



Job offer at the Royal Institute of Technology (KTH), School of Electrical Engineering:

## Ph.D. in Electromagnetic Engineering with application in Antenna Theory

Sweden has for a long time been well known for its competence on advanced antenna design, this has been established even more during the last decades. At KTH the focus has been on (broadband) phased array antennas on planar and curved surfaces. At this point we are seeking a candidate for a Ph.D. position within this area.

The research project will be about antennas integrated in the skin of an aircraft. As an illustration on the application of this area a modern aircraft can have as many as 30 different antennas protruding from its structure (up to 70 antennas on a typical military aircraft has been quoted). The antennas may be used in radar systems or for satellite based on-board entertainment systems. Furthermore, communication antennas are used for transmitting/receiving tactical information as well as making it possible for aircraft passengers to use their cell phones during flight. Hence, the applications are found in both the military and civilian market.

The project is a jointly academia-industry project where several companies and universities in Sweden are involved. As proposed here, the research will focus on the analysis and design of planar phased array antennas integrated into the aircraft skin. Requirements on the radar cross section must also be addressed. This is a theoretical work where most of the effort will be in electromagnetic analysis and design of the given application. However, we also expect an experimental verification of the results.

The research will be carried out at the Royal Institute of Technology, School of Electrical Engineering, division of Electromagnetic engineering. The start of the position is planned in January 2007.

### Requirements for applicant

The applicant should hold a master degree in physics or electromagnetics. Specialisation into antenna and microwave techniques are preferred.

### Subsistence

Salary is following the guidelines given by KTH. Help for finding lodging can be provided. Teaching on undergraduate level is included in this position up to a maximum of 20% of the time (knowledge in Swedish is not necessary). Furthermore, a licenciate degree<sup>#</sup> is mandatory before a continuation of the position is granted.

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<sup>#</sup> A licenciate degree is to be expected after about 2 years work.

**Application**

The application may be send by regular mail to:

School of Electrical Engineering  
Royal Institute of Technology  
Osquldas väg 10  
SE-100 44 Stockholm  
Sweden

An electronic application can be mailed to: [application@ets.kth.se](mailto:application@ets.kth.se) (Please quote the reference number below in the subject of the email)

Submission deadline: 2007-01-10

The reference number for this position is (it has to be quoted in the application): E-2006-0733

**Further contact**

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See also [www.ee.kth.se/organization/openpositions.php](http://www.ee.kth.se/organization/openpositions.php)