



HÁSKÓLINN Í REYKJAVÍK  
REYKJAVÍK UNIVERSITY

*Annual Report 2006*  
*Department of Computer Science*  
*Reykjavík University*

January 2007



## 1 Introduction

The Department of Computer Science at Reykjavík University is the largest computer science department in Iceland, both in terms of number of academic staff members and of number of students. Its mission is to conduct high quality research in selected areas of computer science, as measured by the standards of the international research community, to provide excellent education leading to BSc, MSc and PhD degrees in computer science, and to promote an appreciation of the crucial importance of computer science within Icelandic society at large.

At present, the department has 16 members of academic staff (14.8 FTE), two post-doctoral researchers, and two PhD students. The department has four professors (Einar Steingrímsson is appointed jointly with the Department of Mathematics, and is on a 30% position in computer science), four associate professors, and eight assistant professors. During 2006, Anna Ingólfssdóttir became the first ever woman to be promoted to a professorship in computer science in Iceland.

Out of the 16 members of academic staff, 11 are active in research to various degrees. This means that 68.75% of the academic staff is doing research work. The two postdoctoral researchers in the department (Silvio Capobianco and MohammadReza Mousavi) are the only two such researchers in computer science in Iceland. Moreover, during 2006, the department hired Mark Winands as a third postdoctoral researcher for a period of six months. Finally, two of the three PhD students in computer science in Iceland are carrying out their research within the department.

The department has about 300 students following the degree courses it offers. Out of these, about 30 are MSc students enrolled in our international MSc programme in Computer Science.

The research carried out within the department is centred around the following research centres and laboratories:

- Center for Analysis and Design of Intelligent Agents (CADIA) (Y. Björnsson, K.R. Thórisson and H.H. Vilhjálmsson),
- Database Lab (Björn T. Jónsson, Kári Hardarson and Herwig Lejsek),
- Icelandic Centre of Excellence in Theoretical Computer Science (ICE-TCS) (Luca Aceto and Anna Ingólfssdóttir with Silvio Capobianco and MohammadReza Mousavi, in collaboration with the University of Iceland),
- Language Technology Centre (H. Loftsson, in collaboration with the University of Iceland), and
- Network Systems and Services Laboratory (G. Hjalmtýsson).

In addition, researchers at the department work in the fields of Human Computer Interaction, Distance Learning, and Usability.

The department has ongoing collaborations with many universities throughout the world, both in research and teaching. By way of example, a list of institutions with which we have

Erasmus exchange agreements involving both students and members of staff may be found at <http://hr.is/?PageID=1097>.

## 2 Publications

**Caveat and Explanation** This report is not based on complete information on the output of the Network Systems and Services Laboratory, and is therefore most likely an under-approximation of the level of research activity at the department.

The quality classification of journals and conferences/workshops is based on the one of the Italian Association of Researchers in Computer Science (GRIN), which is available at the URLs

- <http://www.di.unipi.it/grin/Riviste2005.htm> and
- <http://www.di.unipi.it/grin/Classif.Conferenze2000.html>.

In both cases, class A consists of the publication outlets that are considered to have greatest prestige.

**Executive Summary** During 2006, researchers at the Department of Computer Science at Reykjavik University have written or edited 7 books and volumes, 3 book chapters, 9 papers in international journals, 24 papers in the proceedings of international conferences and workshops, and 8 other publications in international outlets.

Amongst the journal publications, three were in class A outlets (top), three were in class B outlets (good), one in class C, and two in unclassified journals. Five of the conference/workshop papers appeared in class A outlets. So 25% of the conference/workshop publications are in very high quality outlets. We remark, however, that the landscape of conferences/workshops is much more fluid than that of journals, and that new conferences/workshops take a few years to become established.

In addition, Jón Freyr Jóhannsson has produced two draft textbooks in Icelandic, which are used for courses at Reykjavík University and in high schools.

### 2.1 Books and Edited Volumes

1. L. Aceto, A. Ingólfssdóttir, Kim G. Larsen and J. Srba. *Reactive Systems: Modelling, Specification and Verification*, November 2006. Cambridge University Press. 330 pages. To appear.
2. L. Aceto and A. Ingólfssdóttir. *Proceedings for the Eighteenth Nordic Workshop on Programming Theory 2006*, 18–20 October 2006, Reykjavik, Iceland.
3. L. Aceto and A.D. Gordon. *Essays on Algebraic Process Calculi*. *Electronic Notes in Theoretical Computer Science* 162, pp. 1–340, Elsevier, 29 September 2006.

