Cooperation of Universidade Nova de Lisboa and Technische Universität at Dresden in the field of Computational Logic

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The Departamento de Informatica of the Universidade Nova de Lisboa (UNL) and the Fakultät at für Informatik of the Technische Universtità at Dresden (TUD) intend to develop a new integrated binational study programme in the eld of Computational Logic. Currently, both universities are coordinating the work–package Education and Training within the European Network of Excellence in Computational Logic, CologNET and members in the International Network of Excellence (IQN) on Rational Mobil Agents funded by the German Academic Exchange Service (DAAD).

It is planned to set up a joint master programme based on the existing Mestrado em Inteligência Artificial Aplicada at UNL and the Master in Computational Logic at TUD. With respect to plans for the new Mestrado em Engenharia Informática at UNL it can be integrated as a profile in Computational Logic.

For this purpose the German Academic Exchange Service (DAAD) provides special funds for the first four years plus an additional year at the beginning for preparation. Recently, this 1st year funding was awarded by the DAAD for the preparation of a joint master programme at UNL and TUD during the academic year 2003/2004. If the study programme starts in 2004 the funds cover (mutual) exchanges of lectures between Lisbon and Dresden and additional costs. Student grants can be awarded within the Sokrates/Erasmus programme, in which UNL and TUD already take part. In general, the programme AlBan provides special funds for students from Latin America to study in the European Union. There are various programmes funded by the DAAD to attract international students to study in Germany.

To establish a joint master programme, UNL and TUD have to set up study regulations addressing the following points: mutual recognition of courses taken by master students at the partner university; regulation about obligatory stays abroad; waving of tuition fees; double degrees (simultaneously given by both, UNL and TUD).

The language of courses offered to students of both universities should be English. There exists already preparatory work to install a teleteaching system between Lisbon and Dresden, founded by CologNet and IQN. It allows for transmitting lectures from one university to the other, and holding joint seminars.In March 2003 there will be a test of the hard– and software in Lisbon. It is planned to have the first tranmissions between Dresden and Lisbon.

The planned joint master can serve as a basis for an European Master programme within the forthcoming programme Erasmus World installed by the European Union. In this programme, high quality joint master programmes of at least three European universities can be awarded with the quality label EU master programme. It is intended to attract students from third countries to study in the European Union. For this end, special grants for foreign students are available. UNL and TUD intent to apply for such a European masters programme with partner universities from the CologNet network.

In addition to these support opportunities for a master programme, the German Science Foundation (DFG) is supporting PhD programmes within International Research Training Groups (Graduiertenkollegs). It is also planned to establish such a PhD programme which allows for additional funding of PhD students. The programmes runs for up to nine years and comprises also money for exchanging researchers and lectures, for organizing workshops and for coordination costs.

The Graduiertenkolleg has to be organized by at least five professors of each university. These professors should have a strong publication record and experience in PhD supervision. From the Dresden side, presumably, Franz Baader, Bernhard Ganter, Steffen Hölldobler, Michael Thielscher and a new professor for Algebraic and Logic Foundations of Computer Science will take part. On the Lisbon side, José Alferes, Pedro Barahona, Carlos Damásio, and Luís Moniz Pereira are already involved in the cooperation, and other professors which comply with the requirements are welcome to consider participating.

The structure of the study programme

The courses of the planned profile in Computational Logic will be split into two groups: mandatory and optional ones. It follows in principle the structure of the existing international master programme in Dresden. The mandatory courses are (cf. appendix for Dresden course description and MIAA page for Lisbon course descriptions):

- Constraint programming
- Declarative programming
- Introduction to computational logic
- Logic programming implementation 1
- Logic programming and artificial intelligence

Except for the course Introduction to Computational Logic all these courses are already established in Lisbon, although the length and the content of some of the courses may vary. The list of optional courses consists of already established courses offered in Lisbon (+) and in Dresden (−)

- Knowledge representation (+)
- Computational reasoning (+)
- Agents (+)
- Computational cognitive science (+)
- Natural language processing (+)
- Theorem proving 1 (−)
- Advanced logics (−)
- Specification and verification (−)
- Theoretical computer science and logic (−)
- Syntax−directed semantics (−)
- Inference techniques (−)

This list is open to extensions. In particular, it is desirable that mandatory courses similar to the Dresden ones are offered in Lisbon, too, and vice−versa. The study regulation will require that a student has to spend at least one or two semester(s) at the partner university.

Dresden is awarding credit points according to the ETCS system (roughly, 1 Lisbon credit is 1.5 ECTS). The existing CL master requires 120 points, 90 for courses, 30 for the thesis.

Committees

The formal university regulations in Germany require that Dresden has three different committees for a study programme:

1. Evaluation committee, which selects the students;
2. Study committee, which sets the curriculum;
3. Examination committee, which oversees.

It is possible and often the case that the members of these three committees are the same. Therefore, the Lisbon side can set up just one committee for all three purposes.

Schedule

- Sept 03 – Aug 04: Preparation of the joint master (with funding of the DAAD)
- Feb 04: First draft for the International Graduiertenkolleg (PhD programme)
- Apr 04: Submission of the application for the International Graduiertenkolleg (PhD programme)
- Sept 04: Start of the joint master programme