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School of Computer Science  
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# Hrafn Loftsson

## PERSONAL DETAILS

- Born April 14, 1965, Reykjavik, Iceland. Icelandic Citizenship. Languages: Icelandic (native), English (fluent), Danish (good), German (basic).

## RESEARCH INTERESTS

- My research field is Natural Language Processing. I have been developing methods and tools for morphological analysis, part-of-speech tagging, shallow parsing, machine translation, corpus construction and intelligent computer-assisted language learning (ICALL).

## EDUCATION

- 2004-2007 • **PhD in Computer Science/Natural Language Processing.** University of Sheffield, England.
- 1990-1992 • **MSc in Computer Science and Operations Research.** Pennsylvania State University, USA.
- 1985-1989 • **BSc in Computer Science.** University of Iceland.

## WORK EXPERIENCE

- 08/2011-Present • **Associate Professor in the School of Computer Science, Reykjavik University.**
  - Research in the field of Natural Language Processing.
  - Supervision of research-oriented B.Sc. students, and graduate students.
  - Courses taught at the B.Sc. and M.Sc. level.
- 09/2013-02/2018 • **Kolibri ehf., Reykjavik.**
  - Software Developer.
  - Languages/Frameworks: C#, Xamarin, Javascript, Node.js, AngularJS.
- 11/2003-08/2011 • **Assistant Professor in the School of Computer Science, Reykjavik University.**
  - Research in the field of Natural Language Processing.
  - Supervision of research-oriented B.Sc. and M.Sc. students.
  - Courses taught at the B.Sc. and M.Sc. level.

## WORK EXPERIENCE (continued)

- 07/2001-10/2003
- **Dean of the School of Computer Science, Reykjavik University.**
  - Responsible for budget, strategy, development and management of the School of Computer Science.
  - Executive board member of Reykjavik University.
  - Interaction and collaboration with students, other schools, and the industry.
  - Courses taught at the B.Sc. level.
- 01/2000-06/2001
- **Assistant Professor in the School of Computer Science, Reykjavik University.**
  - Courses taught at the B.Sc. level.
- 11/1997-01/2000
- **Fjárfestingarbanki atvinnulífsins (FBA), Reykjavik.**
  - Programmer/analyst. Responsible for trading systems.
- 02/1995-10/1997
- **Verðbréfamarkaður Íslandsbanka (VÍB), Reykjavik.**
  - Chief Information Officer.
  - Design and implementation of trading systems.
  - Languages/Frameworks: Delphi Pascal and Oracle PL/SQL.
- 07/1992-02/1995
- **Greenwich Capital Markets (GCM), Connecticut, USA and London, England.**
  - Design and implementation of trading systems.
  - Languages/Frameworks: C/C++ and Smalltalk.
- 02/1989-08/1990
- **Íslenskt hugvit hf., Reykjavik.**
  - Design and implementation of a securities system.
  - Languages/Frameworks: RPG/400.
- 06/1988-01/1989
- **Talnakönnun hf., Reykjavik.**
  - Programming of a securities system.
  - Languages/Frameworks: RPG.

## TEACHING EXPERIENCE

- Fall 2020
- Natural Language Processing (MSc), Programming
- Fall 2019
- Natural Language Processing (MSc), Programming
- Spring 2019
- Data Structures
- Fall 2018
- Natural Language Processing (MSc), Programming
- Fall 2017
- App Development
- Fall 2016
- App Development
- Spring 2016
- Data Structures
- Fall 2015
- Natural Language Processing (MSc), Programming
- Spring 2015
- Object-Oriented Programming in C++
- Fall 2014
- Programming
- Spring 2014
- Programming Languages
- Fall 2013
- Natural Language Processing (MSc), Web Mining (MSc), Independent Study
- Spring 2013
- Data Structures, Programming Languages
- Spring 2012
- Data Structures, Programming Languages, Research-based final projects
- Fall 2011
- Programming, Web Mining (MSc), Research-based final projects
- Spring 2011
- Data Structures
- Fall 2010
- Natural Language Processing (MSc), Programming, Independent Study
- Spring 2010
- Compilers
- Fall 2009
- Natural Language Processing (MSc), Programming Languages, Independent Study
- Fall 2008
- Natural Language Processing (MSc), Programming Languages

## TEACHING EXPERIENCE (continued)

Spring 2008	• Compilers, Independent Study
Fall 2007	• Natural Language Processing (MSc)
Spring 2007	• Compilers
Fall 2006	• Programming Languages
Spring 2006	• Introduction to Language Analysis
Spring 2004	• Compilers
Fall 2002	• Programming Languages
Spring 2002	• Compilers
Fall 2001	• Programming Languages
Spring 2001	• Compilers, Computer Graphics
Fall 2000	• Programming Languages
Spring 2000	• Compilers, Computer Graphics
Fall 1999	• Programming Languages

## PUBLICATIONS

### *Journal Papers*

- **Loftsson, H.** 2008. Tagging Icelandic text: A linguistic rule-based approach. *Nordic Journal of Linguistics*, **31(1)**: 47–72.
- **Loftsson, H.** 2006. Tagging Icelandic text: an experiment with integrations and combinations of taggers. *Language Resources and Evaluation*, **40(2)**: 175–181.
- Matthíasdóttir, Á., Fanngjörnsdóttir, K. and **Loftsson, H.** 2004. Women in Computer Science. *Tímarit um menntarannsóknir*, 1. árg. 2004. FUM, félag um menntarannsóknir.