4. L. Aceto and A. Ingólfssdóttir. Foundations of Software Science and Computation Structures: 9th International Conference, FOSSACS 2006, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2006, Vienna, Austria, March 25–31, 2006. Proceedings, Lecture Notes in Computer Science 3921, Springer-Verlag, March 2006. ISBN: 3-540-33045-3.
5. Laurent Amsaleg, B.T. Jonsson and Vincent Oria, guest editors. Special Issue: Selected Papers from the First International Workshop on Computer Vision Meets Databases (CVDB 2004). *Multimedia Tools and Applications Journal*, 31(3), December, 2006.
6. Jaap van der Herik, Nathan Netanyahu, Yngvi Björnsson (2006). *Computers and Games*. Revised papers from the Forth International Conference on Computers and Games (CG 2004), Ramat-Gan, Israel. Springer-Verlag.
7. Anna Ingólfssdóttir, Bud Mishra, Hanne Riis Nielson, and Corrado Priami. *Transactions on Computational Systems Biology VII*. Lecture Notes in Computer Science 4230 Springer 2006, ISBN 3-540-48837-5

## 2.2 Chapters in Books

1. Bonaiuto, J., K. R. Thorisson (2007). Towards a Neural Model of Realtime Turntaking in Face-to-Face Dialogue. To be published in I. Wachsmuth, M. Lenzen, G. Knoblich (eds.), *Embodied Communication in Humans And Machines*. U.K.: Oxford University Press.
2. Thorisson, K. R. (2007). Synthetic Sentience and Consciousness in Mechanoids and Meat Computers. To be published in T. Helgadóttir and S. Atlason (eds.), *Selected Writings in the Philosophy of Consciousness*. Reykjavik: Philosophical Society of Iceland. In Icelandic.
3. Thorisson, K. R. (2007). Cognitive Modeling and Cognitive Modularity in Multimodal Communication. To be published in I. Wachsmuth, M. Lenzen, G. Knoblich (eds.), *Springer Lecture Series in Computer Science: Selected Writings in Embodied Communication*. New York: Springer.

## 2.3 Journal Papers

1. L. Aceto, W. Fokkink, A. Ingólfssdóttir and S. Nain. Bisimilarity is not Finitely Based over BPA with Interrupt. *Theoretical Computer Science* 366 (1–2), pp. 60–81, 16 November 2006. Special issue devoted to Algebra and Coalgebra in Computer Science (J. Fiadeiro and J. Rutten guest editors). Class: A
2. Silvio Capobianco. Cellular Automata over Semi-direct Product Groups: Reduction and Invertibility Results. *International Journal of Algebra and Computation*, Vol. 16, No. 6, pp. 1071-1086 (December 2006). Class: B

3. Hvannberg, E., Lai-Chong Law, E., Larusdottir, M. K.: Heuristic evaluation: Comparing ways of finding and reporting usability problems, *Interacting with Computers*, In press. Class: B
4. B.T. Jonsson, Maria Arinbjarnar, Bjarnsteinn Thorsson, Michael J. Franklin, Divesh Srivastava. Performance and Overhead of Semantic Cache Management. *ACM Transactions on Internet Technology*, 6(3), August, 2006. Class: A
5. Loftsson, H. 2006. Tagging Icelandic text: An experiment with integrations and combinations of taggers. *Language Resources and Evaluation*, 40(2) Unclassified
6. Asrun Matthiasdottir, Michael Dal and Samuel Lefever. Online data collection in academic research: advantages and limitations. *British Journal of Educational Technology* On line early issue at

<http://www.blackwell-synergy.com/toc/bjet/0/0>.

