

Closing date September 30

## **Lecturer in Technical Architecture at the department of Civil, Mining and Environmental Engineering at Luleå University of Technology**

The research at the department of Civil, Mining and Environmental Engineering at Luleå University of Technology aims to create a sustainable society with reliable constructions, smart organisation and effective methods of production. Cooperation with industry and society characterizes our research. The department has approximately 180 employees.

Architecture research encompasses technical architecture, urban and spatial planning, integrated with sustainable development. The goal of employing the lecturer is to strengthen the research in the field of architecture and the education in the MSc programme in Architectural Engineering, which today has approximately 170 students. The Architecture research group, together with Construction Engineering and Management, Renewable Energy, Traffic Engineering and Urban Water, is part of the division of Architecture and Infrastructure. The division has a total of around 40 employees.

### **Subject area**

The topic of the position is technical architecture, investigating practical, constructive and functional dimensions of architecture integrated with aesthetic, harmonic and symbolic dimensions, as well as relationships between people, nature and the built environment in a sustainable way.

### **The position**

The full-time position includes research, teaching, and supervision of PhD students. You are expected to actively apply for research funding and collaborate in the research environment at the department, at the university and with national and international research organisations.

### **Assessment criteria**

- Proven scientific ability (PhD degree)
- Proven pedagogical ability.

These assessment criteria have equal weighting.

Further assessment criteria:

- Degree in Architecture
- Proven interdisciplinary collaboration ability
- Ability to lecture in a Scandinavian language
- Proven collaboration track record

These assessment criteria have equal weighting.

# **Research assistant in Architecture - planning and building in harsh climates at the department of Civil, Mining and Environmental Engineering at Luleå University of Technology**

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The Architecture research group works with technical architecture, urban and spatial planning integrated with sustainable development. Architecture, together with Construction Engineering and Management, Renewable Energy, Traffic Engineering and Urban Water, is part of the division of Architecture and Infrastructure. The division has a total of around 40 employees.

The goal of employing the research assistant is to strengthen the Architecture research group in the field of building and planning for harsh climates. Major parts of the Nordic countries are areas that place strong demands on the physical design of the urban environment, the transport modes that are used and how they are integrated into the urban environment. The climate conditions also place high demands on the design of the buildings; the foundations, surface layers, insulation methods, roofs etc. By harsh climates we mean the climate of today with cold temperatures, substantial rains and wind during most of the year, together with future uncertainties regarding climate change.

## **Subject area**

The research assistant will actively cooperate in the research development of methods and theories for planning and design, providing applied knowledge of how urban structures, with integration of buildings and infrastructure, can be shaped to withstand harsh climates. The aim is to investigate how, in a long term sustainable way, practical, constructive and functional structures with aesthetic, harmonious and symbolic dimensions can be achieved, as well as to investigate relations between humans, nature and built-up environments.

The responsibilities include research and supervising Master and Doctoral theses students. The applicant is expected to actively participate in the mutual development of the research field and cooperate in research groups within the department as well as with national and international research communities. The position is for two years.

## **Assessment criteria**

- Proven scientific ability (PhD degree within the last five years)

Further assessment criteria:

- Degree in architecture or planning
- Excellent oral and written English

These assessment criteria are prioritised in order.

- Proven scientific writing ability
- Proven interdisciplinary collaboration ability
- Proven collaboration ability
- Proven ability to supervise

These assessment criteria have equal weighting.

## **PhD studentship in Architecture – managing uncertainties and qualitative values in spatial planning**

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Architecture research includes technical architecture, urban and spatial planning, integrated with sustainable development. The goal of employing a PhD student is to strengthen the research in the field of architecture and the education in the MSc programme in Architectural Engineering, which today has approximately 170 students. The Architecture research group, together with Construction Engineering and Management, Renewable Energy, Traffic Engineering and Urban Water, is part of the division of Architecture and Infrastructure. The division has a total of around 40 employees.

### **The research subject**

The project for PhD studies comprises research into how uncertainties and qualitative values can be managed in spatial planning. Uncertainties can for example result from future climate changes and how these may influence planning in various localities and landscapes. Variation in people's values regarding the shaping of built-up areas and infrastructure also causes uncertainties in planning situations. Asserting qualitative values in planning processes is often problematic. How can uncertainties be managed in a concrete way and how can qualitative values confidently be asserted in a way that increases the quality of the planning outcome?

Research into planning and building in a harsh climate is carried out in the Architecture research group. The new PhD student will strengthen this group. Approximately 20 % of the employment comprises departmental duties such as teaching in the subject and other common undertakings.

### **Qualifications**

The qualifications required for the PhD studentship appointment are a Master's degree in engineering, architecture, landscape architecture or other suitable subject. For all alternatives, a Master's degree in a subject that has methods or applications relevant to the research area is necessary. An additional requirement is research study ability.

The appointment will be made after assessing ability to comprehend the studies, together with grades and other qualifications. In addition it is important that the PhD student has analytical ability and also has good oral and writing skills. An ability to explain complicated concepts is important from both research and teaching perspectives. Knowledge of a Scandinavian language is required as the research project requires the reading of documents and contacts with both local officials and the general population. Good knowledge of English is required for international publication and participation in international congresses. A PhD thesis is an independent work but it is additionally a part of the group's research. For that reason ability to work independently and as a group member is merited.

### **Assessment criteria**

The following assessment criteria apply:

- Analytical ability
- Proven ability to write scientific texts
- Proven ability to work independently and within a group
- Proven ability to collaborate

These assessment criteria have equal weighting.

## **APPLICATION**

We want your application, marked with reference number, September 30, 2009 the latest, to Luleå University of Technology, Registry, SE-971 87 Luleå, Sweden. You can also send your application electronically to [registrator@ltu.se](mailto:registrator@ltu.se).