Accreditation Report

Doctoral Studies in Computer Science

Reykjavik University

Expert Committee Report

January 2008

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1   Introduction

1.1   The Expert Committee

Hans Peter Jensen, Professor of Chemistry, former Rector of the Technical University of Denmark, Chairman.

Friedrich Seifert, Professor Emeritus of Geochemistry and Geophysics, University of Bayreuth, Germany.

Ann Kettle, Honorary Senior Lecturer in Mediaeval History, University of St Andrews, Scotland.

1.2   Liaison Officer

Eiríkur Smári Sigurðarson, Head of Division for Science and Innovation, The Icelandic Centre for Research – RANNIS, Reykjavik, Iceland.

1.3   Terms of Reference

The expert committee is appointed according to Article 4 of Rules No. 37 on Doctoral Studies in Higher Education Institutions to provide reference of the ability of higher education institutions to provide Doctorate degrees. The committee is to base its reference on the components of Article 3 of the same act. They are:

  a.   Role and objectives of higher education institutions for organising doctoral studies.

  b.   Definition of doctoral studies with regard to the National Qualification Framework issued by the Minister of Education.

  c.   Title of degree and duration of doctoral study programme.

  d.   Description of admission requirements and demands for satisfactory preparation.

  e.   Description of application procedure.

  f.   Information about structure of doctoral study administration, including doctorate committee, doctoral defence and qualifications requirements of

    examiners.

g.   Accreditation of the field of study by the Ministry of Education, Science and Culture.

h.   Supervisors' position within the relevant study field, activity in research and published work.

i.   Information about the structure of research activities and future strategy within the relevant field of study.

j.   Information about relation between undergraduate and graduate study programmes and the number of graduated students at Masters level for the past few years.

k.   Position of the higher education institution within the study and research field and its sub-fields in international comparison. Cooperation with research institutions at national and international level, higher education institutions and companies.

l.   Description of financing of doctoral studies.

In writing the report the committee noted a section in the application, marked with an "í", that did not fit the headings under Article 3. On closer examination the committee discovered that section "í" is indeed included in the Icelandic version of the rules but is not in the English translation on which it was asked to base its evaluation. Part "í" states: "Information on facilities and theoretical resources, number of teaching staff and their education and experience". The committee decided to address this part of the application under heading "h".

1.4   Working Method

The committee received an application with appendices (see Appendix 2) by email from the Ministry of Education, Science and Culture on 25 October 2007. The committee made a site visit to Reykjavík University 3 December 2007 (see Appendix 1). It had the opportunity to hold discussions with senior management, potential PhD students and supervisors and stakeholders and to look at the facilities of the Department of Computer Science. The committee considered its conclusions and gave its first impressions to Ministry representatives on 4 December 2007. Ann Kettle,

Friedrich Seifert and Eiríkur Smári Sigurðarson wrote a first draft of the report on 5 December, excluding the final sections. The draft was sent to Hans Peter Jensen, who added the final sections and made suggestions for changes to the rest of the text. The committee agreed on a final version of the report by email.

The descriptive parts of the final version were sent to Reykjavík University for a check on factual errors and misinterpretations on 8 January 2008. Reykjavík University had no comments to the report.

1.5 Short evaluation of the work process

The Expert Committee functioned well from it first meeting in Iceland on 3 December. The members of the committee complemented each other in a well-balanced way, both during discussions with representatives from RU and among themselves.

Writing this report has been done in cooperation over the internet.

The foreign experts have in a very constructive way been supported in all practical aspects by Dr. Eiríkur Smári Sigurðarson from RANNIS. The experts are very grateful to Eiríkur Sigurðarson for the professional and unstinting support he provided during the working period of the committee.

2 Reykjavík University

The Department of Computer Science has operated from the foundation of Reykjavík University in 1998. It traces its roots to an earlier computing college (TVÍ) founded more than a decade earlier. In this time, the Department of Computer Science has grown very fast.

In fall 2003, the department founded a research-oriented M.Sc. programme in

computer science. This is a two-year programme where students spend a full year on an individual research project under the supervision of the department's faculty members. In autumn 2005, the program was expanded to allow for a course-oriented focus, but the majority of the students still have a research-oriented focus. As of January 2007 seven students have graduated and 20 students are currently enrolled in this M.Sc. program.

