

The Danish National Research Foundation's



**RESEARCH ACTIVITIES AT
THE DANISH NATIONAL RESEARCH FOUNDATION'S
CENTRE FOR TEXTILE RESEARCH (CTR)
2009**

INTRODUCTION

2009 was the year of the successful international evaluation of CTR as centre of excellence. As a result, we can continue textile research at CTR for another five years under the Danish National Research Foundation. We are grateful for this support!

CTR has in 2009 completed several of its major research projects as well as launched some new research efforts. CTR also hosted the *ESF Exploratory Workshop Textile Terminologies* in March 2009 as well as 3 other international gatherings. Nosch received the Elite Research Prize of the Ministry of Research, Technology and Innovation in January 2009. The Prize was partly spent on a study tour for the entire CTR staff to China, where new collaborations were engaged. The study tour gave us a new outlook on the global world of textiles.

The scientific core of CTR consists of two research programmes: *Tools and Textiles, Texts and Contexts* (TTTC), which focuses on textiles of the Mediterranean Bronze Age, and *Textile and Costume from Bronze and Iron Age in Danish Collections* (DTC), which investigates Danish textiles and animal skins in a European context. The primary staff of CTR in 2009 consisted of one director (Nosch), three researchers (Mannering, Andersson Strand, Gleba), five co-financed PhD scholars (Zagal-Mach, Ringgaard, Pásztókai-Szeöke, Lyngbye Pedersen and Frei), and scholars employed for 1-9 months at CTR (Cherine Munkholt as editor, Mette Bruun as coordinator, Jo Cutler as researcher, Linda Mårtensson as textile technician) and several textile scholars who resided and worked with us for 1-2 month periods (Joanna Cutler, London University, Paula Mazare from University Iulia Alba Rumania, Sophia Bergerbrant, University of Stockholm; Susanne Lervad, Term Plus, Copenhagen; Sabine Karg, National Museum, Michael Langkjær, University of Copenhagen). In addition to this, there is a group of approx. 80 contributing collaborators from 23 European countries plus the USA, Canada, Israel, Syria, Jordan and Russia. CTR greatly benefited in 2009 from exchange and collaboration with the two CTR visiting professors: In spring the assyriologist Dr. Cécile Michel, CNRS; in autumn the palaeoanthropologist Prof. Pia Bennike. CTR also engaged in a collaboration with Dr Sabine Karg, National Museum of Denmark, and collaborated on the international research project FLAX sponsored by the Danish Research Agency for Culture and Communication. 2009 was also the year in which Nosch was appointed research professor at the Saxo Institute, University of Copenhagen.

Other important research activities of the centre were the final edition of several books, conference proceedings as well as monographs. CTR scholars have given a total of 38 lectures at international conferences in 9 countries in 2009. All CTR activities are communicated through our web site: www.hum.ku.dk/ctr.



The Danish National Research Foundation's
**CENTRE
FOR
TEXTILE RESEARCH**



March 2009 CTR hosted the international exploratory workshop **Textile Terminologies in the 3rd and 2nd millennia BC**. The workshop was arranged by CTR as part of the research program *Tools and Textiles – Texts and Contexts* in collaboration with CNRS Nanterre's research group ArScAn/Histoire et Archéologie de l'Orient Cunéiforme, directed by Cécile Michel.

See: <http://ctr.hum.ku.dk/upload/application/pdf/f51d6748/web%20site%20text.pdf>

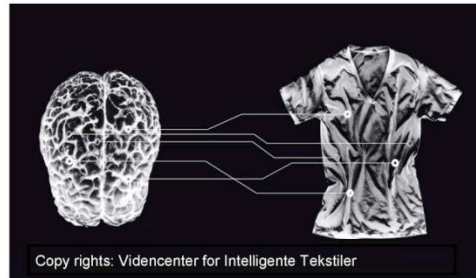
A delegation of 10 CTR researchers participated in a **Study Tour to China 4 - 20 October 2009**. The tour included visits, workshops or lectures at Shanghai History Museum, Indigo Dying Factory, Nantong Textile Museum,



Embroidery Research Institute, Silk Spinning Factory, Hangzhou National Silk Museum, Donghua University, Nanjing Textile Research Institute and Shaanxi Historical Museum and Archaeological Institute.

HIGHLIGHTS 2009

FUTURE TEXTILES – Technology and Intelligent Textiles was the subject of a conference 3 November 2009 hosted by CTR.



