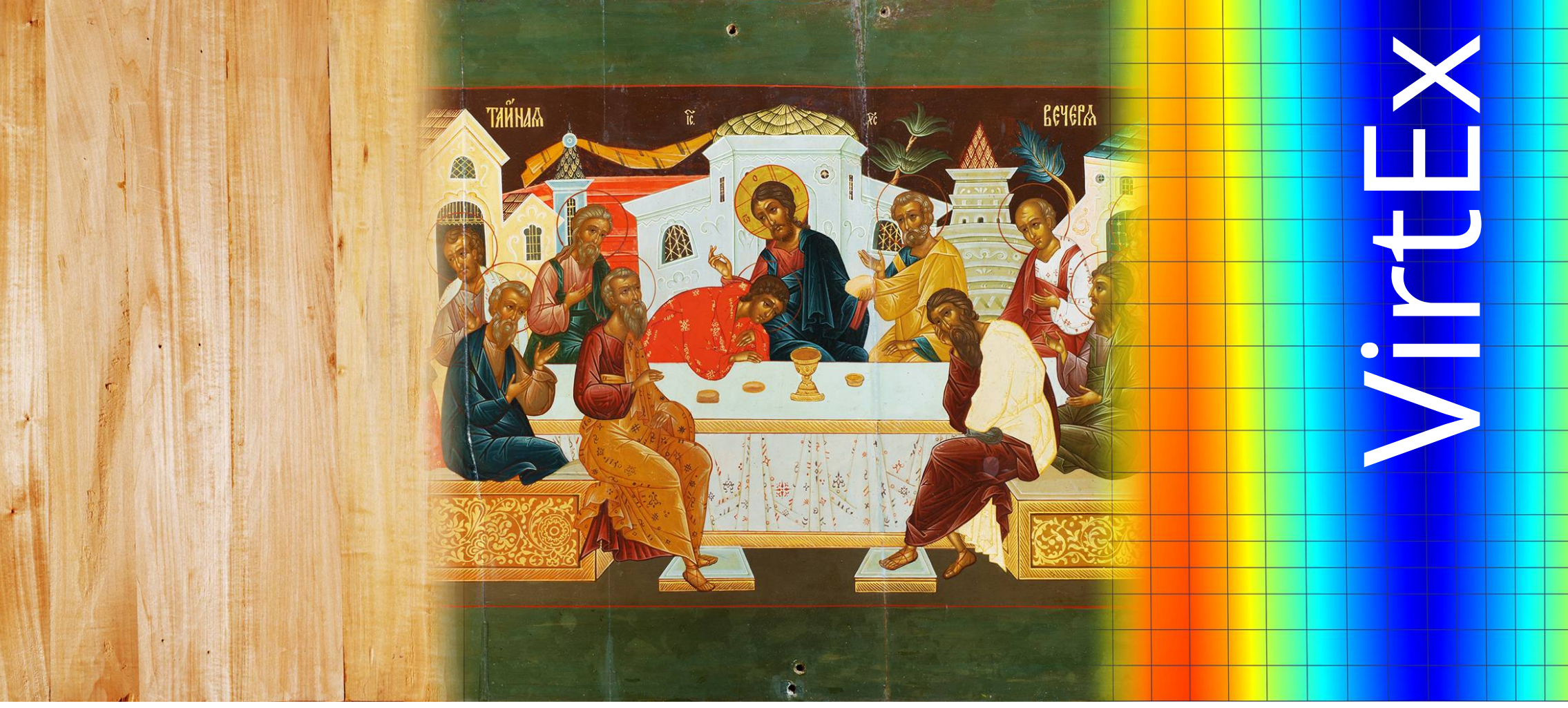


VirtEX

Virtual Experiments for Wooden Artwork

International Online-Colloquium

5 November 2021 | 9:00 – 16:00

SACHSEN This project is financed by the Saxon State Ministry of Science, Culture and Tourism with tax funds using the budget approved by the Landtag of the Free State of Saxony, Sächsische Aufbaubank, project number 100371102.

