

CATS



**Centre for Art Technological
Studies and Conservation**

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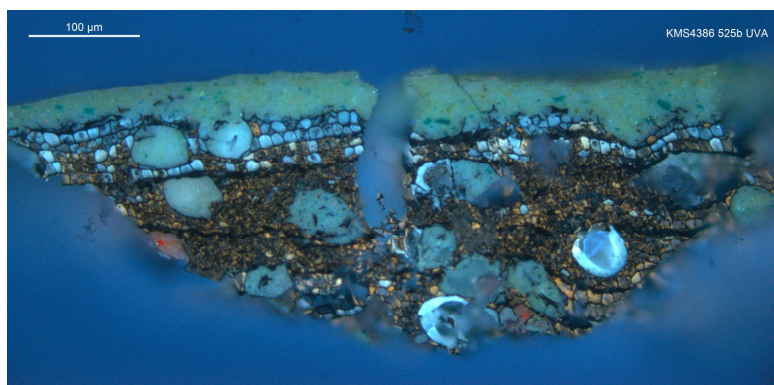
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CATS Newsletter XI

Welcome to the eleventh edition of the CATS newsletter with information on the latest projects, collaborations and analyses within CATS and its partners.



Cross section from Edward Weie "Faun and nymph" 1940-41 © CATS-SMK

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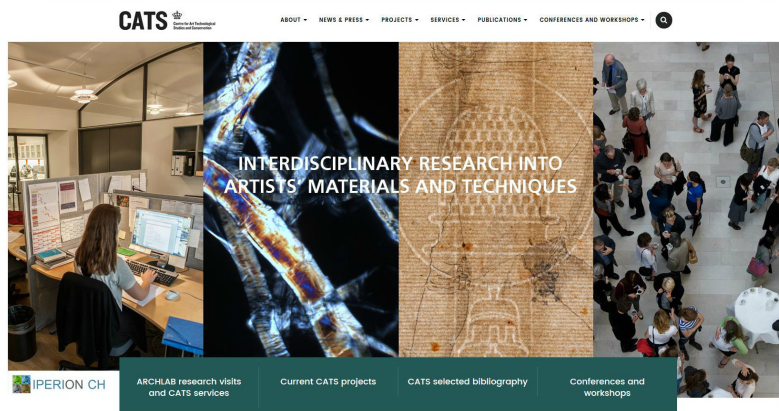
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CATS projects and news:

New website!

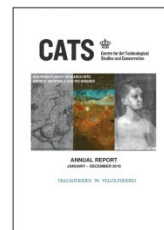


CATS' website has got a brand new layout.

Here you can read about our past and current projects, conferences and workshops, and find pictures of the lab. Feel free to take a look around the pages and discover our services and publications.

We hope you'll like the new face of CATS!

Also: Read the annual report of CATS 2016 [on our website](#).



New lab equipment in CATS

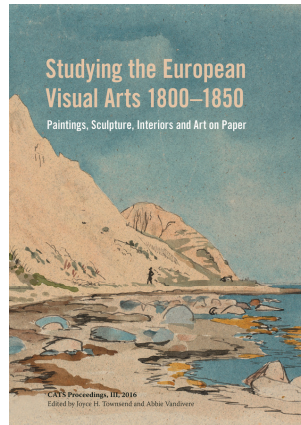


The establishment of the lab facilities of CATS has been an ongoing task, and upgrades and new acquisitions are continued throughout the project and in close collaboration between the researchers and scientists.

The following new equipment has been installed in 2016:

- **KADK: X-ray scanner, Dürr CR 35/HD-CR 35 NDT Plus**
- **NMD: Establishment of new laboratory facilities for the benefit of Danish research in materials science and environmental archaeology.**
- **SMK: Spectroradiometer ASD (UV-VIS-NIR reflectance and radiance/irradiance analysis)**

The proceedings from *CATS Conference 2016*
expected summer 2017



A two-day Technical Art History conference was held by CATS at the National Museum of Denmark on June 15–16th 2016.