Unclassified

7. M.R. Mousavi, M.A. Reniers, J.F. Groote. SOS Formats and Meta-Theory: 20 Years After, Accepted for publication in *Theoretical Computer Science*, Elsevier Science B.V., 2006. To appear. Class: A
8. M.R. Mousavi and M. A. Reniers, Orthogonal Extensions in Structural Operational Semantics, Accepted for publication in *Fundamenta Informaticae*, IOS Press, 2006. To appear. Class: B
9. Thorisson, K. R. (2007). Integrated A.I. Systems. Accepted to *Minds and Machines*, Special Issue commemorating the 1956 founding of A.I. as a research discipline. 15pp. Class: C

## 2.4 Papers in Refereed Conference and Workshop Proceedings

1. L. Aceto, W. Fokkink, A. Ingolfsdottir and B. Luttik. A Finite Equational Base for CCS with Left Merge and Communication Merge. In the Proceedings of ICALP 2006 (Michele Bugliesi, Bart Preneel, Vladimiro Sassone, Ingo Wegener editors), *Lecture Notes in Computer Science 4052 (Part II)*, pp. 492–503, Springer-Verlag, July 2006. Class: A
2. L. Aceto, T. Chen, W. Fokkink and A. Ingolfsdottir. On the Axiomatizability of Priority. In the Proceedings of ICALP 2006 (Michele Bugliesi, Bart Preneel, Vladimiro Sassone, Ingo Wegener editors), *Lecture Notes in Computer Science 4052 (Part II)*, pp. 480–491, Springer-Verlag, July 2006. Class: A

3. L. Aceto. Impossibility Results in the Equational Logic of Processes. Preliminary proceedings of the Workshop on Logic, Models and Computer Science (LMCS06) organized by the Italian Association for Logic and its Applications (AILA), Camerino, Italy, 20–22 April 2006. Unclassified: First edition of the event
4. Yngvi Björnsson, Jonathan Schaeffer, Nathan Sturtevant (2006). Partial Information Endgame Databases, Lecture Notes in Computer Science Vol. 4250. Proceedings of the Advances in Computer Games 11, Taipei, Taiwan, pp. 11-22. Unclassified
5. Yngvi Björnsson, Ryan Hayward, Michael Johanson, and Jack van Rijswijk (2006). Dead Cell Analysis in Hex and the Shannon Game, Graph Theory, Trends in Mathematics, A. Bondy, J. Fonlupt, J. Fouquet, Fournier. J. L. Ramierz-Alfonsin (eds.), pp. 45-59. Unclassified
6. Yngvi Björnsson and K. Halldorsson (2006). Improved Heuristics for Optimal Pathfinding on Game Maps, Proceedings of the 2nd International Conference on Artificial Intelligence and Interactive Entertainment (AIIDE06), Marina Del Ray, CA. Unclassified
7. B. Brynyulfsson, G. Hjalmtýsson, Kostas Katrinis, Bernhard Plattner: Autonomic Network-layer Multicast Service Towards Consistent Service Quality. AINA (2) 2006: 494-498 Unclassified
8. Herwig Lejsek, F. Asmundsson, B.T. Jonsson, Laurent Amsaleg. Scalability of Local Image Descriptors: A Comparative Study. Proceedings of the ACM Multimedia Conference. Santa Barbara, CA, USA, October, 2006. Class: A
9. A.M. Jonsson, B.T. Jonsson. Towards pB+-trees in the Field: Implementation Choices and Performance. Proceedings of the First International Workshop on Performance and Evaluation of Data Management Systems (EXPDB). Chicago, IL, June 2006. Unclassified, but the conference is class A.
10. Larusdottir, M.K. Using Rapid Contextual Design at Reykjavik University. Accepted paper for the workshop named HCIED.2006-1 inventivity: Teaching theory, design and innovation in HCI held by the British Computer Society HCI Group (BHCIG), the International Federation of Information Processing (IFIP) WG13.1 Education, and the Irish Computer Society in Limerick in Ireland, 23–24 March 2006. Unclassified
11. Larusdottir, M.K. Food and groceries delivery service. Accepted to the workshop HCI Educators' Yellow Book Workshop at the HCI 2006 conference: The 20th BCS group conference in co-operation with ACM. Unclassified, but the conference is class: A
12. Larusdottir, M. K. Reducing the gap between HCI research and software development teams in Iceland. Accepted to the workshop named: Improving the Relationship between Research and Practice in Interaction Design at Nordchi 2006. Unclassified