### *Conference and workshop papers*

- **Loftsson, H.** and Matthíasdóttir, Á. 2021. Moving Classes in a Large Programming Course Online: An Experience Report. In *Proceedings of the 2nd International Computer Programming Education Conference*. Online.
- Daðason, J. F., **Loftsson, H.**, Sigurðardóttir, S. and Björnsson, P. 2021. IceSum: An Icelandic Text Summarization Corpus. In *Proceedings of the Conference of the North American Chapter of the Association for Computational Linguistics (NAACL): Student Research Workshop*. Mexico City, Mexico (Online).
- Steingrímsson, S., **Loftsson, H.** and Way, A. 2021. CombAlign: a Tool for Obtaining High-Quality Word Alignments. In *Proceedings of the 23rd Nordic Conference of Computational Linguistics (NODALIDA-2021)*. Reykjavik, Iceland (Online).
- Ingólfssdóttir, S. L., Guðjónsson, Á. A. and **Loftsson, H.** 2020. Named Entity Recognition for Icelandic: Annotated Corpus and Models. In *Proceedings of the 8th International Conference on Statistical Language and Speech Processing (SLSP 2020)*. Cardiff, United Kingdom.
- Jónsson, H. P., Símonarson, H. B., Snæbjarnarson V., Steingrímsson, S., and **Loftsson, H.** 2020. Experimenting with Different Machine Translation Models in Medium-Resource Settings. In *Proceedings of the 23rd International Conference on Text, Speech and Dialogue (TSD 2020)*. Brno, Czech Republic (Online).
- Steingrímsson, S., **Loftsson, H.** and Way, A. 2020. Effectively Aligning and Filtering Parallel Corpora under Sparse Data Conditions. In *Proceedings of the ACL Student Research Workshop*. Seattle, Washington (Online).

## PUBLICATIONS (continued)

- Matthíasdóttir, Á. and **Loftsson, H.** 2020. Improving the implementation of a first-semester programming course. In *Proceedings of the 16<sup>th</sup> International CDIO Conference*. Bangkok, Thailand.
- Nikulásdóttir, A., Guðnason, J., Ingason, A. K., **Loftsson, H.**, Rögnvaldsson, E., Sigurðsson, E. F. and Steingrímsson, S. 2020. Language Technology Programme for Icelandic 2019-2023. In *Proceedings of the 12<sup>th</sup> International Conference on Language Resources and Evaluation (LREC 2020)*. Marseille, France.
- Daðason, J. F., Mollbert, D., **Loftsson, H.** and Bjarnadóttir, K. 2020. Kvistur: a BiLSTM Compound Splitter for Icelandic. In *Proceedings of the 12<sup>th</sup> International Conference on Language Resources and Evaluation (LREC 2020)*. Marseille, France.
- **Loftsson, H.** and Matthíasdóttir, Á. 2019. Using Flipped Classroom and Team-Based Learning in a First-Semester Programming Course: An Experience Report. In *Proceedings of TALE 2019, IEEE International Conference on Teaching, Assessment, and Learning for Engineering*. Yogyakarta, Indonesia.
- Ingólfssdóttir S. L., Þorsteinsson, S. and **Loftsson, H.** 2019. Towards High Accuracy Named Entity Recognition for Icelandic. In *Proceedings of the 22<sup>nd</sup> Nordic Conference of Computational Linguistics (NODALIDA-2019)*. Turku, Finland.
- Ingólfssdóttir S. L., **Loftsson, H.**, Daðason, J. F. and Bjarnadóttir, K. 2019. Nefnir: A high accuracy lemmatizer for Icelandic. In *Proceedings of the 22<sup>nd</sup> Nordic Conference of Computational Linguistics (NODALIDA-2019)*. Turku, Finland.
- Steingrímsson, S., Kárason, Ö. and **Loftsson, H.** 2019. Augmenting a BiLSTM tagger with a Morphological Lexicon and a Lexical Category Identification Step. In *Proceedings of Recent Advances in Natural Language Processing (RANLP 2019)*. Varna, Bulgaria.
- Þorsteinsson, V., Óladóttir, H. and **Loftsson, H.** 2019. A Wide-Coverage Context-Free Grammar for Icelandic and an Accompanying Parsing System. In *Proceedings of Recent Advances in Natural Language Processing (RANLP 2019)*. Varna, Bulgaria.
- Matthíasdóttir, Á. and **Loftsson, H.** 2019. Flipped Learning in a Programming Course: Sstudents' Attitudes. In *Proceedings of the 15<sup>th</sup> International CDIO Conference*. Aarhus, Denmark.
- Ingason, A. K., **Loftsson, H.**, Rögnvaldsson, E., Sigurðsson, E. F. and Wallenberg, J. C. 2014. Rapid Deployment of Phrase Structure Parsing for Related Languages: A Case Study of Insular Scandinavian. In *Proceedings of the 9<sup>th</sup> International Conference on Language Resources and Evaluation (LREC 2014)*. Reykjavik, Iceland.
- Helgadóttir, S., **Loftsson, H.** and Rögnvaldsson, E. Correcting Errors in a New Gold Standard for Tagging Icelandic Text. In *Proceedings of the 9<sup>th</sup> International Conference on Language Resources and Evaluation (LREC 2014)*. Reykjavik, Iceland.
- **Loftsson, H.** and Östling, R. 2013. Tagging a Morphologically Complex Language Using an Averaged Perceptron Tagger: The Case of Icelandic. In *Proceedings of the 19<sup>th</sup> Nordic Conference of Computational Linguistics (NODALIDA-2013)*. Oslo, Norway.
- **Loftsson, H.** 2013. Tagging the Past: Experiments Using the Saga Corpus. In *Proceedings of the 19<sup>th</sup> Nordic Conference of Computational Linguistics (NODALIDA-2013)*. Oslo, Norway.
- Volodina, E., Borin, L., **Loftsson, H.**, Arnbjörnsdóttir, B. and Leifsson, G.Ö. 2012. Waste not, want not: Towards a system architecture for ICALL based on NLP component re-use. In *Proceeding of the SLTC 2012 workshop on NLP for CALL. Linköping Electronic Conference Proceedings*, **80**: 47–58.

