



2ND INTERNATIONAL CONFERENCE ON MOISTURE IN BUILDINGS 2023

3-4 July 2023

Sponsors





2nd International Conference on Moisture in Buildings 2023 (ICMB23)

3-4 July 2023, hybrid

Keynote Speakers

Dr Robyn Pender

Dr Robyn Pender recently retired from the Building Climate Adaptation Team at Historic England, having been a Senior Building Conservation Advisor at HE/English Heritage since 2005. A physicist, she also has a postgraduate diploma in the conservation of wall paintings from the Courtauld Institute of Art, and her PhD research investigated the impact of external conditions on the transfer of moisture into and through coated building stone. For the Bartlett Graduate School she undertook the scoping study into the impacts of climate change on the historic environment commissioned by English Heritage from the new Centre for Sustainable Heritage, and the performance of the built environment remains Robyn's chief research interest. She is a firm advocate of the need for specialists to engage in accessible communication. Her original team at then English Heritage brought together the new editions of the Practical Building Conservation series, and Robyn was volume editor for the Building Environment, Glass & Glazing, and Metals volumes.

Professor Juha Vinha

Juha Vinha has been establishing a building physics research area at Tampere University of Technology (currently Tampere University) in 1994 and has been working there in building physics research and teaching since then. Since 2013, he has been a full professor of building physics. In addition, he has been a docent of building physics at the University of Oulu since 2009. He has been a responsible leader or principal investigator in more than 230 research and development projects or sub-projects related to building physics. He has published almost 300 scientific publications and more than 200 research reports on building physics, and given more than 200 presentations at various scientific conferences and educational and professional events in the construction industry. He has also been involved in many expert committees developing and writing construction guidelines related to building physics in Finland. He also organizes the Finnish Building Physics Conference in Tampere every other year, which has become one of the Finland's largest professional events in the construction industry.

Professor Juha Pekkanen

Professor Juha Pekkanen is a professor of public health at the University of Helsinki and a part-time research professor at the Finnish Institute for Health and Welfare. His current focus is on environmental health, especially health effects of moisture-damage and indoor microbes. He is centrally involved in 'The Finnish Indoor Air and Health Programme 2018-2028'.

Professor Alexandra Troi

Alexandra Troi is a professor of building physics simulation at Coburg University/Germany, where she teaches the master course on Digital technologies in conservation to architecture and conservation students. Her main research interest is in the energy retrofit of historic buildings. Professor Troi leads the research group on Energy retrofit of historic buildings within the Institute for Renewable Energy, where she acts as vice-head. They have been the operating agent of IEA SHC Task59 on Historic buildings towards NZEB and built a laboratory on hygrothermal building characterisation.

Dr Anne Mette Madsen

Anne Mette Madsen is a senior researcher and group leader at the National Research Center of the working Environment in Denmark. She works with occupational and indoor exposure to microorganisms (fungi, bacteria, and viruses) and microbial compounds to identify problematic exposures and as a basis for interventions to reduce exposure. She investigates the associations between exposure to bioaerosols and occupational health. Her group works with the characterization of workers' exposure using e.g. MALDI-TOF MS and measures the inflammatory potential, antibiotic resistance, and endotoxin content of bioaerosols. She has published more than 100 papers on the topic.

Tabitha Binding

Tabitha Binding is Head of Education at Timber Development UK, she has worked with timber all her life beginning in the forest and ending in the Post Occupancy Evaluation of buildings. A deep understanding of moisture in timber and in buildings is essential when designing, specifying, building and retrofitting for healthy human occupancy. She has worked for Coed Cymru, Woodknowledge Wales, TRADA, the Timber Trade Federation and is strategically seconded to the New Model Institute for Technology & Engineering in Hereford who are undertaking research on their new campus building as a 'Living Lab'. Tabitha has sympathetically retrofitted her own home, an 1840s terrace house in mid-Wales and keeps the RH to 50/60%.

