

## Questionnaire on research strengths and emerging areas of research focus in preparation for the INU Research Workshop

Name of university: **Malmö University**

*Please give brief comments on the following:*

### 1 General information on university

- Location **Malmö, southernmost Sweden**
- Contact details **Malmö University SE 205 06 Sweden**
- Website URL **www.mah.se**
- Public or private institution? **public**
- Organization chart on university set up

**Malmö University has six schools and faculty areas, all of which are multi-disciplinary. This means that several disciplines meet under one roof, each one enriching the other:**

**Faculty of Health and Society  
Faculty of Odontology  
School of Arts and Communication  
School of International Relations and Ethnic Relations  
School of Teacher Education  
School of Technology and Society**

**There exist rights to examine doctoral students at the two faculties, while the PhD-students at the four schools formally are affiliated to other universities.**

- Programs (main programs, profile)

**About 80 % of the undergraduate level is devoted to advanced studies and training programs that lead to professional degrees:**

**teacher,  
nurse,  
dentist or dental technician,  
graduate engineer,  
social worker and  
biomedical analyst.**

- Staff
  - Number of full time equivalents (general, academic) **1027 (399; 628)**
  - Number of individuals (general, academic) **1275 (495; 780)**

### 2 General information – research

- Students
  - Number of full time equivalents (PhD and Master's by research and by course work) by areas of study **Undergraduate programmes 11 500 fte; # of**

**doctorands 180: medicine 60; human/social sciences 90; natural science and technology 30. (masters level, not applicable (yet))**

- Annual research income **14M €**
  - Internal sources **8 M €**
  - External sources **6 M €**
- Summary of annual research report quantifying research output in terms of
  - Books **30 (+ 56 chapters in books)**
  - Referred journal articles **125**
  - Referred conference papers
  - Research reports
  - Consultancy reports } **365**
- Does your university have any specific research institutes? If so, please list them with brief descriptions of the activities.

**Research programme: Biofilms – The goal of the research is understanding, prediction and control of material/biomolecule/cell interactions with medical, dental, food, and environmental applications - Research is specifically directed at seeking methods to control (e.g. modify or eliminate) biofilms through modulation of biomolecule adsorption and/or affecting the behaviour of problem organisms.**

- Does your university have a research park? If so, please give a brief description of the facilities.

**1. MINC is an incubator focusing on developing knowledge-intensive business ideas with high growth potential. Through integrated dialogue, effective counselling and expertise adjusted to specific needs, they support selected companies through their first critical stages of development.**

**2. MEDEON aids through an incubation operation researchers for a company or a hospital, as a physician, nurse, technician, or university students that have ideas in the medical area that they want to develop.**

- Does your university offer research training support, e.g. providing facilities for postgraduate students, scholarships and conference assistance?

**All our doctorands are financed and most usually use our facilities as their working place. Some of our schools announce scholarships to cover expenses in connection to international conferences.**

- Please provide a summary of the university's research plan and organizational set up, including separate responsibilities.

**Research strategies. The research strategies describe prospective future research at the University and consolidate further the unique profile we have built up in Malmö. With this profile prospects are excellent for Malmö University to make high quality contributions to Swedish research. Research at Malmö University is significantly influenced by social-relevance achieved in close collaboration with the public sector, industry and organizations. The issues we address are nourished both by the needs of society, by undergraduate studies and by the needs of professionals.**

**In the present research strategies we prioritise activities that fall within the framework of six research fields:**

- Professional training and career lines
- Migration and ethnicity
- Culture, media and design
- Learning for tomorrow's society
- Technology and human welfare
- Health and welfare

Within each research field we have developed unique multidisciplinary research environments, often with associated post-graduate studies.