## PUBLICATIONS (continued)

- Volodina, E., **Loftsson, H.**, Arnbjörnsdóttir, B., Borin, L. and Leifsson, G.Ö. 2012. Towards a system architecture for ICALL. In Proceedings of the ICCE Conference on Technology Enhanced Language Learning (TELL), ICCE 2012 – The 20<sup>th</sup> International Conference on Computers in Education. Singapore.
- Helgadóttir, S., Svavarsdóttir, Á., Rögnvaldsson, E., Bjarnadóttir, K. and **Loftsson, H.** 2012. The Tagged Icelandic Corpus (MÍM). In *Proceedings of the SaLTMiL-AfLaT Workshop on “Language technology for normalisation of less-resourced languages”*, 8<sup>th</sup> International Conference on Language Resources and Evaluation (LREC 2012). Istanbul, Turkey.
- Guðnason, J., Kjartansson, O., Jóhannsson J., Carstensdóttir, E., Vilhjálmsson, H., **Loftsson, H.**, Helgadóttir, S., Jóhannsdóttir, K. and Rögnvaldsson, E. 2012. Almennarómur: An Open Icelandic Speech Corpus. In *Proceedings of the Third International Workshop on Spoken Language Technologies for Under-resourced languages (SLTU 2012)*. Cape Town, South Africa.
- **Loftsson, H.**, Helgadóttir, S. and Rögnvaldsson, E. 2011. Using a morphological database to increase the accuracy in PoS tagging. In *Proceedings of Recent Advances in Natural Language Processing (RANLP 2011)*. Hissar, Bulgaria.
- Brandt, M. D., **Loftsson, H.**, Sigurþórsson, H. and Tyers, F. M. 2011. Apertium-IceNLP: A rule-based Icelandic to English machine translation system. In *Proceedings of the 15<sup>th</sup> Annual Conference of the European Association for Machine Translation (EAMT-2011)*. Leuven, Belgium.
- **Loftsson, H.**, Yngvason, J. H., Helgadóttir, S. and Rögnvaldsson, E. 2010. Developing a PoS-tagged corpus using existing tools. In *Proceedings of “Creation and use of basic lexical resources for less-resourced languages”, workshop at the 7<sup>th</sup> International Conference on Language Resources and Evaluation, LREC 2010*. Valetta, Malta.
- Henrich, V., Reuter, T. and **Loftsson, H.** 2009. CombiTagger: A System for Developing Combined Taggers. In *K. Jokinen and E. Bick (eds.), Proceedings of the 22<sup>nd</sup> International FLAIRS Conference, Special Track: “Applied Natural Language Processing”*. Sanibel Island, Florida, USA.
- **Loftsson, H.**, Kramarczyk, I., Helgadóttir, S. and Rögnvaldsson, E. 2009. Improving the PoS tagging accuracy of Icelandic text. In *Proceedings of the 17<sup>th</sup> Nordic Conference of Computational Linguistics (NODALIDA-2009)*. Odense, Denmark.
- Ingason, A. K., Jóhannsson, S. B., Helgadóttir, S., **Loftsson, H.** and Rögnvaldsson, E. 2009. Context-Sensitive Spelling Correction and Rich Morphology. In *Proceedings of the 17<sup>th</sup> Nordic Conference of Computational Linguistics (NODALIDA-2009)*. Odense, Denmark.
- Rögnvaldsson, E., **Loftsson, H.**, Bjarnadóttir, K., Helgadóttir, S., Nikulásdóttir, A. B., Whelpton, M. and Ingason, A. I. 2009. Icelandic Language Resources and Technology: Status and Prospects. In *Proceedings of the NoDaLiDa 2009 Workshop “Nordic Perspectives on the CLARIN Infrastructure of Common Language Resources”*. Odense, Denmark.
- **Loftsson, H.** 2009. Correcting a POS-Tagged Corpus Using Three Complementary Methods. In *Proceedings of the 12<sup>th</sup> Conference of the European Chapter of the ACL (EACL 2009)*. Athens, Greece.
- Ingason, A. K., Helgadóttir, S., **Loftsson, H.** and Rögnvaldsson, E. 2008. A Mixed Method Lemmatization Algorithm Using Hierarchy of Linguistic Identities (HOLI). In B. Nordström and A. Ranta (eds.), *Advances in Natural Language Processing, 6<sup>th</sup> International Conference on NLP, GoTAL 2008, Proceedings*. Gothenburg, Sweden.
- **Loftsson, H.** and Rögnvaldsson, E. 2008. Linguistic richness and technical aspects of an incremental finite-state parser. In *Proceedings of “Partial Parsing 2008”, workshop at the 6<sup>th</sup> International Conference on Language Resources and Evaluation, LREC 2008*. Marrakech, Morocco.

## PUBLICATIONS (continued)

- **Loftsson, H.** and Rögnvaldsson, E. 2007. IceNLP: A Natural Language Processing Toolkit for Icelandic. In *Proceedings of InterSpeech 2007, Special session: “Speech and language technology for less-resourced languages”*. Antwerp, Belgium.
- **Loftsson, H.** and Rögnvaldsson, E. 2007. IceParser: An Incremental Finite-State Parser for Icelandic. In J. Nivre, H-J. Kaalep, K. Muischnek and M. Koit (eds.), *Proceedings of the 16<sup>th</sup> Nordic Conference of Computational Linguistics (NODALIDA-2007)*. Tartu, Estonia.
- **Loftsson, H.** 2007. Tagging Icelandic Text using a Linguistic and a Statistical Tagger. In *Proceedings of Human Language Technologies 2007: The Conference of the North American Chapter of the ACL*. Rochester, NY, USA.
- **Loftsson, H.** 2006. Tagging a Morphologically Complex Language Using Heuristics. In T. Salakoski, F. Ginter, S. Pyysalo, and T. Pahikkala (eds.), *Advances in Natural Language Processing, 5<sup>th</sup> International Conference on NLP, FinTAL 2006, Proceedings*. Turku, Finland.

