultural and cognitive) will not be taught separately as they are usually done today, but rather as integrated parts of the three core competencies, such as sketched in Figure 1. This is a radical re-organisation of how music is taught in most institutions, with the specific aim of breaking down the divisions that often exist between different disciplines and musical genres.

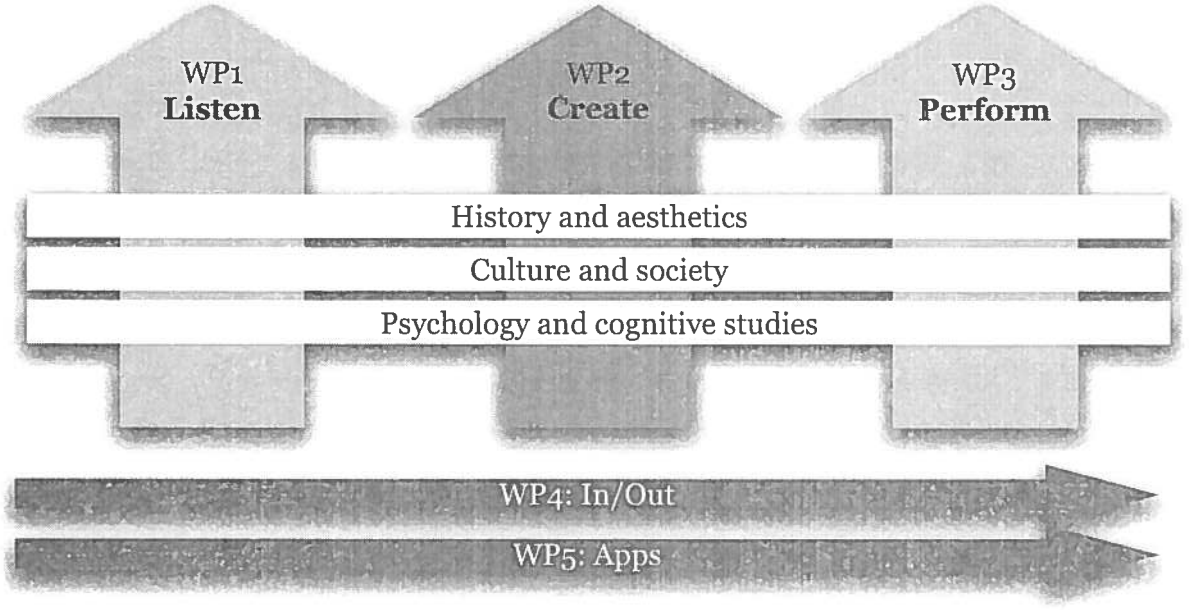


Figure 1. Illustration of how the work packages are related.

In addition to the three main work packages (WP1–3), we also plan two more work packages supporting the others:

- **WP4 In/Out**: This work package will focus specifically on securing the interdisciplinary foundation in the three main work packages, hence the "in/out" analogy taken from connectors in music studios. Here the idea is to include researchers from the different musicological traditions (historical, cultural, cognitive), as well as non-musicological researchers from relevant disciplines (e.g. literature, psychology, informatics) with an interest in musical topics. This will broaden the musicological perspectives, and will also be an interesting platform to see how ideas from our model can be "exported" and used in educational activities in other disciplines.
- **WP5 Apps**: The last work package will deal with the development and utilisation of technologies in music education. While there are numerous music-related computer software and mobile phone apps, little has been done to investigate how these can be used as pedagogical tools in music education at large. The aim is to explore existing technologies systematically, and also develop new software and teaching material (podcasts, screencasts, games, etc.) to be used in the other work packages.

1.3. Reasons why the academic community qualifies as a unit for sustaining a CEE

The CEE will be based at the Department of Musicology, and will therefore benefit from the excellent human and physical resources already available:

- The Department is the largest musicology department within the Nordic countries, with leading researchers in many of the musicological fields, including music history, popular music studies, music cognition, and music technology. Thus we have the necessary expert knowledge, as well as the width of competencies, needed to set up the CEE, and to develop the proposed new music education model.
- The Department hosts a number of externally funded research projects,[1] covering all the large musicological directions, and with extensive networks to other researchers and institutions. This means that research results can easily be integrated in the new educational programme, and students can be involved in the research activities from day one.
- The teachers and administrative staff at the Department already have experience with running one of the most popular and successful study programs at the Faculty of Humanities, with very high student satisfaction results (see Section 2.1 for details).
- The Department encourages formative learning by integrating theory and practice, and by reflecting the dynamic nature of musical research. In many ways, formative learning is implicit in musicology, given that the study of music is so closely related to developing long-term skills and proficiency in mastering an instrument, composing, producing, etc.
- In addition to the scientific research activities, the Department also has a rich history of artistic activities, including the weekly lunch concert series, and regular visits from world-class musicians, composers, and producers.
- The ZEB-building, at which the CEE will be located, has excellent physical resources, including state-of-the-art recording and mixing studios, motion capture and sound spatialization lab, some 30 rehearsal rooms, and solutions for recording and streaming sound and video in all labs and teaching rooms.

2. Quality in established educational activities

2.1. Result factors

Dropout rate. The dropout rate in the current musicology Bachelor's programme is low seen in relation to other programmes within the Humanities and Social Sciences at the University of Oslo. In a study from 2009,[2] the Department of Musicology had a dropout rate of 38%, which was second best of the programmes in the study, and the lowest of the ones from the Faculty of Humanities. The findings of the 2009 study are similar to those shown by statistics for students starting in 2007, 2008, and 2009.[3] As Table 1 shows, the Bachelor's programme in musicology consistently scores best within the Faculty of Hu-

[1] http://www.hf.uio.no/imv/english/research/projects/
[2] Hansen, Helge Sigurd: Studentfrafall ved Det humanistiske- og det samfunnsvitenskapelige fakultet, Universitetet i Oslo. Studieavdelingen, Universitetet i Oslo, 2010 http://www.uio.no/for-ansatte/arbeidsstotte/sta/undersokelser/studielop/pilot/frafall_061009.pdf
[3] https://www.uio.no/for-ansatte/arbeidsstotte/sta/fs/statistikk/bokkula/bokkula.php

manities on the indicators of completion and dropout rates. The scores are also better than the average for the University of Oslo as a whole.

Table 1. Results of students starting their BA programme in 2007–2009.

Year	Completion rate BA in musicology	Drop-out rate BA in musicology	Completion rate, all programmes, Faculty of Humanities	Drop-out rate, all programmes, Faculty of Humanities
2007	50%	47%	28%	70%
2008	57%	40%	27%	70%
2009	49%	39%	24%	66%

ECTS credits produced. According to the Norwegian Social Science Data Services (NSD) Database for Statistics on Higher Education (DBH), the number of ECTS credits per student produced, the department consistently places at or near the top within the Faculty of Humanities: Second best in 2010 and 2011, and at the top in 2012.[4]

Student satisfaction. In the University of Oslo's 2008 survey of students' general satisfaction with their education as well as their assessment of its job relevance,[5] the programmes offered by the Department achieved high scores in key areas. On what is described in the final report as "perhaps the single most central question in the entire survey",[6] where candidates have reported their general level of satisfaction with their education, musicology achieved the second highest score within the Faculty of Humanities.[7]

Career relevance. In another key question in the 2008 survey, the candidates rate their careers in relation to their own ambitions and expectations. Here, musicology achieved the best rating within the Faculty of Humanities,[8] due to the close link between the relevance of the study programme to the skills needed within today's music professional life.[9] The Department's former students take on a wide variety of jobs, not least as teachers at all levels (primary schools to universities), in media public management, in the cultural sector, in trade and professional organisations, and as performers and producers.