Copy rights: Videncenter for Intelligente Tekstiler

The conference focused on nanotechnology and intelligent textiles and incorporated participants both from the textile and design industry and from textile research institutions.

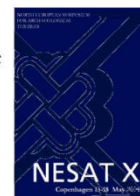
See: <http://ctr.hum.ku.dk/calendar/futuretextiles/>



CTR and Dr. Sabine Karg, the national Museum of Denmark hosted the **First International Flax Seminar** which constituted the launch of the establishment of an international Flax Network. The workshop embraced the whole process of flax production, comparing the results of prehistoric and classical archaeologists, textile researchers and natural scientists, geologists and physicists from Scandinavia, The Netherlands, UK, Germany, Switzerland and Estonia.

DressID CTR organised a seminar about *Production and Trade* at the Hallstatt meeting in June 2009 during the 4th General Meeting.

CTR edited the publication of the **North European Symposium for Archaeological Textiles X** with 50 contributions (Oxbow Books, Oxford 2010).



EVALUATION

2009 was the year of the international evaluation of CTR as centre of excellence. It was also the year in which we developed a new research plan for 2010-2015 and planned new collaboration; our research and future plans were submitted to an international panel of experts who also visited CTR on April 27 and discussed with us for an entire day. The international evaluation report, together with our new research plans, was submitted to the Danish National Research Foundation in June 2009 with a view to being awarded another funding period. As a result, the board of the Foundation granted DKK 25 millions for another five years of textile research. The new research includes a strong partnership with the National Museum of Denmark and joint research plans.

RESEARCH PROGRAMME: TEXTILES AND COSTUMES FROM BRONZE AND EARLY IRON AGE IN DANISH COLLECTIONS (DTC)

STAFF

Ulla Mannering (full time); Margarita Gleba (9 months); Irene Skals (400 hours, NM funding); Anne-Lisbeth Schmidt (400 hours, NM funding); Marianne Bloch Hansen (200 hours).

RESEARCH IN 2009

In 2009, the DTC research programme has been working on completing the *Designed for Life and Death* manuscript. A meeting was held 29 May at CTR with the different programme participants to coordinate research results in the different sections of the book. Further time has been spent on editing and writing contributions to the book *Textiles in Context*, making final corrections to the *North European Symposium of Archaeological Textiles X* conference proceeding, and completing the book by Susan Möller-Wiering on the textiles from weapon deposits. Early Iron Age skin materials were further investigated and photographed in 2009. Excavation of a grave find from Herning with unprecedented good preservation conditions for textiles was started.

The focus was on:

- Publication of the numerous results and the new methodological approaches explored in specialised journals (14C, dye, strontium). (see list of publications)
- Completion and the opening of the newly developed website <http://oldtiden.natmus.dk> in collaboration with the National Museum. The homepage serves as a digital extension of the new permanent exhibition *Danmarks Oldtid*, with a special focus on archaeological textiles.
- Collaboration with Professor Bodil Holst, Head of the Nanophysics Group, Department of Physics and Technology, University of Bergen, developing new methods for differentiating between flax and nettle fibres from an archaeological context. In January 2010 beam time at the *European Synchrotron Radiation Facility* in Grenoble made it possible to examine 16 archaeological textile samples provided by DTC/TTTC. The results will be published jointly with CTR.
- Collaboration with the Ancient DNA Group at the Institute of Biology, University of Copenhagen exploring the possibilities and developing methods for extracting DNA from dyed and naturally pigmented modern and ancient wool samples.
- The most important publications in 2009 were:

Mannering, U., Possnert, G., Heinemeier, J., Gleba, M. *Dating Danish textiles and skins from bog finds by means of ¹⁴C-AMS*, *Journal of Archaeological Science*, 37 (2010), 261-268.

Vanden Berghe, I., Gleba, M., Mannering, U. *Towards the identification of dyestuffs in Early Iron Age Scandinavian peat bog textiles*, *Journal of Archaeological Science*, 36 (2009), 1910-1921.

Mannering, U., Gleba, M., Possnert, G., Heinemeier, J. *Om datering af mosefundne lig og beklædningsdele*, KUML 2009 (2009), 103-125.

<u>MILESTONES 2009</u>	<u>STATUS 2009</u>
Completion of manuscript <i>Designed for life and death</i>	50% completed
Completion of manuscript <i>Textiles in Contexts</i>	90% completed. Edition of the last contributions still outstanding
Publication of manuscript <i>Textiles for War</i>	Manuscript finished and currently being edited.