The conference was focusing on artists' techniques and materials, written sources, conservation science, the history of science and technology, history of trade, and innovation of artists' materials during the first half of the 19th century. In the previous decades a number of art academies emerged throughout Europe and a focal point of the conference was possible the impact of these institutions on a new generation of artists. The papers presented examined how this manifested itself in Paintings, Sculpture, Interiors and Art on Paper.

The oral conference presentations have been submitted for publication and under the skillful guidance of the two editors, Dr Joyce Townsend (Tate) and Abbie Vandivere (Mauritshuis) the CATS Proceedings III is expected summer 2017 (May/June). We hope that you will find the third volume of the CATS conference proceedings enlightening and enjoyable as well as inspiring for further studies. As with the previous two volumes in the series, this volume, expertly published by Archetype Publications, will also be available online.

CATS welcomes technical visits at the ICOM-CC
Conference in Copenhagen



A tour of the conservation studios (paintings, art on paper, contemporary art and sculpture) and CATS – Centre for Art Technological Studies and Conservation.

Home to more than 260,000 artworks, the collections house 700 years of art and art history, from early European Renaissance to cutting-edge contemporary art. On view are works by some of the greatest figures from art history, including: Mantegna, Cranach, Titian, Rubens, Rembrandt and many more; Danish and Nordic art from the birth of Danish painting to the Golden Age and through to the dawn of modernism; modern art from the 20th century and the very latest contemporary art; and finally French art which includes some of the museum's most famous works by artists including Picasso, Braque, Derain and Matisse.

The history of the museum is inextricably bound up with the history of the art collections amassed by Danish monarchs. In 1849 the royal collections became state property as a result of the abolition of absolute monarchy. Together with the king's collections of paintings and sculptures – also known as The Royal Collection of Paintings – the museum also became home to the Royal Collection of Graphic Art and the Royal Cast Collection. The Royal Collection of Graphic Art is one of the oldest collections of graphic art in the world, comprising drawings, watercolours, etchings, woodcuts, lithographs, photographs, and other forms of art on paper.

CATS specialises in interdisciplinary research into artists' materials and techniques. It was set up in collaboration between SMK, the National Museum of Denmark, and the School of Conservation at the Royal Danish Academy of Fine Arts.

New dendrochronologist in CATS



CATS has appointed Dr Andrea Seim as dendro-researcher from April 1st 2017.

Andrea has over ten years of experience in the field of dendrochronology, both in dating archaeological and historical material and in relating tree growth to climate. She worked in dendroarchaeological laboratories in South Germany (Bavarian State Department for the Protection of Monuments and Sites as well as DendroNet) and at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL in Switzerland and obtained her Ph.D. at the Department of Earth Science, University of Gothenburg, Sweden last year. Throughout her academic activities she developed long and well-replicated tree-ring chronologies for ecologically and economically important European and Asian tree species such as oak, pine, spruce, beech or juniper. Material for this included archaeological material, standing constructions, diverse historical wooden objects and dead and living trees on-site. With a dense network of collaboration partners, wood anatomical studies, tree-ring network analyses and dendro-provenance analyses were successfully conducted by her in various projects. Andrea has experience in handling fragile objects and is looking forward to develop further non- and micro-invasive methods in tree-ring dating of art objects such as panel paintings.

A 'Marie Skłodowska-Curie Individual Fellowship' at CATS 2017-2019

Dr. Angela Jager has been awarded a two year Marie Skłodowska-Curie Individual Fellowship for her research project 'Netherlandish Paintings in Ledreborg Palace (NePLeP). A multi-disciplinary research of circa 600 paintings'.

The overall aim of this research is to contribute to understanding the strong interest in 17th century Netherlandish paintings in Denmark by focusing on the collection of Ledreborg Palace and the acquisition history of its paintings. More than 600 paintings decorate the walls of Ledreborg Palace (Lejre); all are of Netherlandish origin.

Dr. Jager explains: 'I shall implement the latest expertise in socio-economic art history (my academic specialisation from the University of Amsterdam) and the technical study of paintings (in which the host, CATS, is one of the internationally leading institutions), to explain the unusually high availability of Netherlandish 17th century paintings in Danish collections'.

The project commences April 1, 2017.