13. Loftsson, H. 2006. Tagging a Morphologically Complex Language Using Heuristics. In T. Salakoski, F. Ginter, S. Pyysalo, and T. Pahikkala, editors, *Advances in Natural Language Processing, 5th International Conference on NLP, FinTAL 2006, Proceedings*, Turku, Finland. Unclassified
14. Asrun Matthiasdottir. Women Disappearing in Computer Science. Proceeding of the international conference 3rd E-learning Conference Computer Science Education in Coimbra, Portugal. Unclassified
15. Asrun Matthiasdottir. How to Teach programming languages to novice students? Lecturing or not? Proceeding of International Conference on Computer Systems and Technologies - CompSysTech06. Unclassified
16. M.R. Mousavi, I.C.C. Phillips, M.A. Reniers, I. Ulidowski. The Meaning of Ordered SOS. Proceedings of the 26th Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS'06), Kolkata, India, volume 4337 of Lecture Notes in Computer Science, pages 334–345, Springer-Verlag, December 2006. Class: A
17. E. Korshunova, M. Petkovic, M.G.J. van den Brand and M.R. Mousavi. CPP2XMI: Reverse Engineering of UML Class, Sequence, and Activity Diagrams from C++ Source Code (Tool Paper), Proceedings of the 13th Working Conference on Reverse Engineering (WCRE'06), Benevento, Italy, IEEE CS, October 2006. Unclassified
18. A.H. Ghamarian, M. Geilen, T. Basten, B. Theelen, M.R. Mousavi and S. Stuijk. Liveness and Boundedness of Synchronous Data Flow Graphs, Proceedings of the 6th International Conference on Formal Methods in Computer-Aided Design (FMCAD'06), San Jose, CA, USA, pages 68-75, IEEE, November 2006. To appear. Unclassified
19. M.R. Mousavi, M.A. Reniers. On Well-Foundedness and Expressiveness of Promoted Tyft, Proceedings of the 3rd Workshop on Structural Operational Semantics (SOS'06), Bonn, Germany, Electronic Notes in Computer Science, Elsevier, August 2006. To appear. Unclassified
20. A.H. Ghamarian, M. Geilen, S. Stuijk, T. Basten, A. Moonen, M. Bekooij, B. Theelen and M.R. Mousavi. Throughput Analysis of Synchronous Data Flow Graphs, Proceedings of the 6th International Conference on Application of Concurrency to System Design (ACSD'06), Turku, Finland, pages 25-34, IEEE CS Press, June 2006. Unclassified
21. Kopp, S., B. Krenn, S. Marsella, A. N. Marshall, C. Pelachaud, H. Pirker, K. R. Thorisson, H. Vilhjalmsson, (2006). Towards a Common Framework for Multimodal Generation: The Behavior Markup Language. Proceedings of Intelligent Virtual Agents (IVA '06), August 21-23. Nominated for Best Conference Paper Award. Also published in Springer Lecture Notes in Computer Science. Unclassified

22. Saemundsson, R., K. R. Thorisson, G. R. Jonsdottir, M. Arinbjarnar, H. Finnsson, H. Gudnason, V. Hafsteinsson, G. Hannesson, J. Isleifsdottir, A. Johannsson, G. Kristjansson, S. Sigmundarson (2006). Modular Simulation of Knowledge Development in Industry: A Multi-Level Framework. Proceedings of the First International Conference on Economic Sciences with Heterogeneous Interacting Agents, Italy, June 15-17. Unclassified
23. Sverrir Sigmundarson and Yngvi Björnsson (2006). Value Back-Propagation vs. Backtracking in Real-Time Heuristic Search, 21st National Conference on Artificial Intelligence (AAAI06), Workshop on Learning for Search, pp. 136-141. Unclassified, but conference is class A
24. A. Valente, W. Lewis Johnson, Hannes H. Vilhjalmsson: The Tactical Language and Culture Training System: A Demonstration. AAAI 2006 Class: A