### *Edited volumes*

- **Loftsson, H.**, Rögnvaldsson, E. and Helgadóttir, S. (eds). 2010. *Advances in Natural Language Processing. 7<sup>th</sup> International Conference on NLP, IceTAL 2010, Reykjavik, Iceland, August 2010, Proceedings*. © 2010 Springer.

### *Non-refereed work*

- Loftsson, H. 2014-2015. Hugsaðu eins og tölvunarfræðingur. An Icelandic translation of the book “How to Think Like a Computer Scientist”, by Allen B. Downey.
- Loftsson, H. 2010. Nýtt íslenskt-enskt grófbýðingarkerfi frá Máltækniisetri [A new Icelandic-English shallow-transfer machine translation system from the Icelandic Centre for Language Technology]. *Reykjavik University magazine*. March 2010.
- Loftsson, H. 2009. Máltækni í HR [Language Technology at RU]. *Reykjavik University magazine*. May 2009.
- Loftsson, H. 2008. Markari og hlutabáttari fyrir íslenskan texta [A tagger and a parser for Icelandic text]. *Tölvumál journal*. February 2008.
- Loftsson, H. and Ingason, A. K. 2007. IceNLP – A Natural Language Processing Toolkit for Icelandic: User guide.
- Loftsson, H. and Rögnvaldsson, E. 2006. A shallow syntactic annotation scheme for Icelandic text. Technical Report RUTR-SSE06004, Department of Computer Science, Reykjavik University.

## SOFTWARE

- Software development is an integrated part of my research, as witnessed, for example, by the following systems:

*IceNLP* – an open source NLP toolkit, implemented in Java, for analyzing and processing Icelandic text. Available for download at <https://github.com/hrafnl/icenlp>.

*CombiTagger* – an open source system, implemented in Java, for developing and evaluating combined taggers. Available for download at <https://github.com/hrafnl/CombiTagger>.

## AWARDS AND GRANTS

- 2021
- **The Strategic Research and Development Programme for Language Technology**
  - *Title:* Using Machine Learning Models for Clinical Diagnoses.

## AWARDS AND GRANTS (continued)

- *Project Manager*: Emil Lárus Sigurðarson, Primary Health Care service of the Capital Area (PHCCA)
  - *Collaborator*: Hrafn Loftsson, RU; Steindór Oddur Ellertsson, PHCCA
  - *Duration*: 18 months. *Grant*: 36.6 million ISK.
- 2021
- **The Strategic Research and Development Programme for Language Technology**
  - *Title*: Spoken Dialogue Framework for Icelandic.
  - *Project Manager*: Hannes H. Vilhjálmsson, Reykjavik University (RU)
  - *Collaborator*: Hrafn Loftsson, RU, Jón Guðnason, RU; Anna Björk Nikulásdóttir, Grammatek ehf.; Eydís Huld Magnúsdóttir, Tiro ehf.; Já ehf.; Akraneskaupstaður.
  - *Duration*: 2 years. *Grant*: 70 million ISK.
- 2021
- **CEF-Telecom**
  - *Title*: National Language Technology Platform (NLTP).
  - *Project Manager*: Tilde (Latvia)
  - *Collaborator*: Reykjavik University (Iceland), Culture Information Systems Centre (Latvia), Malta Information Technology Agency, Office of the State Advocate (Malta), University of Malta, University of Tartu (Estonia), Central State Office for the Development of Digital Society (Croatia), University of Zagreb (Croatia).
  - *Duration*: 2 years. *Grant*: 796,000 EUR.
- 2021
- **CEF-Telecom**
  - *Title*: Microservices at your service: bridging the gap between NLP research and industry.
  - *Project Manager*: Lingsoft (Finland)
  - *Collaborator*: Reykjavik University (Iceland), University of Tartu (Estonia), Gradient (Spain).
  - *Duration*: 2 years. *Grant*: 553,000 EUR.
- 2020
- **The Icelandic Student Innovation Fund**
  - *Title*: Automatic topic classification of Icelandic texts.
  - *Project Manager*: Hrafn Loftsson, Reykjavik University
  - *Collaborator*: Vilhjálmur Þorsteinsson, Miðeind ehf.
  - *Duration*: 3 months. *Grant*: 900,000 ISK.
- 2020
- **The Icelandic Student Innovation Fund**
  - *Title*: Pre-nominal adjective order in Icelandic.
  - *Project Manager*: Hrafn Loftsson, Reykjavik University
  - *Duration*: 3 months. *Grant*: 900,000 ISK.
- 2019
- **Almannarómur: Language Technology for Icelandic**
  - *Projects*: Speech Recognition, Speech Synthesis, Machine Translation, Grammar Checking, Tools and Resources.
  - *Project Manager*: Anna Björk Nikulásdóttir
  - *Collaborators*: SÍM (Samstarf um íslenska máltækni)
  - *Duration*: 5 years.
- 2019
- **The Strategic Research and Development Programme for Language Technology**
  - *Title*: Automatic Text Summarization for Icelandic.
  - *Project Manager*: Hrafn Loftsson, Reykjavik University
  - *Collaborator*: Morgunblaðið, mbl.is
  - *Duration*: 1 year. *Grant*: 11.3 million ISK.
- 2019
- **The Strategic Research and Development Programme for Language Technology**
  - *Title*: Named Entity Recognition for Icelandic.
  - *Project Manager*: Hrafn Loftsson, Reykjavik University
  - *Collaborator*: The Icelandic Stock Exchange