2.2. Process factors

There are numerous examples of excellent educational processes at the Department:

- A key factor for the high student satisfaction and completion rate is the focus on a good teacher-to-student ratio, particularly when learning practical skills. This, combined with

[4] http://dbh.nsd.uib.no/
[5] Kandidatundersøkelsen 2008, carried out by Rambøll Management AS. See the complete final report here: http://www.uio.no/studier/program/inf-design/dokumenter/Kandidatundersokelsen2008_sluttrapport.pdf
[6] Ibid., p. 95
[7] Ibid., p. 99 (table)
[8] Ibid., p. 95 (table)
[9] http://www.hf.uio.no/imv/english/studies/programmes/bachelor/

the focus on giving weekly assignments, ensures that the students are followed up closely throughout their studies.

- Many of the courses in the Department has turned from focusing on summative learning with an exam at the end of the semester, to formative learning based on the students' own projects. These term projects are small-scale research projects, often connected to one of the many on-going research projects in the Department.
- Evaluations are used throughout the studies to improve the quality, ranging from in-class mid-term evaluations, general course evaluations and full study program evaluations. The student council hosts a meeting on programme-related topics each semester.
- Students are actively engaged in performance activities through the weekly concert series, and through participation in the ensembles, including the award-winning choir Schola Cantorum, the medieval instrument group Schola Instrumentalis, Oslo Laptop Orchestra, and Oslo Mobile Orchestra. Many of the students also set up their own bands/groups/ensembles, and produce their own music recordings.
- First year students travel to Voss each spring for an intensive training programme in Norwegian folk music and dance. This is both an excellent way of learning about folk music and is also an important social aspect of the study.
- The musicology student council is active in organising various types of social activities, and put up a two-day festival during the opening week of 2012 (ZEB-ivalen).

It is also worth mentioning that several courses have been established over the last years based on on-going research activities in the Department, such as:

- *MUS2006 Music and Movement*: The Department has several internationally acclaimed researchers within the field of music of movement, and they have started an entry-level course in which students are presented for the latest research in the field, read research texts, and get hands-on experience with working in the motion capture lab.
- *MUS2830 Interactive Music*: This course is focused on teaching music technology from musical and performance-oriented perspectives. The students read human-computer interaction literature, and learn how to develop their own computer music applications. Finally, they perform with their applications in various contexts.
- *MUS4222 Sound Analysis*: Popular music studies is another strong field within the Department, and this course is a theoretical-practical course in which students learn about studio production and mixing processes. Well-known producers are invited to give master classes, and the students are introduced to the latest in sound and rhythm research.

2.3. Input factors

The following academic personnel will take on key positions in the CEE:

- Head of Department Alexander Refsum Jensenius will be the CEE leader. He is an internationally renowned researcher in the fields of music cognition and music technology, and has developed and taught several interdisciplinary courses in these fields.
- Associate Professor Hans T. Zeiner-Henriksen will be the CEE deputy leader and leader of WP2. He is the current Head of Education at the Department, and has developed and taught several research-based courses over the years, many of which have focused on including popular music perspectives, and the mix of practice and theory.
- Professor Anne Danielsen will lead WP1. She is a leading figure in the field of popular music studies, and has been instrumental in the development of popular music and sound based analysis courses in the Department.
- Postdoctoral researcher Astrid Kvalbein will lead WP3. She is a singer, music critic, educator, and music historian, and will be instrumental in developing an understanding how performance perspectives can influence history and analysis, and vice versa.
- Postdoctoral researcher Peter Edwards will lead WP4. He has a background in performance, composition, and music history, and will be a key person in bridging the gaps between "classical" and "popular" musics, as well as theoretical-practical perspectives.
- Professor Rolf Inge Godøy will lead WP5. He directs the fourMs lab, which was in the final round to become a Norwegian Research Centre of Excellence in 2012. He has focused much attention on bridging the gaps between traditional score-based music theory and sound-based and embodied approaches to music analysis.

Additionally, several other researchers and teachers from inside and outside the Department will be involved in the different work packages. The recruitment of these members will be based on gathering excellent researchers that are also open for thinking outside the box, and with a strong interdisciplinary inclination. The CEE members will cover different musical genres ("popular", "experimental", "classical"), different methodological approaches (historical, cultural, cognitive), and have different practical expertise (analysis, ear training, composition, production, performance, etc.).

All existing research facilities at the Department will be used in the educational activities, including recording and mixing studios, and the world-class motion capture lab. Additionally, a new audio/video infrastructure will be finalised by the end of 2013, and will provide multichannel audio and video streaming possibilities in all teaching rooms. This will open for exciting new multi-channel audio/video approaches to recording lectures (podcasting) and distance-based learning.

3. Potential for innovation and dissemination

3.1. Strategy regarding the centre's development and innovation

The CEE will focus on developing the new music education model in several steps (see attached timeline for details):

- Integration of core ideas in already existing courses at the Department in the autumn semester of 2014. This will be the first test bed to see how the ideas work in practice.
- Start a full new study programme with a subset of the Department's students (~20 out of 60 students per year) in 2015. It will here be important to carefully document and evaluate all parts of the programme, and use the results to adjust and revise study plans and the teaching material being developed.
- Test parts of the model at our partner institutions (see Section 5), followed by careful documentation and evaluation.
- If successful, the plan is to implement the model for all new music students in the Department by the end of the CEE period, and then work towards spreading the model widely in other higher education institutions nationally and internationally.
- If given the chance to continue the CEE for another 5-year period, we envision expanding the model for use in primary and secondary schools, and also focusing even more attention on the interdisciplinary possibilities within the field of music.

The most critical part of the CEE will be to ensure that the involved teachers work closely together while preparing the courses, that they teach together and observe each others' teaching, and that they reflect on their teaching and the educational outcomes in joint publications. This necessarily requires a substantial teacher overhead, and is one of the reasons why such an ambitions undertaking needs to be carried out within a CEE.

3.2. Knowledge transfer to other relevant institutions

Besides the planned testing of parts of our model at our partner institutions, we foresee three levels of knowledge transfer to other institutions:

- Knowledge transfer to other music programmes: Most of the music programmes in Norway are taught at university colleges with many different types of specialisations. We aim at developing new course material, textbooks, and multimedia content that can be applied widely in these different music programmes. Many of the teachers working at these institutions are educated in our Department, so we also foresee a slow knowledge transfer through our own graduates as they take up jobs at other institutions.

