



UPPSALA  
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**Crossing Perspectives on  
Gender and Physics**

ÅngströmLaboratory, Uppsala

NorWiP annual meeting 2008  
17-19 september

**GenDADA –  
Detecting Anomaly Dynamics  
Applied**

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## **4<sup>th</sup> Annual Meeting of Nordic Network for Women in Physics with a Gender & Physics Workshop:**

### **Crossing Perspectives on Gender and Physics**

*Ångström Laboratory September 17-19 2008*

The fourth annual meeting for the Nordic Network for Women in Physics, NorWiP, was held at the Ångström Laboratory in Uppsala September 17-19 2008. The number of registered participants was 89 coming from all the Nordic countries, including representatives of Lithuania, Estonia, Austria, Switzerland, Germany, USA and UK. Close to 20 percent were PhD students. We had an ‘open door’ policy to encourage physics students and researchers working at Ångström Laboratory, to visit the lectures freely, which many took the opportunity of doing.

NorWiP was established in 2005 and serves the existing networks for women in physics in Denmark, Norway, Finland and Sweden. We maintain many international contacts and invite speakers from the other European countries and the US on a regular basis.

The objectives of NorWiP are to significantly strengthen the recruitment, education and career possibilities of Nordic female students and young researchers. In order to achieve this, partial goals of the network include:

- To train, encourage and retain female PhD students and postdocs.
- To allow students and young researchers to find female advisors, mentors and role models in their field and to allow female physicists at all career stages to exchange information and experiences and to establish contacts to other female physicists in the Nordic countries.
- To increase the visibility of Nordic female physicists and to maintain an open database of women researchers in physics in the Nordic countries.
- To identify gender barriers in the career paths of women in physics and to work toward removing such barriers.
- To facilitate international networking by developing contacts with women in physics organizations around the world.



The annual meetings are a cornerstone in sustaining the network and in reaching these goals. Meeting and networking among female physicists is invaluable thus creating new contacts between students, junior and senior researchers. One major theme for this year's conference was "**Crossing Perspectives on gender and physics**". We believe that physics is done in a cultural and social context, structured by gender, which can be experienced by the active physicist. However, the scholarly exploration of this experience is most often done within the discipline of gender research. Until now little dialogue has taken place between active physicists and gender researchers. The aim of this conference is to bring representatives from both fields together and facilitate exchange of knowledge and perspectives.

The following topics were explored:

- **Detecting Gender: Knowledge-Making in Physics**  
What role does gender play in the experimental and theoretical practice of physics? What research has been done, what is missing? What possibilities are opened up by crossing the borders between gender and physics research?
- **The Anomaly of Being a Woman in Physics<sup>1</sup>**  
From historical and sociological viewpoints, how are male and female physicists perceived and how do they perceive themselves in the scientific and academic environment? What structures affect the careers of physicists? How and why are their identities as insiders and outsiders created in and by the scientific networks?
- **Dynamics of a Masculine Field: Learning & Teaching**  
Where does gender influence the teaching and learning of physics? How can a gender perspective help us understand the experience of learning physics? When teaching physics, how can we take gender issues into account? What would a liberating physics education look like?
- **Applying Physics at our Service**  
What gender questions can be answered by applied physics methods? For example, can we utilize the techniques of engineering physics or material science to support women's environmental concerns or to enhance the visibility of women's cultural creativeness? What problems do we want to be discussed and treated by applied physics?

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<sup>1</sup> Evelyn Fox Keller





The conference held five plenary sessions with invited talks and two parallel sessions with contributed talks, three poster sessions and parallel workshops. Two social events, a welcome dinner and a conference dinner took place. The plan is to publish the conference proceedings with selected contributions and all abstracts.

### **The 1<sup>st</sup> conference day**

At the conference inauguration Professor **Anders Hallberg**, the Vice-Chancellor of Uppsala University, gave an inspirational speech welcoming the conference attendees to Uppsala University and encouraging the participants to engage in passionate discussions on the themes of the conference. Subsequently Vice-Rector **Margaretha Fahlgren** and Dean of Physics Section **Ulf Danielsson** gave welcome addresses, stressing the importance of transgressive encounters between different fields of research.



In the keynote address of the first session Distinguished Professor **Nora Berrah** from the West Michigan University gave an in depth account on investigations of the interactions of atoms, molecules, clusters and their ions with photons. It was followed by a session on the theme '*Detecting Gender*' with invited talks by Professor **Kristina Rolin** on epistemic responsibility in physics and by Professor **Elvira Scheich** on the fabrication and erasure of gender in the knowledge making in physics.

In the afternoon parallel workshops were held. Physics laboratory exercises aimed at gender researchers were led by the PhD students



**Camille Bélanger-Champagne** and **Anna Danielsson**. Tours of the Ångström Laboratory and the clean rooms were given by Docent **Carla Puglia** and the Wave Power Laboratory was organized by PhD student **Cecilia Boström**. A workshop on Techniques of disempowerment was led by **Annika Lindé**, Equality Officer at Uppsala University. This session was attended by physicists and gender scholars, PhD students and senior researchers. The atmosphere was very open and the exchange of differing opinions and experiences was characterized by honesty and a desire to really understand how and why disempowerment works and how it can be neutralized.



In the afternoon Professor **Barbara Badelek** gave an overview talk on the structure of the nucleon, then followed the NorWiP reports on the status in the Nordic countries, given by Professor **Karin Nordström Dyvelkov**, Denmark, Professor **Anna Lipniacka**, Norway and Professor **Stacey Sörensen**, Sweden.

The welcome dinner was held at the Västgöta Nation.