## AWARDS AND GRANTS (continued)

- *Duration:* 1 year. *Grant:* 8.4 million ISK.
- 2013
- **The Icelandic Student Innovation Fund**
  - *Title:* An Open-Source Language-Independent Question-Answering System.
  - *Project Manager:* Hrafn Loftsson, Reykjavik University
  - *Co-applicants:* Jón Gunnar Þorsteinsson, University of Iceland.
  - *Duration:* 3 months. *Grant:* 340,000 ISK.
- 2011
- **NordPlus – Nordiske Sprog og Kultur**
  - *Title:* A System Architecture for Intelligent Computer-Assisted Language Learning.
  - *Project Manager:* Hrafn Loftsson, Reykjavik University.
  - *Co-applicants:* Lars Borin, University of Gothenburg; Birna Arnbjörnsdóttir, University of Iceland.
  - *Duration:* 2 years. *Grant:* 38,500 EUR.
- 2010
- **The Icelandic Student Innovation Fund**
  - *Title:* A gold standard for Icelandic.
  - *Project Manager:* Eiríkur Rögnvaldsson, University of Iceland.
  - *Co-applicants:* Hrafn Loftsson, Reykjavik University; Sigrún Helgadóttir, The Árni Magnússon Institute for Icelandic Studies.
  - *Duration:* 3 months. *Grant:* 420,000 ISK.
- 2010
- **The Icelandic Student Innovation Fund**
  - *Title:* An improved shallow parser for Icelandic text.
  - *Project Manager:* Hrafn Loftsson.
  - *Co-applicants:* Eiríkur Rögnvaldsson, University of Iceland; Jón Eðvald Vignisson, CLARA.
  - *Duration:* 3 months. *Grant:* 280,000 ISK.
- 2009
- **The Icelandic Student Innovation Fund**
  - *Title:* Tagging and correctiong a new corpus.
  - *Project Manager:* Hrafn Loftsson.
  - *Co-applicants:* Sigrún Helgadóttir, The Árni Magnússon Institute for Icelandic Studies; Eiríkur Rögnvaldsson, University of Iceland.
  - *Duration:* 3 months. *Grant:* 280,000 ISK.
- 2009
- **Rannis – The Icelandic Centre for Research (Grant of Excellence)**
  - *Title:* Viable Language Technology Beyond English – Icelandic as a Test Case
  - *Project Manager:* Eiríkur Rögnvaldsson, University of Iceland.
  - *Co-applicants:* Hrafn Loftsson, Reykjavik University; Matthew J. Whelpton, University of Iceland; Kristín Bjarnadóttir, The Árni Magnússon Institute for Icelandic Studies; Anthony Kroch and Joel Wallenberg, University of Pennsylvania; Mikel L. Forcada, Universitat d’Alacant.
  - *Duration:* 3 years. *Grant:* 45 million ISK.
- 2007
- **Rannis – The Icelandic Centre for Research**
  - *Title:* Improved tagging accuracy of Icelandic text.
  - *Project Manager:* Hrafn Loftsson.
  - *Co-applicants:* Eiríkur Rögnvaldsson, University of Iceland and Sigrún Helgadóttir, The Institute of Lexicography, University of Iceland.
  - *Duration:* 2 years. *Grant:* 3.1 million ISK.
- 2007
- **Rannis – The Icelandic Centre for Research**
  - *Title:* Context-sensitive spell checking.
  - *Project Manager:* Eiríkur Rögnvaldsson, University of Iceland.
  - *Co-applicants:* Hrafn Loftsson and Sigrún Helgadóttir, The Institute of Lexicography, University of Iceland.



## AWARDS AND GRANTS (continued)

- *Duration*: 2 years. *Grant*: 3.1 million ISK.
- 2006
- **Rannis – The Icelandic Centre for Research**
  - *Title*: Shallow parsing of Icelandic text.
  - *Project Manager*: Eiríkur Rögnvaldsson, University of Iceland.
  - *Co-applicants*: Hrafn Loftsson and Sigrún Helgadóttir, The Institute of Lexicography, University of Iceland.
  - *Duration*: 1 year. *Grant*: 3.8 million ISK.
- 2006
- **University of Iceland**
  - *Title*: Context-sensitive spell checking.
  - *Project Manager*: Eiríkur Rögnvaldsson, University of Iceland.
  - *Co-applicants*: Hrafn Loftsson and Sigrún Helgadóttir, The Institute of Lexicography, University of Iceland.
  - 1. prize in a competition. *Prize*: 500,000 ISK.
- 2006
- **The Icelandic Student Innovation Fund**
  - *Title*: Utilisation of a large lexicon for tagging Icelandic text.
  - *Project Manager*: Hrafn Loftsson.
  - *Co-applicant*: Kristín Bjarnadóttir, The Institute of Lexicography, University of Iceland.
  - *Duration*: 3 months. *Grant*: 220,000 ISK.
- 2003
- **The Icelandic Student Innovation Fund**
  - *Title*: Women and Computer Science.
  - *Project Manager*: Ásrún Matthíasdóttir, University of Iceland.
  - *Co-applicant*: Hrafn Loftsson.
  - *Duration*: 3 months. *Grant*: 220,000 ISK.

## SUPERVISION OF STUDENT RESEARCH WORK

### *Ph.D. students*

- 2019-  
2018-
- Jón Friðrik Daðason, Reykjavik University. Thesis: Language Modelling.
  - Steinþór Steingrímsson, Reykjavik University. Thesis: Machine Translation.