Milestones for 2010 are:

Finish editing and submission of the three book manuscripts to the publishers.

RESEARCH PROGRAMME TOOLS AND TEXTILES – TEXTS AND CONTEXTS. INVESTIGATIONS OF TEXTILE PRODUCTION IN THE BRONZE AGE EASTERN MEDITERRANEAN (TTTC)

STAFF 2009

Eva Andersson Strand (full-time); Marie-Louise Nosch (full-time), Joanne Cutler (University of London) (5 months);

VISITING SCHOLARS

Prof. Jean-Claude Poursat, Prof. Emeritus University of Clermont II, France (February).

Prof. Cécile Michel, CNRS, Paris (March).

Dr. Richard Firth, UK (April/May & November).

RESEARCH IN 2009

This research programme investigates textile production in the Aegean, Anatolia and the Levant during the Bronze Age. The research is based on collaboration with 40 archaeologists representing 34 sites in present day Greece, Turkey, Cyprus, Israel, Jordan, Syria and Gaza.

The major research tool of the programme is the CTR database for textile tools compiled by the collaborators. App. 10,000 textile tools have been recorded in the database. The database provides a solid foundation for the understanding of textile tools and their developments from the 4th to the 2nd millennia BCE. It differentiates tools chronologically, typologically and according to site types and contexts. The functions of the tools are addressed via experimental archaeology: systematic tests conducted according to precise guidelines and external analyses have yielded very precise data about the time consumed and tool function.

In 2009, the second part of the research programme *Texts and Contexts* in collaboration with CNRS, Dr. Cécile Michel, Paris, yielded new results, networks and perspectives. The programme received funding from CNRS and European Science Foundation for an exploratory workshop, *Textile Terminologies from the 3rd to the 1st Millennium BC*, hosted by CTR in March 2009; 35 scholars participated (see appendix), and 22 papers were subsequently submitted for peer review and publication. M.-L. Nosch and C. Michel undertook this task in 2009 and submitted the entire volume to the publisher Oxbow Books in Oxford in December 2009.

Focus and highlights in 2009:

- The analysis of the 700+ unpublished loom weights from Malia on Crete was completed. This has provided important new insights into textile production at this palatial settlement in the early second millennium BC. The results will be published, in collaboration with the excavator, as a chapter in the forthcoming *Études crétoises* monograph relating to the site (manuscript now in press).
- The programme's experimental research was continued, in collaboration with a research project on the textile production at the Danish Iron Age site of Vorbasse. Experimental work was undertaken in order to ascertain the practicality of weaving a 2/2 twill on the warp-weighted loom, using four rows of loom weights that were based on the Vorbasse archaeological finds. The results clearly demonstrated that the warp-weighted loom, and the loom weights themselves, do not preclude the production of twill.
- Analyses of the loom weights in the TTTC database indicate that they could also function well in a twill weave. Very few fragments of textiles from the Bronze Age Eastern Mediterranean have been preserved, but the

tool analyses and the experimental work have established that the possible production of twill fabrics cannot be excluded.

- The peer reviewed paper “Shape of Things: Understanding a Loom Weight” by Andersson Strand, Mårtensson and Nosch was published in *Oxford Journal of Archaeology* 28 (4). This article presents new knowledge that has been gained through experimental research, regarding the functional parameters of a loom weight.

Archaeological Textiles

The fragment of textile from the Late-Final PPNB layers (8200 BP) 89 at the Neolithic site of Basta, Jordan, given to the Danish National Research Foundation’s Centre for Textile Research for analysis, is one of the world’s oldest examples of a woven textile. Analysis in 2008 by the Department of Conservation, the National Museum of Denmark, determined that the fibre is of plant origin, but no further conclusions could be reached. Therefore, a new approach has been taken: in collaboration with Prof. Bodil Holst, Head of the Nano Science programme at the University of Bergen, Department of Physics and Technology, and Dr. Brigitte Murphy, Kiel University, we were successful in obtaining support from ESRF to analyse samples of this fragment and other archaeological textiles at the *European Synchrotron Radiation Facility* in Grenoble. The tests were conducted in January 2010, and will be published jointly with CTR.