Malmö University will continue to emphasize the close collaboration between undergraduate studies and research. Research at Malmö University has, therefore, high social-relevance; it is multidisciplinary and spurred by a commitment to high quality undergraduate education. A large portion of studies at the undergraduate level are linked to professional training, with little tradition of continuing on to post-graduate studies. The ambition of Malmö University is to increase this transition and at the same time intensify research that is relevant to the professions both in relation to the education of and daily work within each profession. Our goal is to become the leading institution in Sweden when it comes to profession-oriented research, associated post-graduate studies and undergraduate education. In order to stimulate and increase interaction among the University's researchers an institute will be created for multidisciplinary research with associated research programs, among others, for research relating to professions as well as migration and ethnicity.

- Does your university provide assistance for visiting scholars and post-doctoral scholars? If so, please briefly describe the nature of this assistance.

Guest researchers are of course welcome. Most often this is accomplished by contacts that are more or less of a personal nature. This maximizes the mutual benefit of the visit. Malmö University is also engaged in the EU mobility program for researchers; Marie-Curie.

### 3 Self identified research strengths and areas

Please list your university's current research strengths and the reason/s why they have been identified. Within these areas of research strengths, describe the particular areas of focus and please provide details of contact person/s. Areas of excellence can either be stated according to "research focus" areas which have been developed along the lines of research groupings/clusters (cross-disciplinary) or by disciplinary-based delineations.

First, the concept "research environment" has to be elaborated because it is the key to the way Malmö University envisions its research strategies. It is used as a unit of demarcation and as a concept to describe the University's research. A research environment may be conceived as founded on undergraduate studies. A research environment may also involve one or several (closely interlinked) PhD-programs. In a viable research environment we assume that research, post-graduate studies and undergraduate education all interact with each other. This occurs, for instance, when lecturers both teach and do research. Doctoral candidates also teach undergraduate courses in order to broaden their skills and increase their employment potential both inside and outside the academic sphere.

Supervisory capacity is decisive for maintaining viable and sustainable research training. From a quantitative point of view there must be an adequate number of competent

supervisors (professors and associate professors) in order to keep high quality PhD-programs. It is also important that there are enough doctoral candidates in the research environment for mutual interaction. Thus, the research environment must contain a sufficient number of staff competent in supervision and enough doctoral candidates: a critical mass of these categories must exist. The environment also contains several other staff who are at a post-doctoral level: lecturers, research assistants and assistant lecturers.

The qualitative aspects of the research environment are a decisive success factor. A good international and national network is needed to assure that performed research may be subjected to critical scrutiny by peers. Collaboration within the research environment is contingent on the existence of joint research projects within the group. The research environment is not a closed unit. When the interests of the different research environments at the University coincide, there has to be room for mutual reinforcement of diverse initiatives and convergence.

Taking into account the University's history, which in certain cases goes back a long way, it is not surprising that there are already a number of mature research environments, particularly in the Faculty of Odontology and the School of Teacher Education. During the past five-year period other Schools at the University have vigorously established new research environments.

Our research environments are described below in condensed form and tentatively divided into the major fields of medicine, human and social sciences, and natural and technological sciences.

## Medicine

1. **Diagnostics and prediction:** routine X-ray potential for identification of osteoporosis; importance of bone tissue for dental implant treatment; effectiveness of X-ray diagnosis.  
[Christina.Lindh@od.mah.se](mailto:Christina.Lindh@od.mah.se)
2. **Biomaterials and reconstructive dental care:** ceramic materials and constructions; composites; lubrication effects of salivary replacements; surface treated implants; long-term effects.  
[Krister.Nilner@od.mah.se](mailto:Krister.Nilner@od.mah.se)
3. **Orofacial malfunction and pain:** clinical research on changes in joints, muscles and jaw; chronically pain; diagnostic methods and prognosis for treatment.  
[Maria.Nilner@od.mah.se](mailto:Maria.Nilner@od.mah.se)
4. **Oral ecology:** factors that regulates metabolism and pathogenesis of oral bacteria with reference to tooth loss and salivary characteristics.  
[Gunnel.Svensater@od.mah.se](mailto:Gunnel.Svensater@od.mah.se)
5. **Oral public health:** dental care as professional organization of human care; oral health and quality of life; oral health among disprivileged groups; the relation to the client.  
[Bjorn.Soderfeldt@od.mah.se](mailto:Bjorn.Soderfeldt@od.mah.se)
6. **Biomedical laboratory science / biomedical technology:** improvement of laboratory and clinical methods in the fields of health and medical care; phenomena at biological surfaces and surface chemistry in biological systems; antigen-presenting cells and their capability of alerting the immune system.  
[Thomas.Arnebrant@hs.mah.se](mailto:Thomas.Arnebrant@hs.mah.se)