## 2.5 Other Publications

1. L. Aceto and W. Fokink. The Quest for Equational Axiomatizations of Parallel Composition: Status and Open Problems, in Essays on Algebraic Process Calculi (L. Aceto and A.D. Gordon eds.), Electronic Notes in Theoretical Computer Science 162:43–48, Elsevier, 29 September 2006.
2. L. Aceto, M. Halldorsson and A. Ingolfsdottir. Report on the Second ICE-TCS Symposium. Bulletin of the EATCS 86:262–263, June 2006.
3. Yngvi Björnsson and J. Isleifsdottir (2006). Tools for Debugging Large Game Trees. The 11th Games Programming Workshop. Extended abstract
4. H. Lejsek, F.H. Ásmundsson, B.T. Jónsson, and Laurent Amsaleg. Blazingly Fast Image Copyright Protection (demonstration paper). Proceedings of the ACM Multimedia Conference. Santa Barbara, CA, USA, October, 2006.
5. Asrun Matthiasdottir. Poster: Forget about Lecturing. Proceeding of the international conference Methods, Material and Tools for Programming Education, Tampere Finland
6. M.R. Mousavi, Towards SOS Meta-Theory for Language-Based Security, volume 162 of Electronic Notes in Theoretical Computer Science, Pages 267-271, Elsevier Science, 2006.
7. M.R. Mousavi, M.A. Reniers, M.J. Gabbay. Nominal SOS, Proceedings of the sixth Nordic Workshop on Programming Theory (NWPT'06), Reykjavik, Iceland, October, 2006.
8. Kristinn R. Thorisson, Hannes H. Vilhjalmsson, Catherine Pelachaud, Stefan Kopp, Norman I. Badler, W. Lewis Johnson, Stacy Marsella, Brigitte Krenn: Representations for Multimodal Generation: A Workshop Report. AI Magazine 27(1): 108- (2006)

## 3 Activities for 2006

### 3.1 Events and Outreach

1. AI Festival. K. Thorisson conceived, conducted and executed the first AI Festival in Iceland. 300 attendees; full-day event.
2. *FOSSACS (Foundations of Software Science and Computation Structures) 2006*, Vienna, Austria, 2006. This is one of the main international conferences in theoretical computer science. It was co-chaired by Luca Aceto and Anna Ingólfssdóttir.
3. “Heroes of Science” public talk *And Logic Begat Computer Science: When Giants Roamed the Earth* delivered by Moshe Y. Vardi (Rice University, USA) on Thursday, 1 June, 2006. The talk was attended by over 120 people.
4. Nordic Workshop on Programming Theory 2006, 18–20 October 2006, Reykjavík, Iceland. This was the first time that this yearly workshop was held in Iceland. Attendance: about 50 researchers from all over Europe.
5. Permutation Patterns 2006, 12–16 June, 2006, Reykjavik University. Einar Steingrímsson co-organized this event that was attended by about 45 mathematicians from all over the world.
6. Programming Competition, March 2006. Hallgrímur Arnalds has organized our yearly programming competition for high school students. The 2006 edition of the competition had about 40 participants.
7. Vísindavaka 2006. The department had a large booth filled with posters about our research and offered live demos (from both CADIA and the Database Lab). This was a half-day public event, and we had a steady stream of visitors and some live television coverage. Kristinn R. Thorisson and Hannes H. Vilhjálmsson coordinated the activities of the department.

### 3.2 Membership of Programme and Organizing Committees

1. *FOSSACS (Foundations of Software Science and Computation Structures) 2006*, Vienna, Austria, 2006. (Program Committee Co-Chairs Luca Aceto and Anna Ingólfssdóttir.)
2. Second ICE-TCS Symposium on Theoretical Computer Science, Reykjavík, Iceland, 31 May 2006. (Co-organizers Luca Aceto, Magnus M. Halldorsson and Anna Ingólfssdóttir.)
3. Twenty-first Annual IEEE Symposium on LOGIC IN COMPUTER SCIENCE (LICS 2006), 10–22 August 2006, Seattle, Washington State, USA. (PC member, Luca Aceto)

4. 17th International Conference on Concurrency Theory (CONCUR 2006), 27–30 August 2006, Bonn, Germany. (PC member, Luca Aceto)
5. Nordic Workshop on Programming Theory 2006, 18–20 October 2006, Reykjavik, Iceland. (PC co-chairs and co-organizers: Luca Aceto and Anna Ingólfssdóttir.)
6. PAuL: Probabilistic Automata and Probabilistic Logics, workshop affiliated with LICS 2006 as part of the Federated Logic Conference 2006. (Program Committee member: Anna Ingólfssdóttir.)
7. Fifth International Conference on Computers and Games (CG06), Turin, Italy. (Program Committee Member, Y. Björnsson)
8. SIGMOD Workshop on the Performance and Evaluation of Data Management Systems (EXPDB), 2006. (Program Committee Member, B.T. Jónsson)
9. IASTED Databases and Applications Conference (DBA), 2006. (Program Committee Member, B.T. Jónsson)
10. Permutation Patterns 2006, 12–16 June, 2006, Reykjavik University. (Member of organizing committee: Einar Steingrímsson.)
11. 4th Workshop on Structural Operational Semantics (SOS'06), Bonn, Germany. (PC member MohammadReza Mousavi.)
12. 2nd International Symposium on Fundamentals of Software Engineering (FSEN'07), Tehran, Iran. (PC member MohammadReza Mousavi.)
13. Intelligent Virtual Agents 2006. (PC members Kristinn Thorisson and Hannes H. Vilhjálmsson.)
14. Gesticon Multimodal Behavior Description Meeting 2006, at WP Workshop on Good Practice and Standards of the EU-IST Network of Excellence HUMAINE, Vienna. (Co-organizer: H.H. Vilhjálmsson)