In the 2008 CTR annual report, the TTTC programme defined its major milestones for 2009:

MILESTONES 2009	STATUS
Technical analysis of textile tools from Troy (2000 items) completed	Completed
Submission of manuscript to <i>Études crétoises</i> concerning Malia textile tools, with J.-C. Poursat and F. Rougemont	Completed

Milestones for 2010 will be:

- Submit manuscript for the volume *Tools, Textiles and Contexts*.
- Arrange the 13th *Aegaeum Conference on Textiles, Dress and Adornment* hosted by CTR in April 2010, and assist in the publication of the contributions in two volumes, to appear in 2011.

PHD SCHOLARS AND THEIR RESEARCH

The five CTR PhD scholars are now all finishing their PhDs, with exciting new perspectives and results. They have been very active at international gatherings and some have even arranged their own international seminars.

Textiles and Conservation, with a Focus on Textiles from the Collections in the Danish National Museum was co-financed by CTR and the National Museum of Denmark, and investigated by Maj Ringgaard from 2006-2009.

Ringgaard’s PhD research project is called *Degradation Phenomena in 18th-century Textiles Excavated in Copenhagen*. Ringgaard has presented her research at national and international conferences in 2009.

Textiles and Archaeology is co-financed by CTR, University of Århus and the Danish PhD School in Archaeology and investigated by Judit Pásztoókai-Szeöke, of Hungary, from 2006-2009. Her PhD research project is called *The Archaeological Evidence of Textile Production in Roman Pannonia*. Pásztoókai-Szeöke has presented her research at several international conferences, among which *Climate and Ancient Societies. Causes and Human Responses. Stine Rossel Memorial Conference 21-23 October 2009*, in University of Copenhagen, and *Oikos – Familia: The family in ancient Greco-Roman society. Framing the discipline in the 21st century, between 5-7 November 2009*, in the University of Gothenburg. She also co-organised, and co-edits the contributions from, *Work and Identity. The Agents of Textile Production and Exchange in the Roman Period* at the 4th General Meeting of the DressID-project in Hallstatt, Austria, June 2009.

Design as a Competitive Parameter in the Development of the Danish Textile Industry is co-financed by CTR, the Centre for Business History at the Copenhagen Business School, Centre for Design Research, the School of Design at Kolding, and the private foundation Fonden Frigges Legat, and investigated by Birgit Lyngbye

Pedersen from 2006-2010. Lyngbye Pedersen has presented her research at the 5th EBHA Summer School in Umbria, organised by the Association for Business History. She also presented her research at seminars at the School of Design Kolding and University of Copenhagen.

(Isotope) - Geochemical Studies of Textiles and Tools: Tracing their Sources is financed by the SAXO Institute, University of Copenhagen, and investigated by Karin Frei from 2007-2010. Frei has presented her research at international conferences and published her findings in highly ranked journals.

Textiles and Experimental Archaeology is co-financed by CTR and Lund University, and investigated by Ulla Isabel Zagal-Mach from 2006-2010. Her Ph.D. research project is called *Sails on the Horizon - a Craft Oriented Study of the Integration of Textile Sails in South Scandinavia Production and Use 500-800 AD*. She gave papers at two international conferences: *X Nordic TAG*, NTNU, Trondheim, and at Millersville University, Pennsylvania U.S.A. She also taught a masters course "Archaeological Theory" at the Department of Archaeology, Saxo-Institute, University of Copenhagen, and an undergraduate course "The Dynamics of Interactions. Celts, Etruscans, Greeks and Romans", at Lund University.

DRESSID. THE EU FUNDED COLLABORATION ON TEXTILES RESEARCH

Clothing and Identity in the Roman World – DressID

CTR engaged in 2007 in this international research program under the Education, Audiovisual and Culture Executive Agency, Directorate-General for Education and Culture of the European Commission. The project runs over 5 years, 2007-2013. A large part of CTR research and results can be directly integrated into the *DressID* project.

CTR is one of six European partners, and is heading three study groups:

- Elements of costume (spokesperson Mannering)
- Experimental textile archaeology (spokesperson Andersson)
- Production and Trade (spokespeople Gleba & Pasztokai-Szeöke)

In 2009, the 4th General Meeting of the project was held, this time in Hallstatt, Austria. During the meeting, Nosch, Andersson, Stolcova, Mannering, Pasztokai-Szeöke and Gleba reported on the on-going research, and Gleba and Pasztokai-Szeöke organised a one-day seminar in connection with the Hallstatt Meeting (see below).