7. **Caring/nursing science:** mental health in caring and social work; communication in care, social support and prevention; evaluation; pedagogics in care; care consumption and special needs; reproductive health.  
[Margareta.Ostman@hs.mah.se](mailto:Margareta.Ostman@hs.mah.se)

## Human and social sciences

8. **Education:** Theory and practice of teaching and learning in different educational settings, Childhood and youth studies, Inclusive education and special needs education, Professions and professionalization processes.  
[Ingegerd.Tallberg-Broman@lut.mah.se](mailto:Ingegerd.Tallberg-Broman@lut.mah.se) and [Anna-Lena.Tvingstedt@lut.mah.se](mailto:Anna-Lena.Tvingstedt@lut.mah.se)
9. **Didactics in science, mathematics and technology:** subject matter didactics at the cross-section between the subject, practice in working life and pedagogics; learning in science and mathematics; development towards a professional educator.  
[Gunilla.Svingby@lut.mah.se](mailto:Gunilla.Svingby@lut.mah.se)
10. **Culture, language and media:** Culture and media and the Theory and Practice of Teaching and Learning Swedish. Media; forms of cultural expressions and communication processes; aesthetics and technology; learning in relation to an expanded concept of text; language and literature pedagogics; Theory of reception; culture and media pedagogics.  
[Bo.Reimer@K3.mah.se](mailto:Bo.Reimer@K3.mah.se) and [Johan.Elmfeldt@lut.mah.se](mailto:Johan.Elmfeldt@lut.mah.se)
11. **Social work:** underprivileged individuals/groups; societal influence on conditions of life; causes to marginalization; gender and sexuality; offense of norms; conflicts and interventions.  
[Sven-Axel.Mansson@hs.mah.se](mailto:Sven-Axel.Mansson@hs.mah.se)
12. **International Migration and Ethnical Relations:** dynamics of international migration; politics of migration; integration processes; minorities; human rights and democracy.  
[Bjorn.Fryklund@imer.mah.se](mailto:Bjorn.Fryklund@imer.mah.se)
13. **Interaction design:** design of digital artifacts, environments and media; design-oriented synthesis of constructive action and critical reflection; focus on use qualities and process aspects; the design theory of digital materials.  
[Jonas.Lowgren@K3.mah.se](mailto:Jonas.Lowgren@K3.mah.se)
14. **Sports science:** sports as a learning and socialization process; professionalization and commercialization; regulations and legal matters; sports, culture and media.  
[Tomas.Peterson@lut.mah.se](mailto:Tomas.Peterson@lut.mah.se)
15. **Urban studies:** planning, construction and administration of the urban environment; ecological, social, cultural and economic development of cities; real estate development.  
[Per-Olof.Hallin@ts.mah.se](mailto:Per-Olof.Hallin@ts.mah.se)
16. **History studies:** social history; culture analysis; history from below; oral history; social classes; ethnicity; gender and emancipation.  
[Mats.Greiff@lut.mah.se](mailto:Mats.Greiff@lut.mah.se)

## Natural and technological sciences

17. **Materials science:** physical processes related to crack growth; composites; corrosion in conjunction with tension; mechanics of paper; effects of hydrogen on construction material  
[Per.Stahle@ts.mah.se](mailto:Per.Stahle@ts.mah.se)
18. **Applied mathematics:** modeling in order to understand and predict a variety of phenomena, biomathematics for instance; digital image analysis and computer vision.  
[Anders.Heyden@ts.mah.se](mailto:Anders.Heyden@ts.mah.se)

