



GÖTEBORG UNIVERSITY
FACULTY OF SCIENCE

AVAILABLE POSITION
2008-03-05 Dnr E326 964/08

Associate Senior Lecturer in Optimization with application to Medicine and Simulation

University of Gothenburg hereby announces the availability of a position as Associate Senior Lecturer in optimization, placed within the Department of Mathematical Sciences.

The research group in optimization at the Department of Mathematical Sciences at University of Gothenburg and Chalmers University of Technology and at the Fraunhofer-Chalmers Research Centre for Industrial Mathematics (FCC) performs research and application projects in several areas, such as inverse optimization, nonlinear optimization, multiobjective optimization, traffic optimization, optimization under uncertainty, optimization together with simulation, and combinatorial optimization especially in the fields of preventive maintenance and in logistics.

We are now looking for an Associate Senior Lecturer in optimization with emphasis on mathematical modeling, optimization, and simulation in medicine. The main area of research lies in the project "Optimized radiation treatment of cancer through the use of biological models of cure and side effects and an improved planning of the dose distributions in intensity-modulated radiation therapy (IMRT)" which is run closely together with the Departments of Oncology and Radio Physics at Sahlgrenska University Hospital in Göteborg and with associated researchers at medical centres at the Universities of Linköping, Lund, and Umeå. Associated research problems within that project include an improved calculation of the dose distributions and the optimization of non-coplanar treatment angles in intensity-modulated radiation therapy (IMRT). Within the position also lies research work within other current applications of optimization, in particular together with simulation; the main focus however lies in the application field of cancer treatment.

The project is performed within the framework of the research centre Gothenburg Mathematical Modelling Centre (GMMC), with partial sponsorship from the Swedish Foundation for Strategic Research (SSF), Cancerfonden, Chalmers University of Technology, and from University of Gothenburg, together with other researchers at the Department of Mathematical Sciences and FCC.

Apart from research work, the applicant is expected to take part in the teaching activities at the Department of Mathematical Sciences. This time can be allocated to teaching activities both in the existing course curriculum at the department and in new, relevant undergraduate and/or postgraduate courses of the applicant's choice.

Qualifications

Qualified for the employment as a assistant senior lecturer is a person with a PhD or a foreign exam equivalent to a Swedish PhD, with preference for applicants whose exam is no more than five years old. Candidates who have completed their degree earlier than this should receive equal priority if special grounds exist for example leave of absence because of sickness, parental leave and other similar circumstances. (HF 4 kap 8a §) (Higher Education Act)

Assessments

In the assessment the applicants scientific and pedagogical dexterity will bear the highest importance, followed by proven leadership and administrative skills. Special accentuation will be placed on proven abilities to conduct independent research activities.

It is crucial that the applicant has defended a thesis within a mathematics subject, for example applied mathematics or mathematical statistics, where a main emphasis is put on optimization. If the applicant in addition has experience in conducting research on large-scale nonlinear optimization, preferably in combination with simulation, optimization under uncertainty or optimization within medicine, then it is an additional main qualification.

The position is valid for four years; after this period, an evaluation based on research and pedagogical merits may make the position permanent.

For a more even gender distribution we especially welcome female applicants.

Information

For further information, contact Head of Department Bo Johansson, tel. +46 31 772 35 35, e-mail bo@math.chalmers.se, or Professor Michael Patriksson, +46 31 772 35 29, e-mail mipat@math.chalmers.se.

Application

The application should be written in English, addressed to The Dean, Faculty of Science, and include:

- A Curriculum Vitae (CV), a list of publications, certificates of exams and employment and supplementary documents to be considered. Documentation of pedagogical qualifications should include information about the extent and type of teaching performed, and formal quality reports.
- A brief written account on scientific, pedagogical, and other work of importance for the position, including contacts outside of academia. (max 5 pages)
- A brief written account of current and planned research. (max 3 pages)
- Reprints of a maximum of five scientific publications with a motivation of the selection
- Contact information of at least two persons who can act as references.

Application, including all enclosures, must be packed in four identical sets, which can be passed on to reviewers without repacking.

Send your application labelled with reference number **E326 964/08** to the University at the following postal address:

**Registrar
Göteborgs universitet
Box 100
SE-405 30 Göteborg
Sweden**

The deadline for your full application to arrive is **April 24, 2008**.

Union representatives: SACO Martin Björkman, telephone: +46 31 786 3608, SEKO Lennart Olsson, telephone: +46 31 786 1173, OFR-S Eva Sjögren, telephone: +46 31 786 1169.