- Knowledge transfer to international musicology programmes: Here we will start by testing out parts of the model in the institutions of the members of our advisory board, and then move on to partners in the European Network of Systematic and Comparative Musicology. Larger international dissemination will be based on making available study plans, materials, tools, as well as research publications on our findings.
- Knowledge transfer to other study programmes: We believe that music can be exploited much more in other disciplines. One example is the central role of music in contemporary culture. Music is thus a very relevant starting point for teaching cultural studies. Another example is how music can be used in teaching subjects like physics and mathematics, in which students can learn about vibrations and wave propagation through sound, or listen to the effects of algebraic and geometric equations through music technological tools developed within the CEE. We will draw on the expertise of our board and advisory board to discuss how parts of our model can be used in such other fields.

3.3. Future educational innovation in the field

Even though we aim at creating a more integrated and interdisciplinary music education model than what is currently offered in most institutions, there will be need for even more such collaborative skills in the future. We therefore see the first 5-year CEE period only as the first step towards a radically new way of teaching, learning, and researching music.

3.4. Describe plans for the national dissemination of knowledge

National dissemination of knowledge will be done through a number of channels, including textbooks, multimedia content, software/apps. The most important asset will most likely be our alumni, as they start to fill up relevant positions around the country.

4. Organisational plan

4.1. Describe how the centre will be governed and managed

The centre leader and a full-time administrative manager will be in charge of the day-to-day operation of the CEE, and the five WP leaders will be in charge of developing and running the education and research activities. The CEE board will oversee the activities, budgets, and strategic choices, and will have an interdisciplinary composition:

- Prof. Gro Bjørnerud Mo, Research Dean at the Faculty of Humanities, University of Oslo
- Prof. em. Arvid Vollsnes, Department of Musicology, University of Oslo
- Student Ingrid Liland. Department of Musicology, University of Oslo
- Prof. Bruno Laeng, Department of Psychology, University of Oslo

- Prof. Jim Tørresen, Department of Informatics, University of Oslo

An international advisory board will meet annually to be updated on the latest activities and suggest improvements. They will also help in testing out parts of the model at their own institutions:

- Ass. Prof. Rebecca Fiebrink, Princeton University
- Prof. Marc Leman, University of Ghent
- Prof. Jukka Louhivuori, University of Jyväskylä
- Prof. Ingrid Monson, Harvard University
- Prof. Simon Zagorski-Thomas, London College of Music
- Prof. Nicola Dibben, University of Sheffield

Describe added value of the CEE

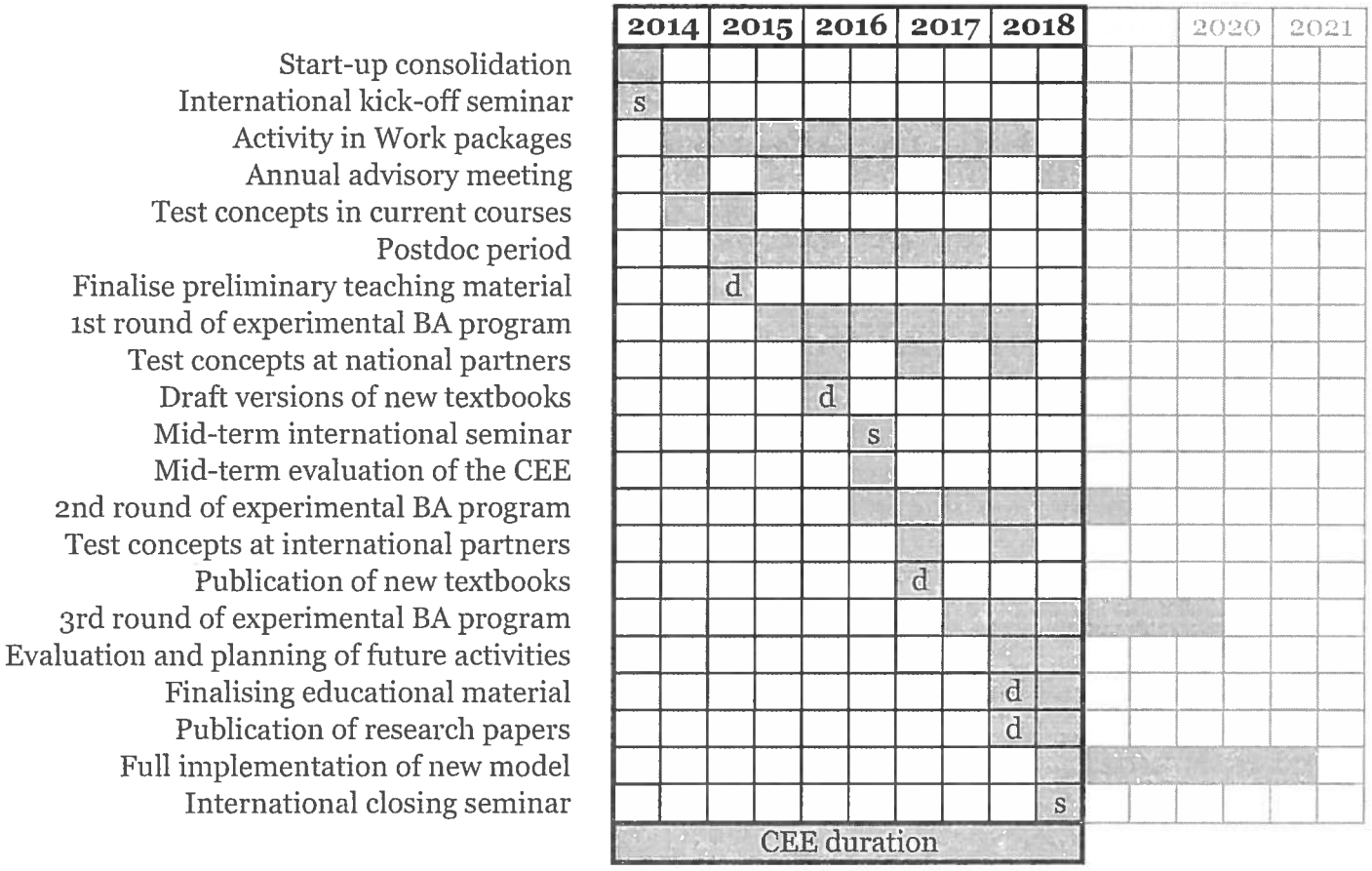
The scope of the proposal and the complexity involved in developing the music education programme that we envision, is only possible to achieve through becoming a CEE. The CEE status will give us the support needed to start such an ambitious undertaking, and the financial capacity to make it succeed.

5. Collaborative partners

In addition to the collaboration with the institutions of our board and international advisory board (see above), we will also draw on some of our Norwegian partner institutions:

- The *Norwegian Academy of Music*. The Department is currently establishing a strong collaboration with the Academy, which will open for sharing teaching resources between the two institutions. For the CEE activities this will be particularly relevant in the fields of classical ear training (WP1), composition (WP2), and instrument performance (WP3).
- The *Norwegian University of Science and Technology* (NTNU) is the leading institution in Norway for jazz studies and performance-based music technology, and will be an important partner when it comes to developing music technology tools and exploring various types of video-based and distance-based teaching in WP5.
- *Popsenteret* is the popular music museum in Oslo, and will be an important partner in disseminating knowledge to a general and large audience. The Department already has several installations running at the museum.
- *NOTAM* – The Norwegian Centre for Technology in Music and the Arts will assist in developing software/apps in WP5.