### 3.3 Membership of Editorial Boards

- Luca Aceto is editor of the “Concurrency Column” in the *Bulletin of the EATCS* (October 2003 onwards).
- Luca Aceto is a member of the editorial board of *Journal on Logic and Algebraic Programming*, Elsevier (December 2003 onwards).
- Luca Aceto is a member of the editorial board of *Acta Cybernetica*.
- Special Issue of Multimedia Tools and Applications, dedicated to papers from the CVDB 2004 workshop Guest editor for a Special Issue of Multimedia Tools and Applications, dedicated to papers from the CVDB 2005 workshop. (Guest editor: B.T. Jónsson).

### 3.4 Membership of Learned Bodies and Steering Committees

- Luca Aceto and Anna Ingólfssdóttir are scientific co-directors of the Icelandic Centre of Excellence in Theoretical Computer Science (ICE-TCS), March 2005 onwards. (Together with Magnús M. Halldórsson.)
- Luca Aceto was a member of the steering committee for European Symposium on Theory and Practice of Software (ETAPS) (September 2004–February 2006).
- Luca Aceto is the chair of the IFIP Working Group 1.8 on Concurrency Theory under TC.1.
- Luca Aceto is a member of the scientific advisory board of the Bertinoro International Center for Informatics (BICI) (2002–2006).
- Luca Aceto is a member of the council of the EATCS (European Association for Theoretical Computer Science) (2005–2009).
- Yngi Börnsson is vice-president of the International Computer Games Association.
- Anna Ingólfssdóttir is a member of the steering committee for the European Symposium on Theory and Practice of Software (ETAPS) (March 2006–September 2008).
- Anna Ingólfssdóttir is secretary of the IFIP Working Group 1.8 on Concurrency Theory under TC.1.
- Hrafn Loftsson is a scientific director of the Icelandic Centre for Language Technology (ICLT), July 2005 onward.
- Ásrun Matthíasdóttir and Hannes H. Vilhjálmsson are members of the advisory group to the Ministry of Education on the use of IT in schools. This was a part of the “ESB Education and Training 2010: National Debate Action Plan 2006”.
- Einar Steingrímsson is a member of the “Engineering and Science Board” of the Icelandic Research Council.
- K. Thorisson is a member of the “Engineering and Science Board” of the Technological Development and Innovation Fund of the Icelandic Research Council.
- H.H. Vilhjálmsson is board member of Alelo Inc.

### 3.5 Guests

During 2006, we have received 16 guests from foreign institutions for stays ranging in duration from two days to three weeks. These are listed in below in reverse chronological order.

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- Gerd Behrmann, CISS and Department of Computer Science, Aalborg University, Denmark. Period: 18–19 October, 2006.
  - Matthew Hennessy, University of Sussex, UK. Period: 18–22 October, 2006.
  - Tarmo Uustalu, Institute of Cybernetics, Tallinn University of Technology, Estonia. Period: 17–27 October, 2006.
  - David Sands, Chalmers University of Technology and University of Göteborg, Sweden. Period: 17–22 October, 2006.
  - Hanne Riis Nielson, Technical University of Denmark, Denmark. Period: 16–22 October, 2006.
  - Flemming Nielson, Technical University of Denmark, Denmark. Period: 16–22 October, 2006.
  - Kim G. Larsen, BRICS, CISS and Department of Computer Science, Aalborg University, Denmark. Period: 16–20 October, 2006.
  - Vadim Bulitko, Department of Computing Science, University of Alberta, Canada. Period: 5–8 June, 2006.
  - Nadia Busi, Department of Computer Science, University of Bologna, Italy. Period: 5–9 June, 2006.
  - Moshe Y. Vardi, Department of Computer Science, Rice University, USA. Period: 31 May–2 June, 2006.
  - Wan Fokkink, Department of Computer Science, Vrije Universiteit Amsterdam, NL. Period: 29 May–2 June, 2006.
  - Laurent Amsaleg, IRISA Rennes, France. Period: 27 May–3 June.
  - Hervé Jégou, IRISA Rennes, France. Period: 27 May–3 June.
  - Jan Friso Groote, Department of Mathematics and Computer Science, Eindhoven University of Technology, The Netherlands. Period: 7–27 May, 2006.
  - Artem Pyatkin, Department of Informatics, University of Bergen, Norway. Period: 5–10 April, 2006.
  - Bridget Eileen Tenner, Department of Mathematics, MIT, USA. Period: 2–11 January, 2006.