An application was originally submitted to the Ministry of Education, Science and Culture in December of 2004. It was resubmitted following the new regulations regarding PhD studies which came into force on 17 January 2007.

Reykjavík University has asked for a speedy conclusion to its application, as it has students working on their doctoral dissertations.

3   State of Planning for PhD Studies at RU

a. Roles and objectives of higher education institutions for organising doctoral studies

The overall role and mission of Reykjavik University is to enhance the competitiveness of industry in Iceland and it is considered that this is most effectively done by graduating well educated students, able to accept leadership roles in industry. One of the ways of achieving this goal is to offer research degrees. The Department of Computer Science is the strongest in Iceland and the aim in applying for the accreditation of a doctoral programme is to strengthen further the research programme of the department and to afford students the opportunity to participate in the research taking place. The first article of the regulations for the PhD program in Computer Science states that 'the goal of the programme is to prepare students for leading careers in academia and industry'.

The committee heard from the Rector of the University that the application from the

Department of Computer Science, which was first presented in 2004, was regarded as an essential stage in the development of the University. In the opinion of the committee the role and objectives of the proposed programme are appropriate and in accordance with the overall role and mission of the University.

b. Definition of doctoral studies with regard to the National Qualification Framework issued by the Minister of Education

The academic requirements for the award of a PhD in Computer Science are set out in the regulations and state that a successful graduate must: demonstrate a systematic understanding of the field of computer science and mastery of the associated skills and methods of research; demonstrate the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity, demonstrate the ability to make a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits international refereed publication; demonstrate capacity for critical analysis, evaluation and synthesis of new and complex ideas, demonstrate capacity to participate actively in their academic community and to communicate with peers, the larger scholarly community and with society in general about their areas of expertise.

The programme is a three to four year course of study providing 180 to 240 credits at cycle 3, level 4. Students entering the programme are expected to have a wide background in computer science from an MSc Program. The breadth requirement to demonstrate a systematic understanding of the field of computer science and mastery of the associated skills and methods of research is met by requirements to pass a course in Research Methodology and the equivalent of two graduate courses from each of three major areas of Computer Science: Systems, Applications and Theory; all course work should be completed within the first year of study. The remaining academic requirements are satisfied through work on a thesis and are verified by means of the evaluation process.

The committee was provided with the Learning Outcomes for a PhD in Computer

Science. These corresponded to the criteria set out in the third cycle, level 5 of the National Qualification Framework for Iceland. The learning outcomes covered knowledge and understanding, type of knowledge, practical skills, theoretical skills, communication skills and information literacy and learning skills. The learning outcomes in the National Qualification Framework had been appropriately adapted to the discipline of Computer Science. The learning skills section, in particular, provided a detailed description of how doctoral students would acquire the skills to develop a critical assessment of the present state of knowledge in their field of research.

In the opinion of the committee the academic requirements of the program fulfil the requirements of level 5 of the third cycle of the National Qualification Framework for Iceland.

c. Title of degree and duration of doctoral study programme

The title of the degree is 'Doctor of Philosophy' or 'PhD'. The length of the programme is not less than three and not more than four years of full-time study. Part of the programme, from three to twelve months, must be spent at another university or research institute.

d. Description of admission requirements and demands for satisfactory preparation

The criteria for admission are the completion of an MSc degree and the demonstration of strong potential for further graduate study. The latter is judged by means of letters of recommendation, performance in courses, publications, etc. In view of the varieties of grading schemes used around the world, no minimum grade for admission is stipulated but international students are asked to submit GRE scores and, as the official language of the program is English, TOEFL scores are required from non-native English speakers. Additional preparatory courses may be required of students with degrees in areas other than computer science.

e. Description of application procedure

The application procedure is laid out in the regulations. Application and notification deadlines are posted on the university web-site and applications must be submitted electronically or by mail by the advertised deadline. Each application must include: confirmation of the MSc degree, or an expected graduation date; an official transcript of the applicant's graduate and undergraduate program, together with a statement, where it is available, of the ranking of the applicant with respect to other graduates from the programs; three letters of recommendation from those familiar with the applicant's work; a 'statement of purpose' written by the applicant which includes an outline of the research direction which the applicant wishes to pursue, as well as a proposal for a particular faculty member to supervise the doctoral thesis; any additional information that can aid in the assessment of the strengths and weaknesses of the applicant; detailed course descriptions of graduate and undergraduate programmes.