Timeline CEE MUS:21



s = international open seminars
d = deliverables

Funding plan	2014	2015	2016	2017	2018	Project period
University of Oslo	-1 178	-2 185	-2 333	-2 486	-1 648	-9 830
NOKUT	-3 000	-3 000	-3 000	-3 000	-3 000	-15 000
Totals	**-4 178**	**-5 185**	**-5 333**	**-5 486**	**-4 648**	**-24 830**

Comments

- All figures in NOK 1000,-.
- The University of Oslo contributes with a yearly lump sum of NOK 600 000 in addition to resources from the Department of Musicology.

Cost plan

	2014	2015	2016	2017	2018	Project period
Payroll and indirect expenses 1)	3 167	4 175	4 312	4 455	3 606	19 716
From this:						
Project employees	*580*	*1 287*	*1 330*	*1 374*	*661*	*5 232*
Internally funded teaching	*846*	*874*	*903*	*933*	*964*	*4 520*
Externally funded teaching	*1 033*	*1 067*	*1 102*	*1 138*	*1 176*	*5 515*
Procurement of R&D services	505	505	510	516	521	2 557
Equipment	0	0	0	0	0	0
Other operating expenses	505	505	510	516	521	2 557
Totals	**4 178**	**5 185**	**5 333**	**5 486**	**4 648**	**24 830**
1) from this: indirect costs	708	947	978	1 010	806	4 449

Comments

- All figures in NOK 1000,-.

Work effort (man-years)

	2014	2015	2016	2017	2018	Work years
Project leader	0,2	0,2	0,2	0,2	0,2	1
Administrative assistance	1	1	1	1	1	5
Work package leaders (5 leaders at 20%)	1	1	1	1	1	5
Postdoctoral fellow		1	1	1		3
Other teaching resources	1,2	1,2	1,2	1,2	1,2	6
Totals	**3,4**	**4,4**	**4,4**	**4,4**	**3,4**	**20**

Alexander Refsum Jensenius, CV

B.A., M.A., M.Sc., Ph.D.

Address: Dept. Musicology, PB 1017 Blindern, NO-0315 Oslo
Mobile: +47 95 12 92 32
E-mail: a.r.jensenius@imv.uio.no
Web: www.arj.no

Born: 10 November 1978 – Oslo, Norway

Current positions
- 2013–: Head of Department, Department of Musicology, University of Oslo
- 2000–present: Freelance musician, Print/web designer and Music/multimedia consultant

Education
- Ph.D. musicology, University of Oslo, 2004–2008. One year as visiting researcher in the Music Technology group at McGill University
- M.Sc. applied information technology, Chalmers University of Technology, Sweden, 2003–2005
- Cand.philol. (M.A.) musicology, University of Oslo, 2001–2002. One year as exchange student at CNMAT, University of California, Berkeley
- Cand.mag. (B.A.) music and mathematics, University of Oslo, 1997–2001

Employment history
- Norwegian Academy of Music: Senior research fellow (20%) (2008–2011)
- Dept. Musicology, University of Oslo: Senior research fellow (2007–2013), Research fellow (2004–2007), Lecturer (2003–2006), Research assistant (2002–2004)

Early scientific contributions
- Several novel studies of peoples' spontaneous movements to musical sound, including air piano/guitar, sound tracing, and free dance to music.
- Theoretical clarifications of the concepts of movement, action and gesture in music, including classification of different types of music-related body movements .
- A framework for streaming and storing movement, action, and gesture data through the Gesture Description Interchange Format (GDIF).Ideas from this work have influenced several other standardisation efforts — for example, Performance Markup Language (PML).
- Novel movement analysis and visualisation techniques: motiongrams, videograms, motion history keyframe displays, and mocapgrams.These techniques have been adopted by a number of researchers and programming environments (Max, Matlab, EyesWeb).
- The development of computer programs for sound and movement analysis, contribution to the Jamoma framework, as well as tools for mapping from gestural controllers to sound synthesisers.
- The development of several new instruments for musical expression, including Cheapstick, Music Troll, Music Balls.
- Presentations at all the major music technology and cognition conferences, as well as invited guest lectures at a number of universities: Oxford (2012), Hamburg (2012), Aldeburgh (2012), IRCAM (2010), Queen's Belfast (2009), Jyväskylä (2009), Aalborg (2009), Gent (2008–9), Genova (2008), KTH (2007–9), NTNU (2006–12), Oslo School of Architecture (2006–10), Helsinki (2006), McGill (2005), Copenhagen (2005), Gothenburg (2004).

Research management experience and achievements

- General chair and research chair of the 11th International Conference on New Interfaces for Musical Expression in Oslo 2011 (380 participants). The conference was considered highly successful, and I was subsequently elected as head of the international steering committee for the conference.
- Since 2003 I have been one of the main contributors to the establishment of music cognition and music technology as research and teaching disciplines in Norway. In 2005 I founded *Musikkteknologidagene* (annual Norwegian conference for music technology researchers); in 2011 I established *Nettverk for tverrfaglige bevegelsesstudier* (Norwegian network for movement studies).
- Co-initiator of the fourMs group (Music, Mind, Motion, Machines) at the University of Oslo. Since 2008 we have built up a thriving group composed of researchers from musicology and informatics, with close connections to researchers in psychology, neurology, physiotherapy, and the performing arts. In spring 2011 we moved into new spaces and have set up three labs with state-of-the-art motion capture and sound equipment.
- Researcher in several Norwegian (*Musical Gestures*, *Sensing Music-related Actions*, *New Instruments for Musical Expression*), Nordic (*Structured Understanding of Music*, *Integration of Music Informatics, Performance and Aesthetics*) and European (Cost Action 287 *Gesture Controlled Audio Systems*, Cost Action IC0601 *Sonic Interaction Design*) projects.
- During my studies, I gained extensive leadership experience as president of the Norwegian Association of Young Scientists, board member of the Norwegian Foundation for Youth and Science, and organiser of the annual Norwegian Contest for Young Scientists (1998–2001) and European Space Camp Andøya (1998–2003).
- Co-organiser of the 2001 EU contest for young scientists, gathering more than 200 people for a full week of activities in Bergen, Norway. In addition to the contest participants, their national escorts and the jury, we organised a panel discussion with five Nobel prize laureates, and Crown Prince Haakon of Norway awarded the prizes.

Teaching, supervision

- Since 2003 I have taught undergraduate and graduate courses in sound theory, music theory, composition, music psychology/cognition, and interactive music technology.
- I have supervised seven and co-supervised six master's student projects, and have co-supervised two Ph.D. students.

Scientific Community Service

- Chair of the steering committee of the International Conference on New Interfaces for Musical Expression (from 2011).
- Reviewer for journals: *Leonardo*, *Computer Music Journal*, *Musicae Scientiae*, *Music and Practice*, *IEEE Transactions on Multimedia Computing Communications and Applications*, *Popular Musicology Online*, *Studia Musicologica Norvegica*.
- Reviewer for conferences: *International Conference on New Interfaces for Musical Expression*, *International Computer Music Conference*, *Sound and Music computing*, *ICST Conference on Arts and Technology*.
- Reviewer of applications for the European Commission (rapporteur 2011), Arts Council Norway, Swedish Research Council, Icelandic Research Council, Norwegian Academy of Music.
- Extensive experience as board member in a number of organisations.