Collaborations with Leeds University

Collaboration agreements with Professor Katrina Honeyman, expert in textile industry and design history, School of History, Leeds University have been developed for several different projects:

Professor Katrina Honeyman spent four days as a visitor to the CTR. The focus of the visit was to develop research collaborations with CTR, and to engage in editorial work on a special issue of the scientific journal *Textile History*. This special issue on 'Military history and textiles' consists of selected papers from a conference held at CTR in May 2008. The editorial group involved Kjeld Hald Galster, military historian from the Centre for Military History, Royal Danish Defence College, as well as Nosch and Honeyman. Further research plans are to develop a large-scale European collaborative research project. In the shorter term it is intended to hold workshops in Leeds and in Copenhagen. Possible themes would revolve around textiles, dress, gender, race. The second project will focus more specifically on children and childhood; we plan a workshop on the theme of clothing childhood/children in a global and long historical perspective, with discussion of children as the makers as well as the consumers of clothes. During her visit, Honeyman also presented a paper 'Children workers in the early English textile industries' to the staff seminar.

INTERNATIONAL CONFERENCES AND SEMINARS IN 2009

***Textile Terminologies in the 3rd and 2nd millennia BC*, organised by Nosch and Michel, held at CTR Copenhagen**

The international exploratory seminar took place 5-8 March as part of CTR's research program Tools and Textiles – Texts and Contexts. An important step of this large enterprise is the investigation of how textile terminology is used and developed in the societies around the eastern Mediterranean and in the Near East. The sources show a complex terminology of textiles, tools and techniques, decoration and specialised textile occupational titles. 35 experts were convened. The aim of the international seminar was to make an interdisciplinary and comparative investigation of textile terminology in the written records of the Mediterranean area in the 3rd and 2nd millennia BC. The seminar was organised by CTR in collaboration with CNRS Nanterre, research group ArScAn/Histoire et Archéologie de l'Orient Cunéiforme and its director Cécile Michel in connection with their research program The Economy of Wool (2009-2012). The results of the seminar are currently being published by CTR, Ancient Textiles Series, Oxbow Books.

International seminar *Work and Identity. The Agents of Textile Production and Exchange in the Roman Period*, organised by Gleba and Pásztkai-Szeöke (see appendix).

The seminar took place in Hallstatt, Austria during the 4th General Meeting of the *DressID. Clothing and Identities in the Roman World* project sponsored by the Education, Audiovisual and Culture Executive Agency, Directorate-General for Education and Culture of the European Commission.

The proceedings are currently being published.

Future Textiles – Technology and Intelligent Textiles held at CTR, organised by Nosch and Bruun (see appendix)

The conference 3 November focused on developments in the field of nanotechnology and intelligent textiles. It addressed both the prospects and problems which appear, when science and textile design are interconnected. The speakers focused on the importance of intelligent textiles in relation to lifesaving protective clothing, design and architecture. Also, the environmental risks and the problems related to repair difficulties in connection with the use of intelligent textiles were illuminated. The conference incorporated participants both from the Danish industry and from textile research institutions. The debate at the conference also touched upon the question of Denmark's international position in the field and whether Denmark is able to set an example in ecologically sustainable intelligent textile production.

1st international FLAX seminar at Carlsberg Academy (see appendix)

Flax has been important for human culture and development for more than 8000 years and it constitutes one of the oldest textiles manufactured by our ancestors. The workshop organised by Dr. Sabine Karg, National Museum of Denmark, in collaboration with CTR took place 24-26 November and it constituted the launch of the establishment of an international Flax Network, sponsored by the Danish Research Council for Culture and Communication and with the aim to exchange knowledge about the cultural history of archaeological flax finds, ancient technologies of flax and linen preparation and production, and new methods in fibre identification. The workshop embraced the whole process of flax production, comparing the results of prehistoric and classical archaeologists, textile researchers and natural scientists, geologists and physicists from Scandinavia, The Netherlands, UK, Germany, Switzerland and Estonia. The workshop constitutes an important platform for further international and cross-disciplinary collaboration in the field of Flax research. Proceedings are published by Karg in the peer reviewed journal *Vegetation History and Archaeobotany* as a special issue.