Applications are considered by the research council of the Department of Computer Science which makes a recommendation on acceptance or rejection, based on the applicant's qualifications, the commitment of a qualified supervisor and availability of funding. The research council also decides whether any preparatory courses are necessary. The final decision is made by the head of the department and the applicant is notified in writing, with justification given when necessary for rejection. On admission the student is given a written contract, specifying research duties and, where applicable, other duties such as teaching; the contract also specifies the support and other facilities which will be available to the student.

f. Information about structure of doctoral study administration, including doctorate committee, doctoral defence and qualifications requirements of examiners

The research council of the Department of Computer Science, whose members are elected annually, manages the programme. A student is only accepted if a permanent member of the staff of the department agrees to undertake their supervision. The thesis supervisor must hold a PhD degree and be a recognised expert in the intended area of the thesis and an active participant in the international research community in that field. Joint supervision is possible when the research integrates the research areas of two members of the department, particularly in interdisciplinary projects. In jointly supervised projects, one of the supervisors is the leading supervisor and the other is the co-supervisor. The co-supervisor may be external to the department or the University but must meet all the other requirements for supervisors. The responsibility of the supervisor is to be regularly available to the student, to make every reasonable effort to provide the student with enough insight into the research area, pointers for reading, and facilities for conducting research. Following admission, the student and the supervisor create a plan for satisfying the breadth requirements of the programme, which is reviewed by the research council. Once the plan has been executed, the research council reviews the results.

Before the end of the first year of study and as soon as the student has formulated a research proposal, a thesis committee is appointed by the research council in cooperation with the thesis supervisor. The committee comprises at least three members, each meeting the requirements for supervisors, and at least one member must be external to Reykjavik University. In the case of co-supervision, the thesis committee must have two members other than the supervisors. At least one of the members of the committee must have experience in supervising PhD students. The role of the thesis committee is to guide the student towards the completion of the research project. Before the end of the first year of study the student must submit a research proposal which contains: the background of, and motivation for, the project; a well-defined plan for research, including topics to be studied, initial results, techniques and/or ideas. The thesis proposal defence consists of a short open

presentation, followed by a closed session with the thesis committee. The thesis committee decides if the student has passed the defence, failed the defence, or if major revisions are required. In the case of major revisions, a second thesis proposal defence must be scheduled within three months, when the student either passes or fails.

Before the end of the second year of study, the student must submit a research progress report which must update the thesis proposal and contain the following: updated background and motivation for the project; updated plan for research, including the topics to be studied; intermediate results, techniques and/or ideas. The thesis committee reviews the report and provides feedback to the student. In the case of an unsatisfactory report, a second progress report may be requested within three months. If progress is again unsatisfactory, the student may be expelled from the program by the chair of the department, following a recommendation from the research council.

The research thesis is submitted to the thesis committee 12 weeks before graduation. The thesis must represent a body of original, individual research work, which in quantity and quality matches or exceeds the expectations of the thesis committee. A thesis examiner is appointed by the research council in cooperation with the thesis supervisor. The thesis examiner must meet the requirements for supervisors and be external to Reykjavik University. The role of the thesis examiner is to offer an independent assessment of the quality of the submitted thesis and should therefore not have been involved in the development of the research work presented in the thesis. A thesis defence takes place before the grading of the thesis. The thesis defence must be attended by the thesis examiner, as well as the supervisor(s) and at least one other thesis committee member. Committee members who are unable to attend the defence may send a list of questions or suggestions to the student and supervisor before the defence. The defence starts with an open presentation for 45 minutes by the PhD student, followed by 15 minutes of open questions. The thesis committee and thesis examiner then hold a closed session with the student. The thesis is graded pass/fail by the thesis committee and thesis examiner. The committee may also assign a grade of

incomplete and request minor revisions. The committee may also require major revisions and in that case a second and final defence must be held, preferably no later than six months after the original thesis defence. The final version of the thesis, which takes into account any comments by committee members, must be signed by all the committee members. The thesis committee must also write a short report on the thesis and submit it to the student. The student must provide five copies of the final thesis for the Reykjavik University Library, two of which will be given to the Icelandic National Library for conservation. In addition the thesis must be delivered to the Reykjavik University Library in digital form for publication on the Reykjavik University web-site.

In the opinion of the committee the structure proposed for the administration of the PhD program is sound and provides an appropriate framework for the supervision and assessment of doctoral students.

g. Accreditation of the field of study by the Ministry of Education, Science and Culture.