### *M.Sc. theses*

- 2021
- Tinna Þ. Sigurðardóttir. M.Sc., Reykjavik University. Project (30 ECTS).
- 2021
- Gunnar Pálsson. M.Sc., Reykjavik University. Project (30 ECTS).
- 2019-2021
- Ásmundur Guðjónsson. M.Sc., Reykjavik University. Thesis (60 ECTS): Named Entity Recognition for Icelandic: Comparing and combining different machine learning methods.
- 2019-2020
- Svanhvít L. Ingófsdóttir. M.Sc., Reykjavik University. Thesis (60 ECTS): Named Entity Recognition for Icelandic – annotated corpus and baselines.
- 2015-2016
- Hulda Óladóttir. M.A., University of Iceland (co-supervision). Thesis (60 ECTS): Upplýsingaútdráttur - Nýting upplýsingaramma til málmyndunar [Information Extraction].
- 2013-2014
- Karin Christiansen. M.Sc., Reykjavik University. Project (30 ECTS): Summarization of Icelandic texts.
- 2011-2013
- Guðmundur Örn Leifsson. M.Sc., University of Iceland. Thesis (60 ECTS): Intelligent Writing Support for Second Language Learners of Icelandic using Web Services.
- 2008-2010
- Martha Dís Brandt. M.Sc., January 2011, Reykjavik University. Thesis (60 ECTS): Developing an Icelandic to English Shallow Transfer Machine Translation System.
- 2007-2009
- Ida Kramarczyk. M.Sc., June 2009, Reykjavik University. Thesis (60 ECTS): Improving the tagging accuracy of Icelandic text.

## SUPERVISION OF STUDENT RESEARCH WORK (continued)

- 2008-2009
- Timo Reuter and Verena Henrich. M.Sc., March 2009, University of Applied Sciences, Darmstadt (co-supervision). Thesis: LISGrammarChecker: Language Independent Statistical Grammar Checker.

### *M.Sc. independent studies*

- Fall 2010
- Hlynur Sigurþórsson. Reykjavik University. Independent Study: Daemonizing and enhancing IceNLP for the purpose of machine translation.
- Fall 2010
- Andreas Völlger (exchange student). University of Applied Sciences, Darmstadt. Tagging and parsing German using Spejd.
- Fall 2008
- Timo Reuter and Verena Henrich (exchange students) University of Applied Sciences, Darmstadt. CombiTagger: A system for developing combined taggers.

### *B.Sc. theses*

- Fall 2018
- Svanhvít Lilja Ingólfssdóttir and Sigurjón Þorsteinsson. B.Sc., February 2019, Reykjavik University. Thesis: Named Entity Recognition for Icelandic.
- Spring 2010
- Svavar K. Lúthersson. B.Sc., June 2010, Reykjavik University. Thesis: Tagging and parsing a large corpus.
- Spring 2009
- Aðalsteinn Tryggvason. B.Sc., June 2010, Reykjavik University. Thesis: Named Entity Recognition for Icelandic.
- Spring 2009
- Hlynur Sigurþórsson and Pétur Sigurðsson. B.Sc., June 2010, Reykjavik University. Thesis: Using IceNLP in Computer-Assisted Language Learning.
- Fall 2008
- Kristjana Guðjónsdóttir. B.Sc., January 2009, Reykjavik University. Thesis: A Prototype of an Icelandic Grammar Checker.
- Spring 2007
- Frank A. B. Cassata. B.Sc., June 2007, Reykjavik University. Thesis: Automatic thesaurus extraction for Icelandic.

### *B.Sc. independent studies / research opportunity*

- Spring 2014
- Ólafur P. Geirsson, Guðmundur Harðarson, Guðmundur Þ. Guðmundsson. Reykjavik University. Undergraduate Research Opportunity: Orðspor: Labeling named entities with computer games.
- Fall 2012
- Emmanuel Günther. University of Applied Sciences, Darmstadt (co-supervision). Undergraduate Research Opportunity: An Intelligent BOT.
- Fall 2011
- Ólafur Waage. Reykjavik University. Independent Study: Continued development of Apertium-IceNLP: A rule-based Icelandic to English machine translation system.
- Fall 2009
- Jökull H. Yngvason. Reykjavik University. Independent Study: Automatic extraction of verb subcategorization frames for Icelandic

### *The Icelandic Student Innovation Fund*

- Summer 2013
- Ólafur P. Geirsson. B.Sc. student, Reykjavik University. Project: A language independent Question-Answering System.
- Summer 2010
- Ragnar L. Sigurðsson. B.Sc. student, Reykjavik University. Project: An improved shallow parser for Icelandic.
- Summer 2009
- Jökull H. Yngvason. B.Sc. student, Reykjavik University. Project: Developing a PoS-tagged corpus using existing tools.
- Summer 2006
- Anna M. Sigurðardóttir. B.Sc. student, Reykjavik University. Project: Utilisation of a large lexicon for tagging Icelandic text.

### *Ph.D./M.Sc. committees*

## SUPERVISION OF STUDENT RESEARCH WORK (continued)

- Fall 2020 • Egill Anton Hlöðversson. M.Sc. Reykjavik University. Thesis (60 ECTS): Spoken Language Understanding for Icelandic Airline Reservation System, and Translated Corpus. Examiner.
- Fall 2020 • Branislav Bédi. Ph.D. University of Iceland. Thesis: Learning Icelandic in Virtual Reykjavik: Simulating real-life conversations with Embodied Conversational Agents using multimodal clarification requests. Opponent.
- Fall 2019 • Guðmundur Páll Kjartansson. M.Sc. Reykjavik University. Project (30 ECTS): Experimenting with Time and Depth Control in Chess Engines. Examiner.
- Spring 2019 • Julia Elisabeth Haidn. M.Sc. Reykjavik University. Project (30 ECTS): Flight Recommender System Using Implicit Feedback. Examiner.
- Spring 2018 • Anna Vigdís Rúnarsdóttir. M.Sc. Reykjavik University. Project (30 ECTS): Re-Scoring Word Lattices from Automatic Speech Recognition System Based on Manual Error Corrections. Examiner.
- Fall 2013 • Tihomir Rangelov. M.A. University of Iceland. Project (30 ECTS): Shallow-Transfer Rule-Based Machine Translation between Icelandic and Swedish. External reviewer.
- Spring 2013 • Francis Morton Tyers. Ph.D. Universitat d'Alacant. Thesis: Feasible lexical selection for rule-based machine translation. External reviewer.
- Fall 2012 • Yvonne Adesam. Ph.D. Stockholm University. Thesis: Multilingual Trees – Investigating High-quality Cross-lingual Parallel Corpus Processing. Committee member.
- Spring 2012 • Jón Daðason. M.Sc., June 2012, University of Iceland. Thesis (60 ECTS): Post-correction of Icelandic OCR text. Examiner.
- Spring 2011 • Valdís Sigurþórsdóttir. M.Sc., June 2011, Reykjavik University. Thesis (60 ECTS): Towards Automatic Generation of Realistic Web Query Sequences. Examiner.

