

### Dates

April 28 to 29, 2016

### Venue

Stiftung Händel-Haus  
Große Nikolaistraße 5 · 06108 Halle (Saale) · Germany

### RECOMMENDED HOTELS

Dorint Hotel  
Dorotheenstraße 12  
06108 Halle (Saale)  
phone: +49(0)345 – 29 23-0  
email: info.halle-charlottenhof@dorint.com

Ankerhof Halle  
Ankerstraße 2  
06108 Halle (Saale)  
phone: +49(0)345 – 232 32 00  
email: reception@ankerhofhotel.de

**Low capacities!** Early booking is recommended.

### GENERAL INFORMATION

Tourist Information  
Marktplatz 13  
06108 Halle (Saale)  
phone: +49(0)345 – 122 99 84  
email: touristinfo@stadtmarketing-halle.de

### Institute for Structural Analysis

Technische Universität Dresden  
Faculty of Civil Engineering  
Georg-Schumann-Str. 7 · 01062 Dresden · Germany  
email: daniel.konopka@tu-dresden.de  
www.tu-dresden.de/isd

### Stiftung Händel-Haus

Große Nikolaistraße 5 · 06108 Halle (Saale) · Germany  
phone: +49(0)345 – 500 90 221  
fax: +49(0)345 – 500 90 416  
email: stiftung@haendelhaus.de  
www.haendelhaus.de/en

### REGISTRATION

#### Symposium Fee

Early: 65 € (until March 20, 2016)  
Late: 100 € (until April 21, 2016)  
On site: 130 €  
(conference proceedings, coffee breaks, concert ticket and conference dinner included)

#### Registration

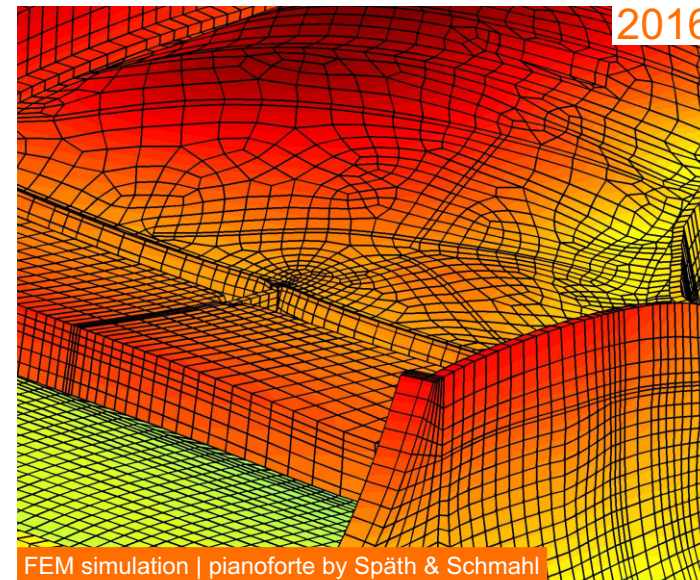
Registration and transfer is possible until April 21, 2016. An acknowledgement of the registration will be sent. Registrations may be cancelled up to April 21, 2016 with a full refund of the conference fee. After this date, a cancellation fee of 25 € will be charged. Registration after April 21 is only possible at venue by cash with an extra fee of 30 €.

#### Attention! Limited to 90 participants!

Register via email at [daniel.konopka@tu-dresden.de](mailto:daniel.konopka@tu-dresden.de).  
Registration will be completed by transferring the fee to the following bank account:

Technische Universität Dresden  
Bank: Commerzbank  
IBAN: DE52 8504 0000 0800 4004 00  
SWIFT: COBADEFF850  
Purpose: D-000089-001-1140901  
WCE2016, surname, first name

Steuernummer (Germany): 203/149/02549  
Tax-ID (foreign countries): DE 188 369 991



FEM simulation | pianoforte by Späth & Schmahl

## ANALYSIS AND CHARACTERISATION OF WOODEN CULTURAL HERITAGE BY SCIENTIFIC ENGINEERING METHODS

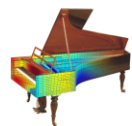
### INTERNATIONAL CONFERENCE

April 28 - 29, 2016

## ANALYSIS AND CHARACTERISATION OF WOODEN CULTURAL HERITAGE BY SCIENTIFIC ENGINEERING METHODS

Halle (Germany)

28.-29.04.2016



The use of wood has a long tradition and is closely linked to the cultural evolution of mankind. Widely available and easy to work, wood has been used not only as timber for construction but also as a raw material for carving and sculpting. Great works of art such as paintings on wood, religious sculptures, musical instruments and furniture demonstrate the skills and virtuosity of past generations and cultures.