Publicity, press, outreach

- I have given more than 120 lectures at leading institutions and conferences, more than 50 popular lectures, and I have had more than 80 national media appearances (TV, radio, newspapers).

Development of Software and Hardware

- Computer program for the analysis of sound and movement: AudioAnalysis, AudioVideoAnalysis, AudioVideoRecorder, VideoAnalysis.
- Computer programs for music/multimedia performance: AudioVideoSynthesis, MultiControl.
- Contributions to software frameworks: Jamoma (embedding my Musical Gestures Toolbox).

Artistic activities

- I am actively involved in artistic research and development, whereby I use knowledge from my scientific work when developing/composing new pieces and art installations. I see these artistic activities also as a means of acquiring new knowledge for my scientific research.
- I have performed more than 100 concerts, playing solo piano (classical, jazz, experimental), in jazz combos, and with electronics (solo, laptop orchestra, iPhone ensemble). I have composed/developed two large-scale multimedia performances: *Vesper 2000* (2000) and *Interaktiv messe* (2004), and have been involved in ten art installations and theatre productions in the Scandinavian countries.

Funding ID

- 2011–2012: Sverm artistic research project, Norwegian Arts Council (€ 50 000)
- 2011: New lab spaces at Depts. of Musicology and Informatics (€ NaN)
- 2010: NIME 2011 conference funding, Norwegian Research Council (€ 40 000)
- 2009–2010: Motion capture and sound equipment, Norwegian Research Council (€ 300 000)
- 2009: Short-Term Scientific Mission, COST IC0601 Action Sonic Interaction Design (€ 2 000)
- 2008–2012: Postdoctoral research fellowship, Norwegian Research Council (€ 300 000)
- 2007: Short-Term Scientific Mission, COST 287 Gesture Controlled Audio Systems (€ 2 000)
- 2006: Visiting researcher to McGill University, Norwegian Research Council (€ 15 000)
- 2004–2008: Ph.D. research fellowship, Norwegian Research Council (€ 250 000)
- 2001 and 2002: UC Berkeley Exchange Scholarship (€ 20 000)

Prizes and distinctions

- 2012: Best paper award, 5th Int. Conf. on Advances in Computer-Human Interactions, Valencia
- 2006: Presentation during celebration of the Norwegian Research Council in Oslo Concert Hall
- 2004: Norwegian delegate to the 16th Ship for World Youth Program, Government of Japan
- 1998: Invited to the Stockholm International Youth Science Seminar (Nobel Prize week)
- 1997: Special prize in the EURISY Space Technology Competition, Toulouse
- 1997: Invited exhibitor in the Swedish Contest for Young Scientists
- 1997: Second prize in physics and best poster award in the Norwegian Contest for Young Scientists
- 1996: Finalist in the International IB Debate Competition, Copenhagen
- 1995: Norwegian delegate to the European Youth Centre, Council of Europe, Strasbourg

Publication summary
- Published: 1 book, 1 conference proceedings (editor), 6 book chapters, 8 journal papers, 54 papers in peer-reviewed proceedings.
- Forthcoming: 1 book, 3 journal papers.
- Total number of citations: 504.
- h-index: 12.

Books 1 published, 1 forthcoming.
- Jensenius, A. R., T. Halmrast, and R. I. Godoy (forthcoming). *Musikk og lyd.* Oslo: Unipub.
- Jensenius, A. R. (2009). *Musikk og bevegelse.* Oslo: Unipub.

Proceedings 1 published.
- Jensenius, A. R., A. Tveit, R. I. Godoy, and D. Overholt (eds.) (2011). *Proceedings of the International Conference on New Interfaces for Musical Expression.* Oslo, Norway.

Dissertations 1 published, 2 unpublished.
- Jensenius, A. R. (2008). *Action–Sound: Developing Methods and Tools to Study Music-Related Body Movement.* Ph.D. thesis, University of Oslo. Oslo: Acta Humaniora. (Citations: 76)

Book chapters 6 published (4 as first-author).
- Jensenius, A. R. (2012). Structuring music-related movements. In J. Steyn (ed.), *Structuring Music through Markup Language: Designs and Architectures*, pp. 135-155. Hershey, PA: IGI.
- Jensenius, A. R. and K.A.V. Bjerkestrand (2012). Exploring micromovements with motion capture and sonification. In Brooks, A.L. (ed.), *Arts and Technology, Second International Conference, Revised Selected Papers*, LNICST 101, pp. 100–107. Berlin: Springer.
- Nymoen, K., R. I. Godoy, J. Torresen, and A. R. Jensenius (2012). A statistical approach to analyzing sound tracings. In S. Ystad, M. Aramaki, R. Kronland-Martinet, K. Jensen, and S. Mohanty (eds.), *Speech, Sound and Music Processing: Embracing Research in India*, LNICST 7172, pp. 120–145. Berlin: Springer.
- Jensenius, A. R., M. M. Wanderley, R. I. Godoy and M. Leman (2010). Concepts and methods in research on music-related gestures. In Godoy, R. I. and M. Leman (eds.), *Musical Gestures: Sound, Movement, and Meaning.* pp. 12–35. New York: Routledge. (Citations: 29)
- Godoy, R. I., E. Haga, and A. R. Jensenius (2006). Playing 'air instruments': Mimicry of sound-producing gestures by novices and experts. In S. Gibet, N. Courty, and J.-F. Kamp (eds.), *Gesture in Human-Computer Interaction and Simulation, 6th International Gesture Workshop*, LNAI 3881, pp. 256–267. Berlin: Springer. (Citations: 57)
- Jensenius, A. R., R. Koehly, and M. M. Wanderley (2006). Building low-cost music controllers. In R. Kronland-Martinet, T. Voinier, and S. Ystad (eds.), *CMMR 2005*, LNCS 3902, pp. 123–129. Berlin: Springer. (Citations: 13)

Papers in journals 8 published, 3 forthcoming (5 as first-author).
- Jensenius, A. R. (forthcoming). Sonifying the shape of human body motion using motiongrams. *Empirical Musicology Review.*
- Jensenius, A. R. (forthcoming). An Action–Sound Approach to Teaching Interactive Music. *Organised Sound.*
- Nymoen, K., R. I. Godøy, A. R. Jensenius, and J. Tørresen (forthcoming). Analysing correspondences of sound objects and body motion. ACM Transactions on Applied Perception.
- Jensenius, A. R. (2013). Some video abstraction techniques for displaying body movement in analysis and performance. *Leonardo*, 46(1):53–60.