EDITING AND PUBLISHING

Other important research activities of the centre consisted in 2009 of editing and publishing (see list of publications). CTR has a publishing and distribution agreement with Oxbow Books, Oxford, but also publishes volumes elsewhere. The editing undertaken in 2009 includes several important volumes such as the final edition of the impressive volume of 50 papers of the *10th North European Symposium of Archaeological Textiles (NESAT)* by Munkholt, Ringgaard, Andersson Strand, Gleba and Mannering, as well as editing of the conference *Textile Terminologies in the 3rd and 2nd millennium BC* by Nosch & Michel, *Textiles History and the Military* by Nosch, Galster and Honeyman, *Roman Military and Textiles* by Nosch, *Communicating Identity in Italic Iron Age Communities*, by Gleba and Horsnæs, and *Work and Identity. The Agents of Textile Production and Exchange in the Roman Period*, by Gleba and Pásztókai-Szeöke

The international scientific journal *Ancient Textiles Newsletter (ATN)* is, since 2008, edited and published bi-annually at CTR, but independently of its centre of excellence structure. This process was consolidated in 2009 and the number of subscribers increased. Andersson Strand, Gleba and Mannering form the editorial committee. The journal is issued in printed form, but will also be issued electronically in a few years. (See www.atnfriends.com.)

In 2009, CTR staff and collaborators published 13 papers in journals, 6 papers in conference series, 12 book chapters, 3 other types of publication and, finally, 4 books. The total publication productivity 2005-2009 is thus:

Total number of publications	2005-2009	Peer reviewed	Non-peer reviewed
Number of journal articles	34	26	8
Number of conference series	54	44	10
Number of monographs	16	16	0
Number of book chapters	36	32	4
Research reports on web site	27	27	0
Others		0	

CTR STUDY AND LECTURE TOUR TO CHINA

The Chinese lecture and study tour took place 4-21 October. CTR staff had the possibility to bring family members along at their own expense. In addition, important partners in textile research were also invited to join us, at their own expense. Thus the group consisted of 29 participants, plus two guides. Research visits had in advance been arranged with Chinese institutions and scholars. *The China National Silk Museum* at Hangzhou had invited CTR, and we spent a day with their researchers and students and gave 4 lectures. Our host was Prof. Dr. Feng ZHAO China's leading expert on silk, vice director of the *China National Silk Museum*, deputy to the National People's Congress and also professor at the *Donghua University* in Shanghai. Plans for collaborations were made, and we invited Prof. Feng ZHAO to CTR for *CIETA* in September 2011. The trip also included *Nanjing Textile Research Institute* and meeting with its researchers, and the *Archaeological Institute of Shaanxi* and meeting with researchers. The groups also visited in particular the *Shanghai History Museum*, *Shanghai Museum*, *Capital Museum* in Beijing, *Indigo Dying Factory* and *Nantong Blue Calico Art Gallery*, *Nantong Textile Museum*, *Donghua University Textile Museum*, *Emperor Qin's Terracotta Army at Xian*, and *Shaanxi Historical Museum*. Also textile workshops were on the programme: Silk Dyeing Workshop, Silk Brocade Weaving Workshop, Suzhou Embroidery Research Institute, meeting Research Staff, Silk Spinning Factory. Finally, CTR team gave five lectures at *Donghua University*, Shanghai for students in design and art history.

CTR STRUCTURE AND STAFF

No major changes in the centre structure occurred in 2009. The SAXO institute continues to take care of administrative tasks, freeing up the centre director Nosch. This arrangement functions very well.

In August 2009, Nosch was appointed research professor at SAXO institute, University of Copenhagen and gave her inaugural lecture in November, with an audience of more than 200 colleagues and Copenhageners who had purchased tickets via PolitikenPlus. Mannerling, Gleba and Andersson Strand underwent scientific evaluation and were assigned to the academic level of associate professors. Gleba was successful in obtaining a Marie Curie Intra-European two-year post-doctorate grant at Institute of Archaeology, University College London (October 2009-2011), where she will continue some of CTR's research activities, and remain in close collaboration with CTR.

CONCLUSION: CTR RESEARCH 2009

The international evaluation of CTR in 2009 was successful – and also time consuming and exhausting. While the evaluation provided an opportunity to finalise projects and clarify ideas, it was also an immense endeavour, in particular for a small centre of excellence. The Chinese study tour was therefore a welcome opportunity to find our breath again. The China tour brought energy and inspiration into the centre and an outlook on the wider world.