These objects are exposed to mechanical and climatic stress as well as biological deterioration, factors leading eventually to visible ageing of the material. String loads on stringed musical instruments, heating of indoor environments, climate change and moisture damage cause deformation and irreversible damage such as cracks. To preserve our cultural heritage for future generations various research activities have been conducted over the last decades, and the topic continues to be highly important. Properties of wood as a material and conservation issues of wooden objects have been subject of numerous research projects, networks and conferences, activities which have considerably advanced our knowledge. Materials scientists, mechanical and acoustical engineers, conservators and museums cooperate in the interest of conserving our cultural heritage.

The symposium aims to favour the scientific exchange between researchers in the fields of the analysis of cultural heritage with engineering methods, and of the structural characterisation of objects such as musical instruments. Conservators are welcome to participate in the symposium, to join the discussion on tolerable climate fluctuations in museums, and to share their experiences of the impact of indoor climates on museum objects. Finally, the symposium will also be suitable as an introduction into the topic for early stage researchers, as the problems of the deterioration of wooden cultural heritage, for example due to climate variations, will remain important, and because the engineering methods currently being developed have important potential to contribute to their solution.

### THURSDAY, April 28, 2016

9 am	Registration
10 am	Opening
10.30 am – 12 am	Session I B R E A K
2 pm – 3.30 pm	Session II B R E A K
4 pm – 5.30 pm	Session III
7 pm	Concert *
ca. 8 pm	Conference Dinner **

### FRIDAY, April 29, 2016

9 am – 11 am	Session IV B R E A K
11.30 am – 1 pm	Session V
1 pm – 1.30 pm	Closing

\* Concert: Ekkehard Wölk Trio, Berlin | Jazz

\*\* Conference Dinner: Hallesches Brauhaus · Große Nikolai-  
straße 2 · 06108 Halle (Saale)

### SYMPOSIUM TOPICS

multi-physical FE-modelling  
wood material modelling  
climate influences

musical instruments  
panel paintings, sculptures, and others  
conservation conditions

### Current information on the programme and lectures

[www.tu-dresden.de/isd/veranstaltungen](http://www.tu-dresden.de/isd/veranstaltungen)

### PROJECT

This symposium is part of the common project “Modelling and Characterization of the Structural Behaviour of Wooden Cultural Heritage under Hygro-mechanical Loading.”

<http://gepris.dfg.de/gepris/project/240287377>



[www.tu-dresden.de/isd](http://www.tu-dresden.de/isd)  
[www.ifb.ethz.ch/](http://www.ifb.ethz.ch/)

[www.haendelhaus.de/en/](http://www.haendelhaus.de/en/)  
[www.ville-ge.ch/meg](http://www.ville-ge.ch/meg)



### REFERENTS

Dr. Dipl.-Chem. Kilian Anheuser  
Musée d'ethnographie de Genève

M.Sc. Erik Valentine Bachtar  
Institute for Building Materials, Wood Physics, ETH Zurich

Prof. Dr. habil. Łukasz Bratasz  
Institute for the Preservation of Cultural Heritage, Yale University

Prof. Dr. Marco Fioravanti  
Dept. GESAAF (Management of Agricultural, Food and Forestry Systems), University of Florence

Prof. Dr. Kristofer Gamstedt  
Department of Engineering Sciences, Applied Sciences, Uppsala University

Dipl.-Rest. M.A. Sebastian Kirsch  
Germanisches Nationalmuseum, Nürnberg

Dipl.-Ing. Daniel Konopka  
Institute for Structural Analysis, Technische Universität Dresden

Dr. Sandie Le Conte  
Cité de la musique, Paris

M.Sc. Rianne A. Luimes  
Department of Built Environment, Technische Universiteit Eindhoven

Dr. Parviz Navi  
Architektur, Holz und Bau, Berner Fachhochschule

Prof. Dr. Marco A. Pérez  
Department of Industrial Engineering, IQS School of Engineering- Universitat Ramon Llull

Dr. Jan Tippner  
Department of Wood Science, Mendel University in Brno

Prof. Ing. Luca Uzielli  
Dept. GESAAF (Management of Agricultural, Food and Forestry Systems), University of Florence

M.Sc. Romain Viala  
Department of Applied Mechanics, FEMTO-ST Institute, Besançon

Prof. Dr. Tomáš Vyhřídál  
Department of Instrumentation and Control Engineering, Czech Technical University in Prague

Dr. Christina Young  
The Courtauld Institute of Art, London

### SYMPOSIUM CHAIRS

Prof. Dr.-Ing. habil. Michael Kaliske  
Institute for Structural Analysis, Technische Universität Dresden

Prof. Dr.-Ing. habil. Dr. h.c. Peter Niemz  
Institute for Building Materials, Wood Physics, ETH Zurich

Clemens Birnbaum  
Stiftung Händel-Haus Halle

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