### **The 2<sup>nd</sup> conference day**

In the morning the second keynote talk was given by Professor **Sharon Traweek** from the History Department of UCLA, Los Angeles. The title of the talk was “Embodied Narratives of Careers and Experiments in Physics”, giving an enlightening of Professor Traweek’s pioneering research based on interviews with physicists active in different cultures.

Under the *Anomaly* theme an analysis of “Universities as cultural workplaces” was done, drawing on the new results of the UPGEM<sup>2</sup>

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<sup>2</sup> Understanding Puzzles in the Gendered European Map, UPGEM



report, presented by the invited speaker Professor **Cathrine Hasse** from DPU, Aarhus university. Hasse is also the coordinator of the EU financed UPGEM project within the 6th framework program. Three categories characterizing different cultures were presented, the Hercules, the Caretaker and the Worker Bees.

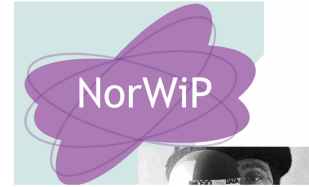
The second *Anomaly* talk focused on historical aspects, describing the pre-war situation with a higher status for women physicists in some European laboratories. Professor **Maria Rentetzi** from the National Technical University of Athens explored the mechanisms allowing women to acquire positions in the natural sciences at this time.

Two parallel sessions comprising the *Anomaly* and *Detecting* themes were then held.

The plenary session after lunch contained physics talks. Nuclear physics was covered in the talk “Physics of small hadronic systems” by Postdoc **Kanchan Khemchandani**, who gave both an introduction to the topic and the theoretical background for some recent experiments done in the accelerator ring CELSIUS in Uppsala. Professor **Eija Tanskanen** showed us beautiful pictures and explained how space weather and space climate can be studied and its implications. Professor **Päivi Törmä** from Helsinki University of Technology concluded the physics session with an exciting talk on her two main research topics, ultracold Fermi gases and molecular electronics as DNA origami.



As the last item on the second day’s agenda a debate was held between panelists **Nora Berrah, Catherine Fox Maule, Cathrine Hasse and Sharon Traweek**, on the questions “*Quota?, Working climate? What to do?*” Animated and passionate discussions took place, several actions were described that had been taken and carried out with success. For instance was the education of the leadership stressed as one important factor by Berrah, who gave examples of



several actions taken by the [Committee on the Status of Women in Physics](#) (CSWP)<sup>3</sup> of which she is a member.

At the end of the day a city walk visiting sites of central Uppsala was organized by **Helene Götschel**. The conference dinner including poster prize awards and musical entertainment by the Engblom Sisters, was held at the Västgöta Nation. Concluding the program for the day Professor **Cecilia Jarlskog** gave a warmly humorous, encouraging and highly appreciated dinner speech on the theme of women in physics.



### The 3<sup>rd</sup> conference day

The third keynote talk was given by the Secretary General **Maren Jochimsen** of the European Platform of Women in Science (epws) informing about the common effort of European women in science to organize with the aim to influence the policymaking of EU. Both NorWiP and GenNa are members of the epws.

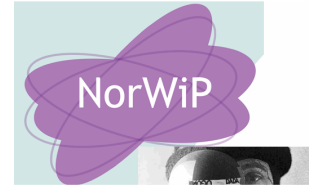
The morning plenary session ended with **Ulrike Röhr** and **Gotelind Alber**, from Berlin, giving a joint presentation on gender aspects and sustainability in climate change negotiations and gender dimensions of climate change policies. Their talk gave a strong impression of how gender matters in the adaptation to climate change impacts.

Parallel sessions were held with physics talks on fusion plasma and particle physics and GenDADA talks on the theme *Dynamics*.

In plenary session Professor **Monika Bessenrodt-Weberpals** from Hamburg University talked on the topic “On the Route to Gender and Diversity Mainstreaming in Higher Education”, describing successful approaches in the teaching of physics, using reflective coeducation.

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<sup>3</sup> A committee of the American Physical Society since 1972



Several examples of topics from biological and environmental aspects of everyday life were given as attempts to abolish gender stereotypes replacing them with positive views on female and male identities.

The conference was concluded by Professor **Dorte Nørgaard Madsen**, the chair of NorWiP.

### Summary

To our knowledge this was the first attempt ever to gather active researchers from the fields of gender and physics for exchange of experience and knowledge. Judging from the positive and open atmosphere that is traditionally the trade mark of our women in physics meetings, and the inspirational discussions that took place, the meeting was a great success. One male PhD student afterwards communicated how different it had been to the more conventional physics conferences he previously had attended. Here people had asked a lot of questions and listened to the answers as if they really wanted to know. Words like 'pioneering and groundbreaking' were often heard in the conversations. The physicists were immersed in a gendered outlook on their scientific enterprise for a few days, thus rendering them further tools to critically analyze aspects of their own research and the social reality of their physics scientific communities. The gender researchers understood more about the reality of doing physics and maybe even learnt a bit of physics along the way! Several of the conference attendees found new collaboration partners.

On behalf of all the conference attendees and NorWiP, we would like to express our deep gratitude to first and foremost **Nordforsk** enabling the Nordic network to be formed and continue to exist. Furthermore we are grateful to **GenNa** for supporting the idea and providing funds, and we thank the secretariat at the Centre for Gender Research for being very helpful in organizing this conference. We are also very grateful for the financial support from **The Swedish National Committee for Pure and Applied Physics** of the **Royal Swedish Academy of Sciences**, **The Swedish Research Council**, **The Swedish Physical Society** and the **Department of Radiation Sciences** and **Uppsala University**.

For the organizing committee  
Pia Thörngren Engblom