## SERVICES

- 2020-2021 • Local Chair and Reviewer for *NoDaLiDa 2021* – The 23<sup>rd</sup> Nordic Conference of Computational Linguistics, Reykjavik, Iceland.
- Spring 2020 • Reviewer for the 16<sup>th</sup> CDIO International Conference.
- Fall 2019-Present • Executive Committee Member of the *Northern European Association of Language Technology*.
- Nov 2018 • Selection Committee member of *Hvatningarverðlaun vískafræðinganna um eftirtektaverða notkun á íslenskri tungu*, a contest regarding noteworthy use of Icelandic in the business sector.
- Nov. 3, 2018 • Chair of the workshop “Að nota íslensku í tölvum og tækjum” [Using Icelandic in computers and devices], organized by “Vísindafélag Íslendinga” [Societas Scientiarum Islandica].
- Sept. 28, 2018 • Chair of the workshop “Databases and machine translation”, organized by the European Language Resource Coordination (ELRC) and the Vigdís Finnbogadóttir institute.
- Fall 2019-Spring 2019 • Program Committee member of *NoDaLiDa 2019* – The 22<sup>nd</sup> Nordic Conference of Computational Linguistics, Turku, Finland.
- 2018-2019 • Board member of *Almannarómur* – a non-profit organization whose purpose is to promote the development of Language Technology tools for the Icelandic language.
- 2015 • Chairman of the board of the Icelandic Language Technology Fund.
- Fall 2014-Fall 2018 • Board member of the National and University Library of Iceland.
- Fall 2014 • Chairman of Committee appointed by the Icelandic Ministry of Education, Science and Culture for proposing actions and plans for supporting Icelandic Language Technology.
- Fall 2014 • Reviewer for University of Iceland Research Fund.
- Fall 2014 • Program Committee member of the 3<sup>rd</sup> Workshop on NLP in Computer-Assisted Language Learning, *SLTC 2014* – 5<sup>th</sup> Swedish Language Technology Conference, Uppsala, Sweden.
- Fall 2014 • Reviewer for *Orð og tunga* (an Icelandic Journal).
- Spring 2013-Spring 2014 • Program Committee member and Local Organizing Committee member of LREC 2014, Reykjavik, Iceland.

## SERVICES (continued)

- Spring 2013-Spring 2014 • Member of a committee developing a new master program in Business Information Management in collaboration with Advania.
- Spring 2013 • Program Committee member of *Workshop on Computational Historical Linguistics, NoDaLiDa 2013* – The 19<sup>th</sup> Nordic Conference of Computational Linguistics, Oslo, Norway.
- Spring 2013 • Program Committee member and Organizer of 2<sup>nd</sup> *Workshop on NLP for Computer-Assisted Language Learning, NoDaLiDa 2013* – The 19<sup>th</sup> Nordic Conference of Computational Linguistics, Oslo, Norway.
- Fall 2012 • Reviewer for *NKG* – “Nýsköpunarkeppni grunnskólanemenda” [Innovation contest in elementary schools], <http://www.nkg.is/>, Reykjavik, Iceland.
- Fall 2012 • Program Committee member of Workshop on NLP in Computer-Assisted Language Learning, *SLTC 2012* – 4<sup>th</sup> Swedish Language Technology Conference, Lund, Sweden.
- Summer 2012 • Program Committee member of *JapTAL 2012* – 8<sup>th</sup> International Conference on Natural Language Processing, Kanazawa, Japan.
- Spring 2012-Spring 2014 • Editorial Board Member of the *Northern European Journal of Language Technology*.
- Spring 2012 • Reviewer for *Gripla* (an Icelandic Journal).
- Spring 2012 • Program Committee member of *FreeRBMT12* – Third International Workshop on Free/Open-Source Rule-Based Machine Translation, Gothenburg, Sweden.
- Spring 2012 • Program Committee member of *SaLTMiL-AfLaT Workshop* on “Language technology for normalisation of less-resourced languages”, LREC 2012, Istanbul, Turkey.
- Fall 2011-Spring 2013 • Member of the *Research Council* at the School of Computer Science, Reykjavik University.
- Spring 2011 • Program Committee member of *NoDaLiDa 2011* – The 18<sup>th</sup> Nordic Conference of Computational Linguistics, Riga, Latvia.
- Fall 2010 • Program Committee member of *FreeRBMT11* – Second International Workshop on Free/Open-Source Rule-Based Machine Translation, Barcelona, Spain.
- Spring 2010-Spring 2012 • Member of the *Curriculum Council* at Reykjavik University.
- Spring 2010 • Selection Committee member of *Ordid.is*, a contest regarding inventive use of the Morphological Database of Icelandic Inflections.
- Spring 2010 • Program Committee member of 7<sup>th</sup> *SaLTMiL Workshop* on “Creation and use of basic lexical resources for less-resourced languages”, LREC 2010, Valetta, Malta.
- Fall 2009-Summer 2010 • Program Committee Chair and Organizer of *IceTAL 2010* – 7<sup>th</sup> International Conference on Natural Language Processing, Reykjavik, Iceland.
- Fall 2009 • Program Committee member of *FreeRBMT09* – First International Workshop on Free/Open-Source Rule-Based Machine Translation, Alicante, Spain.
- Spring 2009 • Reviewer for the *National Science Foundation*, USA.
- Fall 2007-Fall 2011 • Chairman of the *Undergraduate Studies Council* at the School of Computer Science, Reykjavik University.
- Spring 2006 • Reviewer for the *Journal of Natural Language Engineering*.
- Fall 2005-Present • Board member of *The Icelandic Centre for Language Technology*.
- Fall 2002-Spring 2004 • Chairman of the board of Reykjavik University *Netlab*.
- Fall 2001-Fall 2003 • Committee member of the *The Educational Committee of the Icelandic Association of Computer Scientists*.
- Spring 2001 • Reviewer for *Rannis* – *The Icelandic Research Council*.
- Fall 2000 • Reviewer for *Rannis* – *The Icelandic Research Council*.

