

Nordic Graduate School of Language Technology

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The Nordic Graduate School of Language Technology is one of five selected by NorFA for funding beginning January 2004. It has the following goals:

- to provide a forum for graduate students in language technology in which they can obtain advanced research training of a standard and breadth which is not available at any one of the individual participating institutions, not even in any single Nordic country alone
- to raise the general standard of language technology education in Scandinavia in order to meet the increasing need in industry and academic research of researchers and developers with competence in language technology
- to create a broad interdisciplinary platform for graduate education in language technology. This platform should provide a multidisciplinary basis on which the student can build further
- to create an international profile by inviting instructors from foreign universities and research institutes and by encouraging interaction

between students from the Nordic countries and their peers in other countries (including non-Nordic countries)

- to exploit similarities between many of the Nordic languages by encouraging students to reuse linguistic resources and technologies designed for one Nordic language as a base for creating similar tools for the other Nordic languages

The school aims to achieve these goals by building on the structure and activities provided by the existing national graduate schools of language technology in Sweden and Finland, linking the courses and seminar activities of the two schools and including the remaining Scandinavian countries, the Baltic countries and NW Russia in the activities.

The school will seek to achieve these goals by increasing the mobility of students, teachers and supervisors and by building a critical mass of Nordic graduate students who are in contact with each other because they are attending courses, seminars and workshops together. The Nordic graduate school will provide a base with increased resources for inviting guest lecturers and visiting professors and enabling students to obtain supervision in their particular area from a Nordic pool of qualified researchers.

Mobility for students, teachers and supervisors The graduate school will provide funds for students, teachers and supervisors to take part in intensive teaching periods. In addition there will be funds for students to travel to supervisors for the purpose of individual supervision and funds for teachers and supervisors to meet to plan jointly taught courses and strategy for the school.

Guest lectures and visiting professors The intensive teaching periods will include guest lectures by scholars from outside the Nordic countries and we will also involve visiting professors in jointly taught courses.

Seminars and workshops The intensive teaching periods will include seminars, workshops and an internal conference at which both graduate students and teachers will present current work. Non-Nordic invited speakers would also take part in these events.

Initiatives for the improvement of supervision and exchange of supervisory experience Funds will be provided for students to obtain secondary supervision from supervisors within the graduate school not at the student's home institution. In this way, a student can obtain supervision from an expert in his or her particular area which is not available at the home institution. The activities of the graduate school will also allow for supervisors to meet and consult and exchange

knowledge and experience concerning the teaching of particular areas. This will be achieved both by informal meetings and the activity of team teaching courses.

Graduate courses Graduate courses will be taught on the model that has been successfully developed in the Swedish national graduate school of language technology. This involves two intensive periods of teaching (in the beginning and middle of the semester) and a final concluding seminar session. Between these meetings the courses continue by distance techniques using web technology. Most or all of the courses are taught by a collection of teachers from different institutions. There are three levels of courses. The higher levels may presuppose that students have already successfully complete courses on lower levels. Level 1 courses provide graduate introductions to the various areas of language technology, showing where the open research questions lie. Level 2 courses provide a more in depth view of a particular subarea of the field, again concentrating on research oriented teaching. Finally, level 3 courses involve working with one or more particular projects which the course teachers are involved with, i.e. teachers and students engage in research together.

The school will offer four courses and one workshop/internal conference per year. Each event will be coordinated by one of the key supervisors in a different participating country in order to achieve a spread of activity across the participating countries each year. In addition as far as possible we will seek to have the teaching of each course be a collaboration between members from different countries. Two courses will be offered each semester. The courses planned for the first year are:

Course	Coordinator	Local institution responsible
<i>Spring Term</i>		
Natural Language Processing, level 1	Joakim Nivre, Växjö University, Sweden	GSLT (Swedish graduate school)
<i>Autumn Term</i>		
Speech Technology, level 1	Torbjørn Svendsen, Norway	NTNU
Linguistic Resources, level 2	Daniel Hardt, Denmark	Copenhagen Business School
Soft computing and data oriented methods, level 2	Lauri Carlson, Finland	KIT-GS (Finnish Graduate School)

A similar pattern of course offerings will be available in the following years. The exact courses to be offered will be determined in consultation with the students and potential teachers in order to best meet the needs of the students and the development of research within the discipline during the life of the school.

An advantage of offering courses in conjunction with the existing national graduate schools is that students attending one course at the Nordic graduate school may be able to attend other courses which are running in parallel without additional costs for travel and accommodation.

We plan an internal end of year conference and evaluation which in 2004 will be held at the University of Iceland under the organization of Eiríkur Rögnvaldsson. This conference will take the form of a research workshop at which both graduate students and established researchers will present papers and also a seminar meeting at which graduate students can present their work to the school. It will also allow for as many as possible who are involved in the school to meet and evaluate the progress of the school. This annual meeting of the school will also play an important role in identifying potential material to be developed as submissions to the planned *Nordic Journal of Language Technology* which the school will be responsible for.