- Adde, L., Helbostad, J., Jensenius, A. R., Langaas, M., and Støen, R. (2013). Identifi- cation of fidgety movements and prediction of CP by the use of computer-based video analysis is more accurate when based on two video recordings. *Physiotherapy theory and practice*, pp. 1–7.
- Jensenius, A. R., Bjerkestrand, K. A. V., and Johnson, V. (2013). How still is still? Exploring standstill for artistic applications. *International Journal of Arts and Technology*, 6(1).
- Jensenius, A. R. and V. Johnson (2012). Performing the electric violin in a sonic space. *Computer Music Journal*, 36(4):28–39.
- deQuay, Y., Skogstad, S. A. v.D., and Jensenius, A. R. (2011). Dance jockey: Performing electronic music by dancing. *Leonardo Music Journal*, 21:11–12.
- Godoy, R. I., Jensenius, A. R., and Nymoen, K. (2010). Chunking in music by coarticulation. *Acta Acoustica united with Acoustica*, 96(4):690–700. (Citations: 10)
- Adde, L., Helbostad, J., Jensenius, A. R., Taraldsen, G., Grunewaldt, K., and Støen, R. (2010). Early prediction of cerebral palsy by computer-based video analysis of general movements: a feasibility study. *Developmental Medicine & Child Neurology*, 52(8):773–778. (Citations: 2)
- Adde, L., Helbostad, J., Jensenius, A.R., and Støen, R. (2009). Using computer-based video analysis in the study of fidgety movements. *Early Human Development*, 85(9):541–547. (Citations: 8)

Papers in peer-reviewed proceedings (selected) 54 published (20 as first author).

- Jensenius, A. R. (2012). Motion-sound interaction using sonification based on motiongrams. In *Proceedings of the Fifth International Conference on Advances in Computer-Human Interactions*, Valencia, Spain. pp. 170–175. (Best paper award)
- Jensenius, A. R., K. Nymoen, S. A. Skogstad, and A. Voldsund (2012). A study of the noise-level in two infrared marker-based motion capture systems. In *Proceedings of the Sound and Music Computing Conference*, Copenhagen. pp. 258–263.
- Jensenius, A. R. (2012). Evaluating how different video features influence the visual quality of resultant motiongrams. In Proceedings of the 9th Sound and Music Computing Conference, pp. 467–472, Copenhagen, 2012.
- Jensenius, A. R., K. T. Innervik, and I. Frounberg (2010). Evaluating the subjective effects of microphone placement on glass instruments. In *Proceedings of NIME 2010*, Sydney. pp. 208–211.
- Jensenius, A. R. (2008). Some challenges related to music and movement in mobile music technology. In *Proceedings of the International Mobile Music Workshop*, Vienna. pp. 19–22. (Citations: 7)
- Jensenius, A. R., K. Nymoen and R. I. Godoy (2008): A multilayered GDIF-based setup for studying coarticulation in the movements of musicians. In *Proceedings of the International Computer Music Conference*, Belfast. pp. 743–746. (Citations: 12)
- Jensenius, A. R., A. Camurri, N. Castagne, E. Maestre, J. Malloch, D. McGilvray, D. Schwarz and M. Wright (2007). Panel: the need of formats for streaming and storing music-related movement and gesture data. In *Proceedings of the International Computer Music Conference*, Copenhagen. pp. 13–16. (Citations: 10)
- Jensenius, A. R. (2006). Using motiongrams in the study of musical gestures. In *Proceedings of the International Computer Music Conference*, New Orleans. pp. 499–502. (Citations: 13)
- Jensenius, A. R., T. Kvifte, and R. I. Godoy (2006). Towards a gesture description interchange format. In *Proceedings of New Interfaces for Musical Expression*, Paris: IRCAM. pp. 176–179. (Citations: 34)
- Jensenius, A. R., R. I. Godoy, and M. M. Wanderley (2005). Developing tools for studying musical gestures within the Max/MSP/Jitter environment. In *Proceedings of the International Computer Music Conference*, Barcelona. pp. 282–285. (Citations: 20)

CV

Hans T. Zeiner-Henriksen

Home address:
Damplassen 11
0852 Oslo
Tel.: +47 22608008
e-mail: h.t.zeiner-henriksen@imv.uio.no
Date of Birth: 26. Jan. 1963

Work address:
Department of Musicology
Box 1017, Blindern
0315 Oslo
Tel.: +47 22854857
Nationality: Norwegian

Selected Publications:
**The 'PoumTchak' Pattern: Correspondences Between Rhythm, Sound, and Movement in Electronic Dance Music*, PhD-thesis, University of Oslo, 2010.
*Moved by the Groove: Bass Drum Sounds and Body Movements in Electronic Dance Music. In Danielsen (ed.) *Musical Rhythm in the Age of Digital Reproduction*, Ashgate, 2010.
*1980- og 1990-tallets pop og rock. In Hovland (ed.) *Vestens musikkhistorie*, Cappelen Damm Akademisk, 2011.
*Röyksopp: Melody A.M. Falck forlag, 2012.

Higher Education:
2005-2010: **PhD** at the University of Oslo
2003-2005: **University teaching course** at the University of Oslo
1990-1994 Cand. Philol. ***Musikk hovedfag*** at the University of Oslo
1986-1989 Cand. Mag. ***Musikk Storfag and Engelsk Mellomfag*** at the University of Oslo.

Work Experience:
2012-2013 Research position in the project Music, Motion and Emotion at the University of Oslo.
2010-> Associate professor at the Department of Musicology, University of Oslo.
2009-> ½ year scholarship (teaching/research) after finishing Ph.D. thesis.
2005-2008: **Ph.D.-student**. 3 years scholarship within the project "Rhythm in the Age of Digital Reproduction". Contributed with paper presentations at 10 international conferences/workshops during this period.
2002->: Permanent position 70% as **university lecturer** at the Department of Musicology, University of Oslo. From Aug. 2004: 100%.
1993-2002: Part time teaching position at the Institute for Music and Theatre, University of Oslo.

Other:
2009-> Board member of IASPM Norden (Nordic branch of the International Association for the Study of Popular Music).

Section b: Curriculum vitae (max 2 pages)
Name: Anne Danielsen, born 21 February 1963 in Oslo, married, three children.

Current position
Professor of popular music studies, Department of Musicology, University of Oslo (UiO)

Educational and professional history

Oct 09–Dec11	Head of Research, Dept. of Musicology, (UiO)
Aug 11–	Project leader and researcher, "Clouds and Concerts – Mediation and Mobility in Contemporary Music Culture," funded by the Research Council of Norway (RCN)
Jun 05–Sep 09	Project leader and researcher, "Rhythm in the Age of Digital Reproduction," OYI (Outstanding Young Investigator) project funded by the RCN
Jun 01–Jun 05	Post-Doctoral Research fellow, Dept. of Musicology, UiO, funded by the RCN
Spring 2001	Part time lecturer, IMV, UiO
Autumn 2000	Research fellow on "New Connections between Art and Business," funded by the RCN
2001	Dr.art (PhD) in Musicology, UiO. Sept. 27, 2001, Title of dissertation: *Presence and Pleasure. A study of the funk grooves of James Brown and Parliament*, supervisor Prof. Ståle Wikshåland.
2001–2004	Music critic and writer for the Norwegian weekly 'Morgenbladet'
1997	Visiting Researcher University of California, Los Angeles, Dept. of Musicology
1995–2000	RCN-PhD Research Fellow in Musicology, UiO
1994–1995	Reporter at the Norwegian Broadcasting Company, Music Section
1993	Cand. philol. (MA) in Musicology, UiO
1982–1991	Professional singer and band leader

Summary publications: 31 scientific works (2 books, 2 edited volumes, 8 [incl. 2 under review] articles in international peer reviewed journals, 15 book chapters in edited volumes [incl. 2 commissioned chapters], 4 papers in conf. proceedings), approx. 30 popular articles and reviews.