NePLeP is a project funded by the European Commission, H2020-MSCA-IF-2016, under Grant No. 753496



Succesfull CATS application for the European Synchrotron Radiation Facility in Grenoble



Synchrotron Grenoble ID21 beamline. © ESRF

Project: Looking for new insight into the fading mechanism of Prussian Blue by FF-XANES and micro-FTIR 2D mapping of Fe(III)/Fe(II) and bridging cyanide on original and model paintings.

During the restoration treatment of 18th C. Danish paintings a visual examination by the Conservation Department indicated that extensive fading of the original blue colour had taken place in areas exposed to light while still preserved in areas covered by the frame. Initial analyses were done at CATS as well as during a MOLAB-campaign. The aim of the current continuation of the project is to increase the understanding of the redox process of the mixed-valence pigment Prussian blue (PB) ($\text{Fe}^{\text{III}}_4[\text{Fe}^{\text{II}}(\text{CN})_6]_3 \cdot x\text{H}_2\text{O}$ / $\text{KFe}^{\text{III}}[\text{Fe}^{\text{II}}(\text{CN})_6] \cdot x\text{H}_2\text{O}$) in oil paints by evaluating the distribution of the corresponding alteration products in artificially aged PB paint models and in micro-samples from discoloured areas of 18th century paintings.

**Researchers: Letizia Monico, Costanza Miliani, David Buti,
Anna Vila and Annalisa Chieli from Universita di Perugia (Italy) and CATS.**



Related news:

DKK 2,75 mil. to a Ph.D project on air pollution in museum storages

A grant of DKK 2,75 mil. from 'Det Frie Forskningsråd' (the Danish Ministry of Higher Education and Science) pool for 'Ph.D. training outside the universities' has been donated to a project at the KADK - School of Conservation.

The Ph.D. project will be assigned to conservator M.Sc. Signe Smedmark who will be studying the consequences of poor indoor climate in the storage facilities of danish museums. The title of her project is "Air pollution in storages: Consequences for the use of resources, air quality and heritage preservation", a topic most relevant for current and new museum storage facilities in Denmark and abroad.

Congratualations to Signe and KADK!



Find the link to the KADK news page [here](#).

PHD: Mold on Danish Cultural Heritage

How do we fight mold in danish museums? A PHD student will do research on this question during the next three years. The PHD-project's affiliated partners are: KADK - School of Conservation, The Museums of Roskilde and DTU - Institute for Biotechnology and Biomedicin.

Mold in museum collections is an increasing and insurmountable problem for the affected museums. For one part, the mold disintegrates objects of cultural heritage, which is the primary concern of a museums obligation to preserve. Another concern is the spores of the mold, creating health problems for museum employees.

During this business-PHD "Mold Growth in Danish Cultural Heritage", conservator Camilla Jul Bastholm will create new knowledge on identification and cleaning of mold in museum collections. Knowledge that will make sure that the costly cleaning proces is done on a well-qualified and scienticicly proved basis. Based ont these intentions, the project will be of great value to musueums that hold collections infested with mold.

The project start in august 2017 and is supported by the Danish innovation Fond, The Danish Cultural Ministry and STARJ/Silvan Fond (DT-Group).



The Royal Danish Academy of Fine Arts,
Schools of Architecture, Design and Conservation
School of Conservation



IPERION CH:



CATS participation in the International Symposium on 'Cultural Heritage and Data: the Role of Research Infrastructures'

Organized in the framework of the EU-Horizon2020 project IPERION-CH, a two-day International Symposium on "Cultural Heritage and Data: the Role of Research Infrastructures" aimed at celebrating the outcomes of the transatlantic dialogue in the Heritage Science - December 2016.

Participants were led into this scientific cross-cutting domain embracing a wide range of research disciplines supporting the various aspects of tangible and intangible cultural heritage conservation, interpretation and management.

EU and US experts presented and discussed the different tools that can support and provide a model of international integration including, among others:

- The current state of on-going EU/US initiatives in the Science heritage field
- Education and Training related activities
- Innovative instruments and methods for integrated approaches to cultural heritage analysis and diagnostics
- Advancing diagnostics for intervention in conservation
- Digital Heritage

Organisers:



For more information including the presentations, click [here](#).