The day to day administration of the graduate school will be a collaboration between Göteborg and Helsinki. Robin Cooper will be director and Kimmo Koskenniemi will be co-director. Each will be assisted by an administrative assistant. The total administrative effort (both directors and assistants) will be 60% of full-time. While administrative tasks will be carried out with regular consultation between Göteborg and Helsinki, the division of main responsibility between the two sites will be as follows: Göteborg – course planning, international relations, Helsinki – distribution of funds to Nordic participants, conference and workshop organisation. The sites will be jointly responsible for admissions to the school, policy development and board meetings.

There will be an Academic Board consisting of the two directors, representing Sweden and Finland, together with one representative each from the other participating countries.

The Board will meet at least once every semester (i.e. twice a year). The Board's mandate will include

- making decisions concerning scientific content
- the development of a scientific profile of the school
- planning of courses, supervision and other of the school's activities such as seminars, workshops and conferences
- ensuring academic diversity and competence
- making decisions concerning the size of the school
- the administration of applications by graduate students wishing to take part in the school

Courses will normally last one semester and will have one intensive period near the beginning of the semester, one near the middle and a final seminar near the end. Intensive periods for a single course will normally last two days. Between these intensive periods teaching of the course will continue by distance methods. Each course will have a designated course leader who will be responsible for organising the course. Team teaching of courses by teachers from the different countries and by guest teachers from outside the school is encouraged. The intensive periods of a course will normally take place at the coordinator's home institution, although, if desired, other arrangements can be made (e.g. using facilities associated with the existing national graduate schools, combining several courses together to make a longer intensive period). The school's other activities (seminars, workshops, internal conferences) will normally be in conjunction with an intensive teaching period (in order to save travel).

Students who have been accepted into a graduate programme in Language Technology (or corresponding discipline such as Computational Linguistics) in their home country at a participating site will be able to take part in the school's activities. While courses will be approved by the Board and assigned ECT credits the formal responsibility for examination of students will reside with the local institution where the student is registered. This will mean that the school as such does not have to make decisions about how the school's courses are to be counted towards degrees in the participating countries. No extra fees for teaching will be charged to students or their departments for taking part in the school's activities.

Internal evaluation of the school will consist of course evaluation by the students supplemented by student evaluation of the school's activities in general. There will also be an advisory board consisting of three distinguished members of industry from different Nordic countries who have an interest in language technology research.

This board will advise the school by evaluating its progress and making suggestions for industrially relevant activities.

We expect there to be significant interest and support for the school both in language related industry and in industry which has a use for language products such as the motor industry. Already Nokia has expressed interest in and support for the school and we think that it is to be expected that there will be one or two large industries in each of the Scandinavian countries who will express similar interest in addition to smaller language related companies. In practical terms industry can play an important role in the school by presenting us with practical problems which require a research solution, providing us with data relevant to research projects, providing placements for practical work by PhD students and by giving employees release time so that they can pursue an "industrial" PhD. It is important that the school be in dialogue with industry both informally and in seminars where both industry and members of the school make presentations of relevant research and development work. Members of industry may also be interested in following some of the school's regular courses.

The board will consist of one member from each participating Scandinavian country:

Robin Cooper, Professor, Göteborg University, director
Kimmo Koskenniemi, Professor, Helsinki University, co-director
Daniel Hardt, Associate Professor, Copenhagen Business School
Eiríkur Rögnvaldsson, Professor, University of Iceland
Torbjørn Svendsen, Professor, NTNU

In addition there will be representatives from each of the Baltic countries involved and also two elected graduate students from the student body.

The school aims to allow the participation of all centres of research and advanced teaching in language technology in the Nordic countries who wish to contribute, including institutions which become involved in language technology after the school has started. As of now, the following institutions have expressed interest in joining the school:

Sweden

Swedish Graduate School of Language Technology – Högskolan i Borås, Chalmers University of Technology, Göteborg University, KTH, Linköping University, Lund University, Högskolan i Skövde, Stockholm University, Uppsala University, Växjö University. (Robin Cooper)

Finland

Graduate School of Language Technology in Finland – University of Helsinki, Universities of Joensuu, Oulu, Tampere, Turku and Åbo Akademi, Technical universities in Helsinki and Tampere. (Kimmo Koskenniemi)

Denmark

Center for Sprogteknologi (Bente Maegaard)
Copenhagen Business School (Daniel Hardt)
Copenhagen University (Nina Grønnum)
University of Southern Denmark (Per Anker Jensen)

Iceland

University of Iceland (Eiríkur Rögnvaldsson)

Norway

University of Bergen (Koenraad de Smedt)
NTNU (Torbjørn Svendsen)
University of Oslo (Jan Tore Lønning)

Estonia

University of Tartu (Prof Mare Koit)
Tallinn Technical University (Einar Meister, Laboratory of Phonetics and Speech Technology, Institute of Cybernetics)
Tallinn Pedagogical University, (Mart Rannut, Faculty of Philology)

Latvia

University of Latvia (Dr. Inguna Skadina, Institute of Mathematics and Computer Science)

Lithuania

Vytautas Magnus University (Ruta Marcinkeviciene, Centre of Computational Linguistics)

NW Russia

Saint Petersburg University (Liya V.Bondarko, Department of Phonetics)