The Faculty of Engineering and Technology at Reykjavík University received accreditation to award masters degrees within the field of Engineering and Technology on 3 September 2007. The field of Engineering and Technology includes Computer Science.

h. Supervisors' position within the relevant study field, activity in research and published work

The structure of the Department of Computer Science with respect to individual study fields and recent activities in research, teaching and published work is adequately described in the annual report for 2006, submitted with the application. For all the potential supervisors *curricula vitae* were also included, providing information on their careers, expertise in special fields, publications and teaching activities.

The mission of the department is defined as conducting high quality research in selected, relevant areas of computer science. These areas are:

- Analysis and Design of Intelligent Agents

- Databases

- Theoretical Computer Science

- Language Technology.

In addition, there is research activity in the fields of Networking, Human Computer Interaction, Distance Learning, and Usability. In collaboration with the University of Iceland there is activity in the field of Decision Support and there is a commitment to set up a Secure Systems Laboratory.

The committee found that, in terms of infrastructure, the Department of Computer Science is well equipped for research in the areas above by on-line access to digital library services and inter-library loans. Significant and adequate hardware and software for experiments in computer science is available, including advanced facilities for experiments in human-computer interaction.

The selected areas of research are brought to life by a highly qualified and active staff of scientists (16 academic staff, three affiliated members of staff, two post-docs and two potential PhD students), complemented by substantial numbers of visiting faculty. Among the permanent academic staff there are four professors, four associate professors (plus one expected to join soon) and eight assistant professors. Numerically, this staff complement is adequate to cover the areas mentioned above.

Out these staff, eight faculty members are currently qualified to supervise PhD students according to the rules set out in Article 6 of the application, which exceed the minimum requirements as defined in Article 2 of the Ministry's rules on Doctoral Studies in Higher Education Institutions according to article 7 of the Higher Education Act no. 63/2006.

The supervisors are publishing well in international journals, in the proceedings of international conferences and workshops, and are writing or editing books and book chapters. They are highly visible internationally and well networked by holding joint positions in overseas universities, membership of international councils, boards and steering committees, through continuing contact with their former or home universities and companies, as well as newly formed international contacts through research collaborations, joint programmes, etc. A large (ca. 500 participants) international conference in the field of computer sciences is planned for the year 2008 in Reykjavik. Due to their qualifications and experience, staff have been very successful in attracting funds from a variety of sources.

i. Information about the structure of research activities and future strategy within the relevant field of study

Research activities are well focussed in the form of research centres in the areas given above, but the structure is flexible enough for expansion as special needs arise or opportunities come along. Staff seem to be well aware that focussing will also be necessary in the future and that they can only achieve their ambitious goal to become one of the top 20 computer science departments in Scandinavia if they hire exceptionally qualified researchers at all levels.

j. Information about relation between undergraduate and graduate study programmes and the number of graduate students at Masters level for the past few years

The total number of students enrolled in the degree courses offered by the department is about 300, and out of these, 20 are enrolled in the international MSc program in Computer Science. The total number of BSc students graduated since the start of the programme in 2000 is 471.

The MSc program started in 2003, and the first student graduated in 2005. As of January 2007, seven students had graduated. In this group, five students have had a

research focus, and each student had at least one publication in an international workshop or conference. Currently there is a total of nine graduations, and 20 students are enrolled. The aim for the future is an enrolment of 25 students.

k. Position of the Higher Education Institution within the study and research field and its subfields in international comparison. Cooperation with research institutions at national and international level, higher education institutions and companies

On the basis of a presentation, the research report for 2006 and the self-evaluation of the staff, the committee concluded that the research programme of the Department of Computer Science is already now on a similar level to that of cutting-edge institutions worldwide. For additional quality assurance, the staff have agreed to undergo a first international research evaluation, and further evaluations are planned every 3 to 5 years.

The committee was impressed by the strong research links to many (some 30) leading groups in top universities and companies worldwide. These contacts are being actively used, not only for research but also for student exchanges (presently only up to MSc level). Such contacts will be very useful for PhD students who will be required to study at another university or research institute for 3 to 12 months during their course of study.