Interdisciplinary research is the backbone of CTR, and CTR continued in 2009 to seek for collaborations and opportunities both inside and outside the Humanities. The results on the crystalline structures in nettle as a defining phenomenon for plant identification as developed by our partner in Physics in Bergen; the successful application to the European Synchrotron Facility opens up yet other exciting possibilities; the diachronic and comparative study of textile terminologies in Hittite, Egyptian, Mycenaean, Old-Babylonian etc., and the far reaching consequences of the systematic testing of degradation phenomena in dyes and fibres in CTR PhD scholar Ringgaard's research will definitely change conservation praxis in the future. These are areas where traditional methods from archaeology are combined with new analytical tools from the Natural Sciences.

For 2010, CTR's major milestones that we hope to reach are:

- A successful start for CTR2 and solid embedment into both University of Copenhagen and the National Museum of Denmark.
- Further international funding for CTR research
- 2 new PhD grants announced

While 2007 was a year of fundraising and earning money, 2008 was a year of spending money, and 2009 was the year of evaluation, planning and decision making. 2009 was the year of the successful international evaluation of CTR as centre of excellence. As a result, we can continue textile research at CTR for another five years under the Danish National Research Foundation. We are grateful for this support and will continue to set new agendas in international research, as well as seek further funding in order to make our resources meet adequately our ambitions.

Ved underskriften bekræftes det, at beretning og regnskab med tilhørende noter og oversigter indeholder alle relevante oplysninger, som vedrører årets primære aktiviteter i Danmarks Grundforskningsfond Center for Tekstiltforskning

March 2010

Marie-Louise B. Nosch, Director



APPENDIX CTR CONFERENCES 2009

Textile Terminologies in the Ancient Near East and the Mediterranean Area from the 3rd to the 1st millennium BCE, 4-8 March 2009

Speakers	Institution	Title of paper
Susanne Lervad	Termbulus Aps, Danterm, DK	Synonymic variation in the field of textile terminology: a study in diachrony and synchrony
Pascaline Dury	Centre de Recherche en Terminologie et Traduction, Université Lyon, FR	Synonymic variation in the field of textile terminology: a study in diachrony and synchrony
Sophie Desrosiers	Ecole des Hautes Etudes en Sciences Sociales, Paris, FR	Textile terminology in the 3rd and 2nd millennia BC: what kind of classification could help connecting terms to textiles?
Eva Andersson Strand	CTR, Copenhagen, DK	Results of the technological investigations of textile production via systematic tests of textile tools in experimental archaeology
Catherine Breniquet	Université Blaise-Pascal, Clermont-Ferrand II, FR	Weaving in Mesopotamia during the Bronze Age: archeology, techniques, iconography
Ole Herslund	University of Copenhagen, DK	Ancient Egyptian classification of textiles in the writing system
Jana Jones	Macquarie University, Australia	The Egyptian Early Dynastic and Old Kingdom 'linen lists': text and textile reconciled
Benjamin Forster	Yale University, USA	On garments in the Sargonic Period
Maria Giovanna Biga	Università di Roma "La Sapienza" IT	Coloured textiles in the Ebla documentation
Franco Pomponio (text read by Lorenzo Verderame)	Università de Messina IT	The Textiles in the Neo-Sumerian documentation
Hartmut Waetzoldt	Ruprecht-Karls Universität Heidelberg DE	Textile industry terminology in the Neo-Sumerian texts
Cécile Michel	CNRS, Maison de l'archéologie et de l'ethnologie, Nanterre, FR	Textiles or garments: what did the Assyrians trade in Anatolia?
Klaus R Veenhoff	Leiden University, NL	Textiles or garments: what did the Assyrians trade in Anatolia?
Agnés Degreve	Université Catholique de Louvain, BE	Les fibres textiles dans le monde syro-anatolien: le laine (SIG) et le lin (GU/GADA)
Reé Lebrun	Université Catholique de Louvain, BE	Terminologies, hittite, louvite, lycienne
Juan-Pablo Vita	CSIC - Instituto des Estudios Islámicos y del Oriente Próximo, Zaragoza, ES	Les fibres textiles dans le monde syro-anatolien: le laine (SIG) et le lin (GU/GADA)
Agnete Wisti Lassen	University of Copenhagen DK	Terminologies, hittite, louvite, lycienne
Maurizio del Freo	Università di Roma "La Sapienza" IT	Ugaritic and Akkadian textile terminology in the archives of Ugarit (late Bronze Age)
		Tools, procedures and professions - a review of the Akkadian textile terminology
		The terminology of textiles in the Linear B tablets, with some considerations going back to Linea A ideograms