All of the guests delivered seminars and/or contributed informal talks to the various meetings organized by the research centres at the department.

### 3.6 Selected Invited Talks at Conferences, Workshops and Research Centres

- *Impossibility Results in the Equational Logic of Processes*. Invited talk at the Workshop on Logic, Models and Computer Science (LMCS06) organized by the Italian Association for Logic and its Applications (AILA), Camerino, Italy, 20–22 April 2006. (Luca Aceto)
- *Tools for Debugging Large Game Trees*. The 11th Games Programming Workshop, November 2006, Hakone, Japan. (Y. Björnsson)
- *Enhanced Heuristics for Optimal Path-finding on Game Maps*. Japan Advanced Institute for Science and Technology (JAIST), November 2006, Nomi, Japan. (Y. Björnsson)
- AT&T Labs Research, Florham Park, NJ, USA, November 2006. (B.T. Jónsson)
- Siemens Corporate Research, Princeton, NJ, USA, 10/2006. (B.T. Jónsson)
- *Shallow parsing of Icelandic text*. A talk at the conference *Icelandic Language Technology 2006*, organized by the Icelandic Centre for Language Technology. Reykjavik, May 2006. (H. Loftsson)
- *A linguistic rule-based tagger for Icelandic*. A talk at the conference *Icelandic Language Technology 2006*, organized by the Icelandic Centre for Language Technology. Reykjavik, May 2006. (H. Loftsson)
- *Reconciling Operational and Epistemic Approaches to Protocol Verification*, Joint Queen Mary and Imperial College Theory Seminar, November 2006, Department of Computing, Imperial College, London, UK. (M.R. Mousavi)
- *Promoted Operational Semantics: Congruence, Expressiveness and Well-Foundedness*, Computer Science Seminar, June 2006, Department of Mathematics and Computer Science, University of Leicester, Leicester, UK. (M.R. Mousavi)
- *Nominal SOS*, Process Algebra Meeting (PAM), April 2006, CWI, Amsterdam, The Netherlands. (M.R. Mousavi)
- *Understanding Intelligence in Context*. University of Edinburgh, Institute for Perception, Action and Behavior, Edinburgh, Scotland, Feb. 2006. (K. Thorisson)
- *Architectures for Humanoid Cognitive Robots: Using Psychone in Asimo*. HONDA Research Institutes, Mountainview, California, USA, Jan. 2006. (K. Thorisson)
- *Modeling Culture in Language Training*, Workshop on Cross-cultural and Culture-specific Aspects of Conversational Backchannels and Feedback, Institute for Creative Technologies, Marina del Rey, December 2006. (H.H. Vilhjálmsson)

- *Using games to scaffold learning*, Trends in the use of learning objects, NordFlex Virtual Conference, October 2006. (H.H. Vilhjálmsson)
- *Multimedia and Language*, Vigdís Finnbogadóttir Institute of Foreign Languages. (H.H. Vilhjálmsson)

## 4 Public Appearances

The staff members of the Department of Computer Science at Reykjavík University frequently contribute to local newspapers, and make appearances on local radio and television programs. These public appearances are important for the visibility of the department and to advertise computer science amongst the general public. A list of such selected appearances during 2006 may be found at

<http://www.ru.is/luca/app2006.doc>.

## 5 MSc Degrees Awarded in 2006

- S. Sigmundarson, June 2006. Thesis: *Backtracking and Value Back-Propagation in Real-Time Search*, advisor: Yngvi Björnsson.
- H. Gudnason, June 2006. Thesis: *Median Rank in Face Recognition*, advisor: Björn T. Jónsson.
- Á.M. Jónsson, June 2006. Thesis: *Practical Performance Considerations for the Prefetching B+-tree*, advisor: Björn T. Jónsson.







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