Lynne Sullivan

Lynne Sullivan is an Architect who founded sustainableBYdesign, and who is now a Visiting Professor and design consultant, including as a Design Advisor for RIBA Competitions and the Design Council, and as a member of local and national Design Commissions and Review Panels. She chaired the review of Parts L and F whilst a Member of the Government's Building Regulations Advisory Committee, and authored and chaired several research projects for the Zero Carbon Hub 2009-2015. She chaired the Scottish Government's Expert Panel for "A Low Carbon Building Standards Strategy for Scotland", and chaired RIBA's Sustainable Futures Committee 2014-2017; also appointed RIBA Climate Change Ambassador on whose behalf she attended COP21 in Paris. She recently chaired the Buildings Mission Taskgroup as a member of the CLC's Green Construction Board, which she represented as a Steering Group member for the UK Green Building Council Whole Life Carbon Roadmap launched at COP26 in Glasgow. She was awarded an OBE for services to Architecture in 2011. She is also a Board member of the Passivhaus Trust, and Chair of the Good Homes Alliance and the National Retrofit Hub in its 2023 establishment phase.



2nd International Conference on Moisture in Buildings 2023 (ICMB23)

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Monday - 03 July 2023

8:15am	Registration	 Venue
9:00am	Opening and welcome	 Venue G20 Lecture Theatre (Ground floor)
9:30am	Keynote speakers Dr Robyn Pender Prof Alexandra Troi	 Venue G20 Lecture Theatre (Ground floor)
10:30am	Coffee break	 Venue 1st floor Coffee break
10:50am	Parallel sessions	

Indoor Mould Growth

10:50am - 12:00pm  Venue
Lecture Theatre 1



Chaired By
Prof. Lennart Larsson (Lund University)

Memory based mould growth model using real-world datasets

Mr. Tom Weisner¹, Mr. Samuel Collier¹, Dr. Silviu Nistor¹
1. HomeLINK Technologies Ltd

Xerophilic fungi have a taste for Danish art and cultural heritage

Mrs. Camilla Jul Bastholm¹, Dr. Jane Richter², Ms. Anette Aalling³, Mr. Andreas Bjerre³, Dr. Anne Mette Madsen¹
1. The National Research Centre for the Work Environment, **2.** The Royal Danish Academy, **3.** The Art Museums of Skagen

Common sampling techniques for the assessment of indoor fungal growth

Mr. Spyridon Efthymiopoulos¹, Dr. Yasemin D. Aktaş¹, Dr. Hector Altamirano²
1. Department of Civil Environmental and Geomatic Engineering (CEGE), Epicentre Research Group, University College London, London, UK, **2.** Institute for Environmental Design and Engineering, UCL

A critical review of analysis techniques for the assessment of the indoor fungal burden

Mr. Spyridon Efthymiopoulos¹, Dr. Yasemin D. Aktaş¹, Dr. Hector Altamirano²
1. Department of Civil Environmental and Geomatic Engineering (CEGE), University College London, London, UK, **2.** Institute for Environmental Design and Engineering, UCL

Assessing the impact of air movement on hyphal growth

Ms. Morena Ferreira¹, Dr. Josep Grau-Bove², Dr. Hector Altamirano³, Dr. Nigel Blades⁴
1. Institute for Sustainable Heritage, UCL, **2.** University College London, **3.** Institute for Environmental Design and Engineering, UCL, **4.** National Trust for England, Wales and Northern Ireland

Moisture in Historic/Traditional Buildings

10:50am - 12:00pm  Venue
Lecture Theatre 2



Chaired By
Dr. Scott Orr (University College London)

Salts in the 16th century mural painting of The Last Judgment in the leper hospice in Rumst, Belgium

Mr. Vincent Crevals¹, Mr. Sebastiaan Godts¹, Dr. Julie Desarnaud¹
1. Royal Institute for Cultural Heritage

Impact of Moisture Decay on Seismic Vulnerability: Haiti's Timber-Framed Vernacular Buildings

Mr. Kökcan Dönmez¹, Dr. Yasemin D. Aktaş²
1. aDepartment of Earthquake Engineering, Kandilli Observatory and Earthquake Research Institute, Boğaziçi University, Istanbul, Turkey, **2.** bDepartment of Civil Environmental and Geomatic Engineering (CEGE), Epicentre Research Group, University College London, London, UK

Hygrothermal properties relationships in historic bricks

Prof. Staf Roels¹, Dr. Evy Vereecken², Mr. Marc Stappers³, Prof. Wido Quist⁴
1. KU Leuven, Department of Civil Engineering, Building Physics and Sustainable Design, **2.** Buildwise, **3.** Cultural Heritage Agency, **4.** Delft University of Technology

How salts affect the vapour permeability of old walls? Key differences between the vapour permeability of salty and non-salty masonries.