Summary supervision: 3 PhD students (1 completed, 2 currently under supervision), 20 MA students (15 completed, 5 currently under supervision).

Summary keynotes, invited papers and guest lectures: 7 keynotes, 32 invited papers and guest lectures at national and international research seminars and institutions (cf. also Early Achievements Track Record).

Past achievements: My first significant contribution to the study of microrhythm came with the monograph *Presence and Pleasure: the funk grooves of James Brown and Parliament*, which was published by Wesleyan University Press in 2006 as part of Music/Culture, a leading series for the publication of research into African-American music at the time. It was the first musical-analytical study of funk music, and its interdisciplinary and highly unconventional approach combined perspectives from ethnomusicology, music theory, philosophy, and history. Its main theoretical achievements concerned the relationship between rhythmic structure and microtiming in groove-based music, and specifically the ways in which performative aspects such as microtiming might be thought of as structural aspects of the groove, an insight that clearly went beyond the prevailing view of musical structure as basically equivalent to the notated score. Another innovative aspect of the study involved its philosophical reflections regarding the experience of the "now" of repetitive groove-based music, which were informed by post-Heideggerian hermeneutics. The monograph received the very prestigious Lowens Book Award from the Society for American Music, and an Award for Excellence from the Assoc. for Recorded Sound Collections (ARSC).

In 2004, I was awarded Outstanding Young Investigator by the Research Council of Norway (RCN) and granted funding for a five-year research project focused on the in-depth exploration of rhythm in groove-based music created with contemporary digital music technology. Through close readings of technology-driven popular music genres, we contested and revised prevailing theories of musical rhythm, which had been until then mostly derived from the study of Western art music notation. The project's main achievement was an entirely new understanding of pulse: in contrast to the traditional notion of pulse as an isochronous series of points in time, we came to describe *pulse* as a series of "beat bins" that might vary in size and shape (Danielsen 2010). This transformative insight pointed in turn towards the present project, because properties of sound are decisive for the perceived shape and size of the beat. Interest in these findings from scholars doing work on rhythm in music within the fields of music perception/cognition and neuroscience, respectively, led to an involvement in the experimental studies that are reported in work nos. 2 and 3 below, which have been important for the development of the present project proposal.

The current project will give me the opportunity to establish an interdisciplinary research group in Oslo that can pursue these findings, and the hypotheses that have emerged from them, in carefully designed

experiments. Previously, a lack of PhD students and postdocs has slowed the progress of this research. Establishing my own group at my own institution will make it easier to collaborate closely across disciplines and maintain a clearly defined common research focus. It will also allow me to recruit talented PhD students and postdocs who are dedicated to this particular project and have the necessary qualifications. The findings and innovative perspectives that were developed through my and my collaborators' previous research into rhythm represent an excellent point of departure for developing a group that can compete at the highest international level. This group also provides a new context for the insights into and knowledge of rhythm in music acquired during many years of work with music analysis and aesthetic interpretation based in the humanities, encouraging a dialogue among very different research traditions that I believe will prove very productive.

Editorial boards: Music Theory Spectrum, Popular Music, Danish Musicology Online, Studia Musicologica Norvegica

Ad hoc referee work: Ashgate, Art of Record Production Conferences and Proceedings, ARR, Idehistorisk tidsskrift, Indiana University Press, Media History, Nordic Journal of Music Therapy, Nordisk medietidsskrift, Oxford University Press, Popular Musicology, TransCulture

Organizing responsibilities:

- Member of the executive board of ASARP (Assoc. for the Study of Record Production), chair and research chair of the 9th Int. ARP Conference in Oslo 2014 (100 participants).
- Three international research seminar/workshops for the project "Rhythm in the Age of Digital Reproduction" at the University of Oslo in 2005, 2006, and 2007
- Member of the organizational committee of the Norwegian Association for Music Scholars' seminar *Writing Norwegian Music History*, Oslo, Oct. 20–21, 2000
- Member of the organizational committee for the Skagerrak-network's workshop for Nordic PhD students in musicology, Oslo, Nov. 1997

Funding ID:

- 2011–2014: Four-year major research grant for the project "Clouds and Concerts: Mediation and Mobility in Contemporary Music Culture" by the RCN (NOK 11 mill.).
- 2004–2009: Five-year major research grant as Outstanding Young Investigator by the RCN for the project "Rhythm in the Age of Digital Reproduction." The local research group of the project comprised nine people from the postgraduate to the senior level. The project organized three international research workshops (NOK 6 mill.).
- 2001–4: Three-year research grant for the post-doc project "Kunstverket i den digitale reproduksjonens tidsalder" (The Work of Art in the Age of Digital Reproduction) by the RCN (NOK 2,4 mill.).
- 1997: Overseas research grant, RCN (visiting scholar at UCLA) (NOK 80000).
- 1996–1999: Three-year PhD scholarship in musicology from the RCN (NOK 2,1 mill.).

Research collaborations and networks (selection):

2012– *Performing in the Studio*, HERA-funded research collaboration involving leading scholars within the ARP network, led by Dr. Simon Zagorski-Thomas, West London University.

2005– Research collaboration on the impact of digital technology on the production, distribution and reception of music, with Dr. Arnt Maasø, Dept. of Media and Communication, UiO. Joint publication: see work no 7 below. On-going research funded by the RCN, see Funding ID (*Clouds and Concerts).*

2008– Research collaboration on fMRI study of transitions in music, with Prof. Steven Williams, King's College, London, Dr. Mona Kolstø Otnæss and Dr. Bjørn Chr. Østberg, both Oslo University Hospital. Joint publication: see work no. 2 below.

2007– Research collaboration on the interaction of sound and timing in drum kit performance, with Prof. Carl-H. Waadeland, Norwegian University for Science and technology. Joint publication: see work no. 3 below.

2005–9 Member of the interdisciplinary network for Nordic hip-hop research. Joint publication: *Hip-hop I Skandinavien*. Ed. M Krogh and B. Stougaard, Aarhus University Press.

2005– Member of the International Association for Popular Music Research (IASPM), Norwegian representative in the Nordic Branch, 2005–2009.

1997–01 Participant in the interdisciplinary research network *Cultural Disorder: Processes of Change in the Aesthetic Field*, funded by the RCN, Program for Cultural Research.

1997 Visiting scholar at UCLA, supervision by Rob Walser and Susan McClary on my PhD dissertation.

1996–9 Member of the Skagerrak network of Nordic PhD students in Musicology.