#### 4 Areas of emerging interest

Please evaluate and describe in your own words what you consider to be your university's emerging areas of research focus or areas of interest to develop further. Also describe the focus on the research planned to be carried out and details of contact person/s. Areas of excellence can either be stated according to "research focus" areas which have been developed along the lines of research groupings/clusters (cross-disciplinary) or by disciplinary-based delineations.

**A large part of our undergraduate level leads to professional degrees. This fact provides a good basis for developing research around *Professional education and career lines* which include the experiences of professionals, but can also deal with common features of praxis and education to be found in the different professional categories. There is insufficient research today regarding what kind of knowledge needs to be developed in order to improve higher education that leads to professional degrees and what kind of problems a professional needs to illuminate from a research perspective. Both these tasks are central to *Professional education and career lines*. Different professions can learn much from each other including how further training is carried out after completion of undergraduate degrees. In addition, the links between different professions and associated domains of research vary in strength. Contact person: [Ola.Fransson@mah.se](mailto:Ola.Fransson@mah.se)**

#### 5 Funding sources

Please comment on possible national and international funding sources your university has applied for, is planning to apply for or is aware of.

**Apart from our state grant, an important national funding source is other state financed authorities and councils, such as the Swedish Research Council (VR) which mainly finances research projects and, from 2006 onwards, also "excellent research environments"; a 10 year 1M€yr undertaking. Other important research councils are: FAS (The Swedish council for working life and social research) and to a lesser degree for us Formas (that is committed to excellence in research for sustainable development) and VINNOVA (Swedish Governmental Agency for Innovation Systems) that integrates research and development in technology, transport and working life. The Swedish research foundations are also an important funding source for us, whereof the Knowledge Foundation (KF) has been the most significant one. The local community, the industry and EU are less prominent regarding our research income. A survey of national and international funding sources from a Swedish perspective is given below:**

##### National

Applied for	FAS, FORMAS, VR, NUTEK, VINNOVA, KF
Planning to apply for	FAS, FORMAS, VR, NUTEK, VINNOVA, KF

Is aware of FAS, FORMAS, VR, NUTEK, VINNOVA, Sieps, SSF, MISTRA, ESF-Objective 2 and 3 (Obj.1 is not eligible in south Sweden)

**International**

Applied for FP5, FP6, Interreg, EU-Australia Cooperation in higher education  
Planning to apply for FP6, FP7  
Is aware of FP6, FP7, Interreg, Leader, Equal, Urban, EU Funding - EuropeAid, Specific International Scientific Cooperation Activities (INCO), European University Institute – ACS – Jean Monnet Fellowships, Phare/Ispa/Sapard

## 6 Contact information

- Vice-President/Vice-Rector (or equivalent) with responsibility for research management
  - Name **Lennart Olausson**
  - Position title **Rector**
  - E-mail address [Lennart.Olausson@mah.se](mailto:Lennart.Olausson@mah.se)
- Manager of Research Office
  - Name **Peter Jönsson**
  - Position title **Research coordinator**
  - E-mail address **Peter.Jonsson@mah.se**

## 7 Comments on program for research work shop

Please comment on any specific areas you consider important to be covered at the INU Research work shop. Also note if there are any specific speakers you would like to see invited and/or which areas they should cover (e.g. funding possibilities, research management etc).

**The proposed agenda covers the whole range of matters. The action plan is important to discuss. It is here we create a win-win situation for the researchers/research areas that have matching profiles. We now that research cooperation within the INU is not an end in itself for our researchers since viable collaborations may be found everywhere around the globe.**

## 8 Name, date and email for further information

Name: Peter Jönsson

Date: 2006-05-03

Email address: **Peter.Jonsson@mah.se**