Francoise Rougemont	CNRS, Maison de l'archéologie et de l'ethnologie, Nanterre, FR	The terminology of textiles in the Linear B tablets, with some considerations going back to Linea A ideograms
Marie Louise Nosch	CTR, Copenhagen,DK	The terminology of textiles in the Linear B tablets, with some considerations going back to Linea A ideograms
Eugenio Luján	Universidad Complutense de Madrid, ES	Mycenaen textile terminology and the organization of textile production: the case of the scribe 103
Francis Joannés	Universié de Paris I Panthéon - Sorbonne, Maison de l'archéology et de l'ethnologie, Nanterre, FR	Textile terminology in the Neo-Babylonian documentation
Stefan Zawadzki	Adam Mickiewicz University Poznan, PO	Garments in non-cultic context (Neo-Babylonian period)
Miguel Angel Andres	Univesity Salamanca, ES	Some considerations about Vedic, Avestan and Indo-Iranian textile terminology
Agnés Garcia Ventura	Barcelona ES	Teo-Sumarian textile wrappings. Revisiting some foundation figurines from Nippur

Future Textiles – Technology and Intelligent Textiles 3 November 2009.

Speakers	Institution	Title
Anne Louise Degn Hansen	Videnscenter for Inteligente tekstiler	Fremtidens tekstiler er intelligente
Torben Lenau & Elisabeth Heimdal	DTU	Tekstiler og innovation på DTU
Mette Ramsgaard Thomsen	Centre for Inf., Technology and Architecture	Inhabiting a Soft Space: Textile architecture
Aurélie Mossé	Centre for Inf., Technology and Architecture	Energy - harvesting and Self-Actuated Textiles in the Design of Domestic Spaces: a perspective on tectonic textiles
Jens Peter Kruse	Viking Company	Viking Life Saving Equitment: Therma Protection in extreme Environment
Joy Boutrup & Vibeke Riisberg	Designskolen Kolding	Hvad er "intelligente tekstiler"?
Linda Worbin	School of Textiles, University of Borås	Dynamic Textile Patterns
Flemming Besenbacher	Inano, Århus Universitet	NanoNonwovens
Anders Baun	DTU	"Nanoteknologi - er det farligt"

The First International FLAX seminar 24-26 November 2009

Speaker	Institution	Title of paper
Helmuth Schlichtherle	Cultural heritage Baden-Württemberg, Germany	Settlements of Neolithic flax farmers in Upper Swabia, Germany
Christoph Herbig	University of Frankfurt, Germany	Archaeobotanical evidence of flax cultivation and textile production from Neolithic wetland sites.
Ursula Maier	Cultural heritage Baden-Württemberg, Germany	Archaeobotanical evidence of flax cultivation and textile production from Neolithic wetland sites.
Urs Lenzinger	Archaeological Museum of the Canton of Thurgau, Switzerland	Flax processing in Neolithic lake-dwelling sites of Eastern Switzerland
Antoinette Rast-Eicher	ArcheoTex, Switzerland	Neolithic textiles: Flax preparation and thread production in lake-dwelling sites of Switzerland
Mogens Bo Henriksen	The Odense City Museum, Denmark	Archaeological evidence of flax production 500 KC - 1000 AD - examples from Funen, Denmark
Mads T. Runge	The Odense City Museum, Denmark	Archaeological evidence of flax production 500 KC - 1000 AD - examples from Funen, Denmark
Peter Steen Henriksen	The National Museum of Denmark	Archaeobotanical evidence of flax in prehistoric Denmark
Karin Viklund	University of Umeå, Sweden	The history of flax cultivation in Sweden - historical and archaeobotanical records
Helmuth Kroll	University of Kiel, Germany	Neolithic flax from Okoliste, Bosnian mountains, 5200-4500 BC
Gillian Vogelsang	Textile Research Centre, University of Leiden, The Netherlands	Preparation of flax and linen production based on ancient Egyptian tomb paintings
Sue Colledge	University of London, UK	The origin and spread
Robin Allaby	University of Warwick, UK	Archaeogenetics of flax
Christian Bergfjord	University of Bergen, Norway	Identifying archaeological textile fibres using modern microscopy techniques
Bodil Holst	University of Bergen, Norway	Identifying archaeological textile fibres using modern microscopy techniques
Bridget Murphy	University of Kiel, Germany	Investigation of textile fibres from Dead Sea caves using Micro-beam Synchrotron Radiation