Conference: Tempera painting between 1800 and 1950 Experiments and innovations from the Nazarene movement to abstract art

International conference held by Pinakothek der Moderne in Munich. March 15-17th 2018. The conference will offer a vivid platform to explore the revival of tempera painting between 1800 and 1950 from the perspectives of art history, technical art history, conservation and scientific analysis.

The conference was initiated by the 'Tempera Group'. Several parallel research projects at different institutions with varying, interdisciplinary approaches to the subject 'tempera painting around 1900' were under way when in 2010 Karoline Beltinger (Schweizerisches Institut für Kunstwissenschaft, SIK-ISEA, Zurich) and Dr. Jilleen Nadolny (Art Analysis and Research, London) convened an informal international working group. The objective was to stimulate knowledge exchange between individual researchers. Between 2010 and 2013, the 'Tempera Group' gathered for four informal meetings of around 20 researchers, working in the fields of art conservation, art history, science and technical art history. As a preliminary result of this constructive exchange, a book comprising articles by the individual group members was published in September 2016. With our conference we want to make the profound knowledge of the 'Tempera Group' accessible to the broad professional public, open up a dialogue with other researchers and widen the scope of examination.

In the 19th century, the defining feature of tempera paints was their water-miscibility – a characteristic that clearly separated them from oil paints. In the first half of the 20th century, this use of the term was extended by some scholars and artists to *every* mixture of aqueous and non-aqueous binding media.

Registration and more: Please click [here](#)

Conference: 3D Imaging in Cultural Heritage

The British Museum, 9-10 November 2017. BP Lecture Theatre, The British Museum, London. First call for papers.

As part of the European network IPERION CH, a two-day conference will be held at The British Museum on 9-10 November 2017.

The aim of the conference is to explore the use of different 3D imaging methods and their wide-ranging applications in cultural heritage. Areas which will be covered include the visualization of objects and areas with optical techniques, X-ray CT scanning, the role of 3D imaging in the restoration of artifacts and low-cost 3D scanning techniques. The conference will also look towards the future of 3D imaging, and the potential of emerging technologies to impact the field of cultural heritage research.

At this stage we invite the submission of titles and abstracts of up to 500 words for presentations for consideration by the organising committee, using the form that can be downloaded from the conference website www.3dimaginginculturalheritage.org. The completed form should be emailed to abstracts@3dimaginginculturalheritage.org

The deadline for submission of abstracts is 1st June 2017. Conference places may be limited, so early registration is recommended. Those who express an interest in response to this announcement, or submit an abstract, will be notified when registration opens.

Expressions of Interest

To be added to the mailing list and express your interest in attending the 3D Imaging in Cultural Heritage conference, please email your full contact details to info@3dimaginginculturalheritage.org using the subject line 'Expression of interest'. Alternatively, further details of the conference programme, registration procedure and further practical information will be made available in due course from the website, www.3dimaginginculturalheritage.org.

For more information, please contact info@3dimaginginculturalheritage.org

Conference: Intangibility matters



**International conference on the values of tangible heritage.
Lisbon, LNEC - 29-30 May2017.**

Tangible heritage is the support of some of the most relevant and perennial values of Mankind.

It connects us with History, projects us to past environments and to lost cultural contexts, includes landmarks of our identity and constitutes a relevant economic asset. Therefore tangible heritage has intangible aspects inextricably associated to it and when tangible heritage is addressed, intangibility matters.

Conservation of tangible heritage is a cultural act with the value approach as a leading concept. The protection statutes, the arguments used to sustain the protection policies, the management options and definition of priorities, the allocation of resources and the uses of heritage assets are intimately connected and dependent on values, bringing to focus the intangible side of their nature.

Intangibility Matters, the IPERION CH international conference on the values of tangible heritage – IMaTTe 2017, aims at offering a discussion forum for scientists and other professionals working on the Cultural Heritage field about the intangible aspects of tangible cultural heritage assets.

The following topics are examples of the scope expected to be covered by the Conference and suggested to authors for communication proposals.

Registration and more: Click **here**.