Rolf Inge Godøy, CV and selected relevant publications

CV:

- Born July 26, 1952.
- BA (cand.mag.) with musicology, philosophy, and history of ideas from the University of Oslo, 1973.
- Diploma in music theory from the Norwegian State Academy of Music, 1975.
- Diploma in composition from the Norwegian State Academy of Music, 1977.
- Mostly freelance composer 1978 - 1989 with several commissioned works and a state artist grant 1981 -1987. See the web-pages of the Norwegian Music Information Centre for more information on compositional activities, http://www.mic.no/
- Research fellow, the Research Council of Norway, 1990 - 1994.
- Doctorate in musicology 1994.
- Associate professor, Section for Musicology, University of Oslo, 1994-1999.
- Professor, Section for Musicology, University of Oslo from 1999.
- Extensive teaching and supervision experience, past and present doctoral thesis supervision within areas of music theory and music cognition for Odd T. Furnes, Alexander Refusm Jenenius, Egil Haga, Svein Erik Tandberg, Andreas Bergsland, Stein Helge Solstad, Risto Holopainen, Mari Romarheim Haugen, and co-supervision for Kristian Nymoen, Ståle Skogstad and Marius Kuzack.
- Head of department, Department of Music and Theatre 2000-2003.
- Project director for the *Musical Gestures Project* (http://musicalgestures.uio.no), funded by the Research Council of Norway 2004-2007.
- Project director for the *Sensing Music-Related Actions Project*, funded by the Research Council of Norway 2008-2012 (http://www.hf.uio.no/imv/english/research/projects/musicalactions/index.html).
- Member of the Board of Directors of the International Society for Systematic and Comparative Musicology from 2001 to present, participating in network building and in organizing conferences and summer schools in systematic musicology.
- Member of the Management Committee of the European Union COST Action 287 *ConGAS, Gesture Controlled Audio Systems*, 2003-2007, and member of the Management Committee of the European Union COST Action IC0601: *SID, Sonic Interaction Design*, 2007-2011.
- Extensive experience as reviewer for international conferences, for international scientific publications, and for various foreign research funding institutions.
- Main area of research is phenomenological and cognitive approaches to music theory, including theories of human movement in music.

Selected relevant publications concerning the fourMs research areas:

Godøy, R. I. (2013). Quantal Elements in Musical Experience. In. R Bader (ed.), *Sound – Perception – Performance. Current Research in Systematic Musicology, Vol. 1.* Berlin, Heidelberg: Springer, 113-128.

Nymoen, K., Tørresen, J., Godøy, R. I., & Jensenius, A. R. (2012). A Statistical Approach to Analyzing Sound Tracings. In S. Ystad, M. Aramaki, R. Kronland-Martinet, K. Jensen, & S. Mohanty (eds.), *Speech, Sound and Music Processing: Embracing Research in India*. LNCS 7172. Berlin, Heidelberg: Springer, 120-145.

Godøy, R. I. (2011). Sound-action chunks in music. In J. Solis and K. Ng (eds.), *Musical Robots and Interactive Multimodal Systems*. Berlin, Heidelberg: Springer-Verlag, 13-26.

Godøy, R. I. (2011). Sound-action awareness in music. In D. Clarke and E. Clarke (eds.) *Music and Consciousness*. Oxford: Oxford University Press, 231-243.

Godøy, R. I. (2011). Coarticulated gestural-sonorous objects in music. In Gritten, A. and King, E. (eds.) *New Perspectives on Music and Gesture*. Aldershot: Ashgate, 67-82.
Godøy, R. I., Jensenius, A. R., and Nymoen, K. (2010). Chunking in Music by Coarticulation. *Acta Acustica united with Acustica* 96(4), 690-700
Godøy, R. I. and Leman, M. (eds.) (2010). *Musical Gestures: Sound, Movement, and Meaning*. New York: Routledge.
Godøy, R. I. (2010). Images of Sonic Objects. *Organised Sound*, 15(1), 54-62
Godøy, R. I. (2010). Thinking Now-Points in Music- Related Movement. In R. Bader, C. Neuhaus and U. Morgenstern (eds.) *Concepts, Experiments, and Fieldwork. Studies in Systematic Musicology and Ethnomusicology*. Frankfurt am Main: Peter Lang, 245–260.
Godøy, R. I. (2010) Gestural Affordances of Musical Sound. In R. I. Godøy and M. Leman (eds.) *Musical Gestures: Sound, Movement, and Meaning*. New York: Routledge, 103-125.
Godøy, R. I. (2009). Chunking Sound for Musical Analysis. In S. Ystad, R. Kronland-Martinet, and K. Jensen (eds.): *CMMR 2008, LNCS 5493*. Berlin Heidelberg: Springer-Verlag, 67–80
Godøy, R. I. (2009). Geometry and Effort in Gestural Renderings of Musical Sound. In M. Sales Dias et al. (eds.), *GW 2007, LNAI 5085*. Berlin, Heidelberg: Springer-Verlag, 205-215.
Godøy, R. I. (2008). Pour une théorie musicale fondée sur l'objet sonore. In E. Gayou (ed.), *Pierre Schaeffer. Portraits polychromes*. Paris: INA/GRM, 67-75.
Godøy, R. I. (2008) Reflections on Chunking in Music. In A. Schneider (ed.), *Systematic and comparative musicology: concepts, methods, findings*. Frankfurt: Peter Lang, 117-132.
Godøy, R. I. (2006). Gestural-Sonorous Objects: embodied extensions of Schaeffer's conceptual apparatus. *Organised Sound* 11(2): 149–157.
Godøy, R. I., Haga, E., and Jensenius, A. (2006). Playing 'Air Instruments': mimicry of sound-producing gestures by novices and experts. In S. Gibet, N. Courty and J.-F. Kamp (eds.), *GW2005, LNAI 3881*, Berlin, Heidelberg: Springer-Verlag, 256–267.
Godøy, R. I. (2004). Gestural imagery in the service of musical imagery. In A. Camurri and G. Volpe (eds.), *GW 2003, LNAI 2915*. Berlin, Heidelberg: Springer-Verlag, 55–62.
Godoy, R. I. (2003). Motor-Mimetic Music Cognition. *Leonardo*, Vol. 36, No. 4, 317-319
Godøy, R. I. and Jørgensen, H. (eds.) (2001). *Musical Imagery*. Lisse (Holland): Swets & Zeitlinger.
Schneider, A. and Godøy, R.I. (2001). Perspectives and Challenges of Musical Imagery. In Godøy, R.I. and Jørgensen, H. (eds.), *Musical Imagery*. Lisse (Holland): Swets & Zeitlinger, 5-26.
Godøy, R. I. (2001). Imagined Action, Excitation, and Resonance. In R. I. Godoy and H. Jorgensen (eds.), *Musical Imagery* (pp. 239-252). Lisse: Swets and Zeitlinger, 237-250.
Godøy, R. I. (1999). Cross-modality and conceptual shapes and spaces in music theory. In I. Zannos (ed.), *Music and Signs* (pp. 85-98). Bratislava: ASCO Art & Science, 85-98.
Godøy, R. I. (1997). Knowledge in music theory by shapes of musical objects and sound-producing actions. In M. Leman (ed.), *Music, Gestalt, and Computing*. Berlin: Springer-Verlag, 89-102.
Godøy, R. I. (1993/1997). *Formalization and Epistemology*. Oslo: Scandinavian University Press.