## DEMOS/POSTERS

- 09/2010 • **A web service for machine translation from Icelandic to English – Demo.**  
• Researchers’ Night Science festival. Reykjavik, Iceland.
- 09/2009 • **Analysing Icelandic text and translating to English – Demo.**

## DEMOS/POSTERS (continued)

- Researchers' Night Science festival. Reykjavik, Iceland.
- 10/2007 • **IceNLP: A Natural Language Processing Toolkit for Icelandic – Demo.**
  - Artificial Intelligence Festival, Reykjavik, Iceland.
- 10/2006 • **Shallow parsing of Icelandic text – Demo.**
  - Swedish Language Technology Conference, Gothenburg, Sweden.
- 04/2006 • **Shallow parsing of Icelandic text – Demo.**
  - Artificial Intelligence Festival, Reykjavik, Iceland.

## ACTIVITIES AND OUTREACH

- Fall 2012 • Research visit to University of Gothenburg, Sweden. October 6<sup>th</sup> - December 1<sup>st</sup>.
- Fall 2010 • Erasmus teacher exchange visit to University of Applied Sciences, Darmstadt, Germany. November 10-13.
- Fall 2009 • Erasmus teacher exchange visit to University of Applied Sciences, Darmstadt, Germany. November 26-29.
- Spring 2009 • Research visit to University of Pennsylvania, USA. March 19-27.
- Spring 2009 • Research visit to University of Alicante, Spain. February 2-18.

## INVITED TALKS

- 10/2019 • **Sjálfvirk samantekt íslensks texta [Automatic Summarization of Icelandic Texts].** *Er íslenska góður "business"? [Is Icelandic good business?]*. Reykjavik, Iceland.
- 11/2016 • **Cross-platform mobile app development with Xamarin – a success story.** *Go Digital Conference.* Reykjavik, Iceland.
- 02/2013 • **The Raven flies [Hrafninn flýgur].** *Science Coffee, Reykjavik University.* Reykjavik, Iceland.
- 02/2013 • **Language Technology is important.** *The UT2013 conference (UTmessa).* Reykjavik, Iceland.
- 11/2012 • **Icelandic Language Technology – and my current research projects.** *Högre seminarium i datorlingvistik, Uppsala Universitet.* Uppsala, Sweden.
- 10/2012 • **Ongoing development of an NLP toolkit with potential usage in ICALL.** *SLTC Workshop: NLP for computer-assisted language learning.* Lund, Sweden.
- 10/2012 • **Intelligent CALL and writing support for second-language learners of Icelandic.** *Arbeidsseminar om IT-undervisning i Nordens språk.* Lund, Sweden.
- 10/2012 • **Icelandic Language Technology and current BLARK components.** *Gothenburg's CLT workshop.* Gullmarsstrand, Sweden.
- 08/2012 • **Changing the traditional lecture method.** *Teaching Day at Reykjavik University.* Reykjavik, Iceland.
- 12/2011 • **Tagging Icelandic: The development of recent years.** Seminar series: *The Icelandic Centre for Language Technology.* Reykjavik, Iceland.
- 03/2011 • **Tagging and correcting a new gold standard for Icelandic.** *Hugvísindabing 2011.* Reykjavik, Iceland.
- 03/2009 • **Shallow-transfer machine translation.** *Hugvísindabing 2009.* Reykjavik, Iceland.
- 01/2009 • **Correcting a PoS-tagged corpus using three complementary methods.** Seminar series: *The Icelandic Centre for Language Technology.* Reykjavik, Iceland.
- 02/2007 • **Tagging Icelandic text: An experiment with integrations and combinations of taggers.** Seminar series: *The Icelandic Centre for Language Technology.* Reykjavik, Iceland.
- 01/2007 • **Shallow parsing of Icelandic text.** *The Rask conference,* Reykjavik, Iceland.

## INVITED TALKS (continued)

- 05/2006 • **Shallow parsing of Icelandic text.** *The Icelandic Language Technology conference*, Reykjavik, Iceland.
- 05/2006 • **A linguistic rule-based tagger for Icelandic.** *The Icelandic Language Technology conference*, Reykjavik, Iceland.
- 09/2003 • **Does education shape the future or does the future shape education?** *Skýrslutæknifélag conference*, “Is the future now?”, Reykjavik, Iceland.
- 03/2003 • **Women and Computer Science.** *The UT2003 conference*, Akureyri, Iceland.
- 02/2003 • **International Perspective of Women and Computer Science.** *The SIGCSE 2003 conference*, Nevada, USA.
- 03/2002 • **Computer Science education in Reykjavik University – Looking ahead.** *The UT2002 conference*, Reykjavik, Iceland.