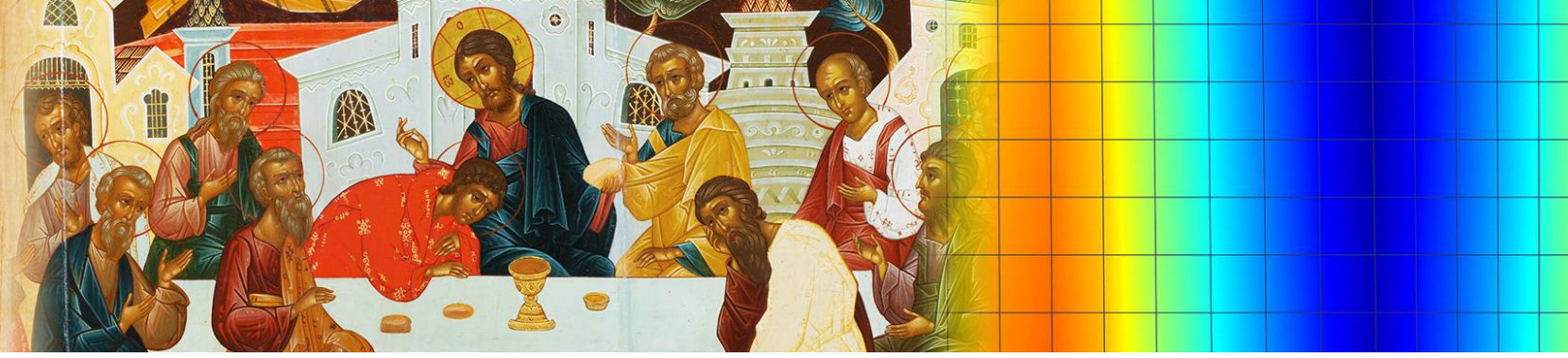
Hochschule für Bildende Künste Dresden

IHD SCIENCE BY EXPERTS

Institute for Structural Analysis

TECHNISCHE UNIVERSITÄT DRESDEN

TECHNISCHE UNIVERSITÄT DRESDEN



Virtual Experiments for Wooden Artwork – VirtEx

The VirtEx project at the Technische Universität Dresden will conclude with a final international colloquium at **5 November 2021.**

It will be held in digital form as an online conference. The colloquium language is English.

Time: 5 November 2021,
08:45 - 16:00 (Timezone: UTC + 1)

Venue: online via zoom

Conference fee: 0 €

To participate, you need to register via email until
3 November
virtex@tu-dresden.de

The zoom link will be sent to you right before the colloquium.

Further information: https://tud.link/nemm

Partners:

University of Fine Arts Dresden

Institut für Holztechnologie Dresden

Russian Memorial Church Leipzig

Andrey Rublev Museum Moscow

State Acad. Art Institute Named After V.I. Surikov Moscow

Institute of Photogrammetry and Remote Sensing (Technische Universität Dresden)

Institut für Diagnostik und Denkmalpflege e.V.

Landesamt für Denkmalpflege Sachsen

Staatliche Kunstsammlungen Dresden

Kunstretter e.V.

Program

The lectures will be of 20 min, followed by a short discussion.

9:00 **Introduction**
Prof. Dr. habil. Michael Kaliske, Technische Universität Dresden, Institute for Structural Analysis

Session 1 (state of knowledge, monitoring)

9:15 **Preservation of wooden heritage objects: Needs and gaps in knowledge**
Prof. Dr. Dr. habil. Łukasz Bratasz, Yale University (USA), Head of the Sustainable Conservation Lab; Polish Academy of Sciences Krakow (Poland), Jerzy Haber Institute of Catalysis and Surface Chemistry

9:50 **Mechanical experiments needed to predict creep in large wooden objects in cultural heritage: Experiences from the Vasa ship**
Prof. Dr. Kristofer Gamstedt, Uppsala University (Sweden), Department of Engineering Sciences

10:25 - 10:40 Break

Session 2 (numerical methods)

10:40 **Cracking induced in historical art objects by indoor climate variations**
Prof. Dr. Akke S.J. Suiker, Eindhoven University of Technology (Netherlands), Department of the Built Environment Applied Mechanics

11:15 **Predicting craquelure and delamination mechanisms in panel paintings**
Prof. Dr. Emanuela Bosco, Eindhoven University of Technology (Netherlands), Department of the Built Environment Applied Mechanics

11:50 **Integration of experimental and numerical methods to study the mechanical risk conditions for the conservation of unique artpieces: The case of the Mona Lisa**
Lorenzo Riparbelli, Prof. Dr. Joseph Gril, Prof. Dr. Luca Uzielli, CNRS (National Centre for Scientific Research), University Clermont Auvergne (France)

12:25 **Inside the icon: Experimental and numerical analysis of climate impacts on the damage potential of panel paintings**
Prof. Dr. habil. Michael Kaliske, Technische Universität Dresden (Germany), Institute for Structural Analysis

13:30 - 14:15 Break

Session 3 (risk assessment, strategies, measures)

13:45 **A new Risk assessment tool which assesses the climate-induced mechanical stress and its strain energy density on Pine circular elements: Experimental and numerical modeling validation**
Prof. Dr. Chiara Bertolin, Norwegian University of Science and Technology Trondheim (Norway), Department of mechanical and industrial engineering

14:20 **Problems and peculiarities of thin panel paintings: The effects of protective measures on the back side**
Dr. Ottaviano Allegretti, CNR-IBE (National Research Council of Italy – the BioEconomy Institute, Italy)

14:55 **Monitoring micro-changes in wooden artworks to support strategies for indoor climate management**
Dr. Michał Łukomski, Getty Conservation Institute (USA)

15:30 **Conclusion / Acknowledgements / Discussion**