On a national level, there are contacts with a number of IT companies, and limited contacts (more on a personal than institutional basis) to computer science activities at the University of Iceland.

l. Description of financing of doctoral studies

The doctoral program in Computer Science will be financially supported by Reykjavik University. Also, Reykjavik University channels part of the annual grant for research support received from the Ministry of Education to the Department of

Computer Science, and this will be partly used to support the PhD program. In addition, grants obtained by staff members from Rannis, EU or industry can be used to finance PhD work. In the opinion of the staff, their salaries are fairly competitive. The committee concludes that the financing of doctoral studies is satisfactory.

4   Issues arising

In dialogue with the Rector, staff, students and stakeholders at Reykjavik University the following issues were discussed.

1.   RU plans a larger master's programme than the current 20 students. This ambition is a challenge in view of the fierce hard competition with industry which is in great need of IT competence and is willing to appoint young staff with bachelor's degrees.

In the opinion of the committee, Icelandic industry should be aware of this difficulty for RU, and thus make appointments with care and in dialogue with the university sector. It should also be considered possible to offer contracts to industrial staff with bachelor's degrees with time allowed for the completion of master's and doctoral degrees.

2.   RU wishes to open its PhD programme to international students and will offer stipends and teaching positions in order to attract students onto the programme. RU will in this connection rely on various partner universities with which RU has exchange agreements. RU expects mostly students from Europe, South East Asia and Africa; American PhD students will probably not be interested in studying in Iceland.

It is the opinion of the committee that international students on the Ph.D. program are essential to make the learning environment truly international.

3.   In relation to the international dimension of the proposed PhD programme at Reykjavik University issues such as opportunities for research leave and

gender balance were discussed. The evaluation group learned that research leave is allowed on a regular basis and on full salary. In addition there are always many visiting scholars in the department. As far as the gender balance is concerned this is a difficult issue as there are few women qualified in the area of computer science and also the discipline attracts relatively few female students.

The committee commends the University's research leave policy. It is aware that there is one woman among the full time staff in the department and appreciates the fact that the department is fully aware of the gender balance issue.

4.   The question arose as to whether the present staff (16 academic staff, 3 affiliated members of staff, 2 post docs and 2 potential PhD students) was large enough to support six different research groups. It was, however, argued that the department works extensively in networks with the result that the groups are in reality much bigger than they appear.

The committee accepts this argument, but would wish to emphasize that critical mass is an essential element in experimentally oriented sciences in today's world.

5.   Financial support for research and PhD students was another subject that came up for discussion. Apart from money from RU the department has some international grant income, mainly from European sources, and it is giving applications for international money high priority. As far as PhD students are concerned, the plan is to award students a fixed stipend (around 250.000 ISK per. Month, plus a bench fee of 4 – 4.5 MISK per year). In return PhD students will be asked to do some teaching (up to 20% of the time available for PhD study).

 The committee finds all this to be excellent and in accordance with rules and procedures for PhD students at other institutions in Europe and the USA.

6.   The budget for the whole department was discussed. It amounts to approximately 400M ISK with 60% expended on salaries.

The committee acknowledges that sufficient money (40 % of the total budget) is

set aside in the department for running costs.

7.   The relationship and collaboration with the sister department in the University of Iceland was briefly discussed. It is currently a delicate issue but there are some collaborative projects between individuals going on. The extension of this collaboration in the future to include PhD courses would be welcomed by RU.

The committee appreciates the delicacy of this issue, but urges RU to work on the matter in order to create enough critical mass by, for example, a PhD summer school on very specialised subjects with foreign experts invited to give lectures.

8.   During discussion of the deliberative structure of RU and its schools and departments it became clear that students do not participate in the Graduate Study Council or, for that matter, in any other board or council in the university. Representatives from the Student Union are, however, invited to important meetings (policy meetings) and will also be present at department meetings.

The committee takes note of this but would like to point to the fact that it is becoming common in a number of countries known to members of the committee for student representatives to participate as full members of boards and councils in their institution.

9.   During discussions with various groups the question of the risk of inbreeding when PhD programmes are added to the Icelandic university structure was brought up. This question provoked much concern from students, staff and stakeholders. First and foremost representatives from the university argued that without PhD programmes Icelandic universities would not be truly competitive universities. The inbreeding question, however, is very much in focus and will be tackled by attracting PhD students from abroad to Iceland and making it compulsory for Icelandic PhD students to go abroad for at least one semester during their studies. This strategy might possibly be combined with developing joint degree

programmes. It should further be mentioned that a number of the master 's students, with whom the committee spoke, were very much aware of the problem and therefore intended to go abroad for PhD studies at various, mainly American and European universities, as it has always been the tradition in Iceland.

The committee understands very well the argument that Icelandic universities require PhD programmes in order to become competitive. It also notes that the potential for inbreeding is being tackled in a number of ways.

10. During the discussion with the Rector we were presented with the plans for the new RU campus.

The committee was very impressed with the plans (the concept as well as the buildings) and the layout of the new campus. In our opinion it is going to present a great opportunity and a big challenge for RU to move into the new surroundings, but we are sure from our contacts with the management, staff and students at RU that the challenge will be met in a well-organised and intelligent way.

11. One of the weaknesses in the department seems to be a shortage of technical and administrative staff. However, the new dean (recently recruited from USA) recognises the problem and has promised to employ more support staff.

The committee approves the decision to hire more technical and administrative staff. Beyond doubt, this will be essential when the PhD programme comes into effect. The expansion of the international office at RU is also approved as the recruitment and integration of foreign students is a major, time-consuming enterprise.

12. Cooperation with industry in the development of the PhD programme was discussed and it was clearly stated that this was important and very necessary, especially in a small country like Iceland.

The committee agrees with this point of view and suggests that RU and the Icelandic authorities investigate foreign models for such cooperation, e.g. the

industrial PhD programme in Denmark and various models for tax incentives related to investment in research.

13.   In discussion with students the housing situation came up several times and it was characterised as difficult and expensive. We learned, however, that accommodation was now offered on the former US military base in Keflavik. Some students considered this is be too far away from Reykjavik, whereas others praised the arrangement, with cheap rooms and free buses to the city several times every day.

The committee supports any initiative which is taken to ease a difficult accommodation situation, and this issue must be tackled if international recruitment to PhD programmes in Iceland is to succeed.

14.   In discussion with RU's stakeholders it became clear that the university has massive support from Icelandic industry. This involves positive opinions, trust and financial support. In addition, industry finds it important for RU, in terms of international competition, to be able to step forward as a full and comprehensive university, including offering PhD programmes. The question of inbreeding is something that industrial representatives are very much aware of and they consider that it should be dealt with by means of exchanges, the recruitment of international students and PhD courses being given in Iceland by international experts in the relevant subjects.

The committee was very impressed by the support provided by stakeholders and supporters and congratulates RU on its strong position in Icelandic society and among representatives of Icelandic industry.

5 Recommendations

1. The University has made a well-written and focused application.

2. The application contained well-defined aims and objectives.

3. The application contained very precise statements in relation to the questions (a – l) raised by the ministry.

4. RU has devoted management, staff and students.

5. The accreditation committee recommends that RU is given the right to award the degree of PhD in Computer Science.

6 Signatures of the Accreditation Expert Committee.

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Prof. Hans Peter Jensen, *Denmark*

Chairman

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Ann Kettle, University of St Andrews, *Scotland*

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Prof. Emeritus Friedrich Seifert, *Germany*

Appendix 1: Agenda of site visit of Expert Committee to Reykjavík University 3 December 2007

9:00   Introduction to School of Computer Science, research and Ph.D. programme

10:10 Coffee

10:30 Svafa Grönfeldt, Rector

11:15 University Council and Management

11:45 Facilities Tour

12:00 Lunch

13:00 Scientists – potential Ph.D. advisors

14:00 Potential Ph.D. students

15:00 Coffee

15:30 Stakeholders and supporters

16:00 Wrap-up

Appendix 2: List of documents received

A.   Application for PhD program in Computer Science

B.   PhD Rules for Computer Science

C.   2006 Annual Report for Computer Science

D.   CV for Anna Ingólfsdóttir

E.   CV for Bjarni V. Halldorsson

F.   CV for Bjorn Thor Jonsson

G.   CV for Einar Steingrímsson

H.   CV for Hannes Hogni Vilhjalmsson

I.   CV for Hrafn Loftsson

J.   CV for Kristinn R Þórisson

K.   CV for Luca Aceto

L.   CV for Magnús Már Halldórssoni

M.   CV for MohammadReza Mousavi

N.   CV for Silvio Capobianco

O.   C. CV for Yngvi Bjornsson

P.   CV for Ulfar Erlingsson

Q.   CV for Yngvi Bjornsson

R.   Learning Outcomes

S.   Graduate Courses