Mr. Valentin Juhasz¹, Mr. Miklos Gasz²
1. University of Strathclyde, **2.** Core Conservation Ltd

Method for monitoring the moisture response of a cross laminated timber (CLT) panel buildings

Dr. Gabriele Tamagnone¹, Prof. Robert Hairstans¹, Prof. James Martin², Dr. Vikki Edmondson²
1. New Model Institute for Technology and Engineering, **2.** Northumbria University

12:15pm
1:15pm

Lunch



Venue
1st floor lunch



2nd International Conference on Moisture in Buildings 2023 (ICMB23)

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1:15pm

Parallel sessions

Mould, Health and Ventilation

1:15pm - 3:00pm



Venue
Lecture Theatre 1



Chaired By

Microbial VOC emissions from mould growth on building materials under various relative humidity conditions

Dr. Wenping Yang¹, Ms. Stephanie So¹, Mr. Apoorv Shah¹, Mr. Gang Nong¹, Mr. Daniel Lefebvre¹, Dr. Maurice Defo¹

1. National Research Council Canada

Aflatoxin biosynthetic pathway extrolites in airborne Aspergilli series Versicolores

Dr. Antoine Géry¹, Mr. Benoît Basset², Mr. Nathan Gounel¹, Mrs. Mathilde Gosselin¹, Dr. Estelle Richard¹, Dr. Virginie Seguin¹, Dr. Julie Bonhomme¹, Prof. David Garon¹

1. Normandie Univ, Unicaen & Unirouen, ToxEMAC-ABTE, Centre F. Baclesse, 14000 Caen, France, 2. Normandie Univ, Unicaen & Unirouen, EcoTEA-ABTE, Bâtiment Sciences 2, Campus 2, 14000 Caen, France

Housing-related determinants of lung health in Nunavik, Canada

Dr. Yasemin D. Aktaş¹, Prof. Caroline Duchaine², Mr. Spyridon Efthymiopoulos¹, Mr. Patrick Miron³, Dr. Boualem Ouazia⁴, Dr. Marc Veillette², Dr. Larry Watt⁵, Dr. Wenping Yang⁶, Dr. Faiz Ahmad Khan⁷

1. bDepartment of Civil Environmental and Geomatic Engineering (CEGE), Epicentre Research Group, University College London, London, UK, 2. University of Laval, 3. KMHB, 4. NRC, 5. Ungava Tulattavik Health Centre, 6. National Research Council Canada, 7. McGill University Health Centre

The relative humidity may strongly affect indoor air concentrations of VOC pollutants

Prof. Lennart Larsson¹, Mr. Johan Mattsson², Dr. Pawel Markowicz¹

1. Lund University, 2. cTrap Ltd

An investigation into how Energy Performance Certificate variables relate to damp

Mrs. Gulala Aziz¹, Dr. Adam Hardy¹

1. Leeds Beckett University

Comprehensive Analysis of Moisture-Related Problems in Turkish Buildings: Identification, Characteristics, and Research Gaps

Dr. Gizem Izmir Tunahan¹, Dr. Hector Altamirano²

1. Dokuz Eylul University, 2. Institute for Environmental Design and Engineering, UCL

3:00pm

Coffee break



Venue
1st floor coffee break

3:15pm

Keynote speakers

Prof Juha Pekkanen
Mrs Lynne Sullivan



Venue
G20 Lecture Theatre (Ground floor)

CIBSE - Retrofit and mould, technical (ventilation, heating and fabric)

4:30pm

Technical Aspects of Retrofit and Mould (Ventilation, Heating, and Fabric)
Chairs: Hywel Davies (CIBSE) and Marcella Ucci (UCL)



Venue
G20 Lecture Theatre (Ground floor)

Julie Godefroy, Valentina Marincioni, Sarah Price, Simon Jones, Andy Sutton

Moisture in Existing Building & Retrofit

1:15pm - 3:00pm



Venue
Lecture Theatre 2



Chaired By

Dr. Evy Vereecken (Buildwise)

Condition of the building envelope is associated with indoor dampness, mould and musty odour, as well as moisture measured in floor joists

Ms. Phoebe Taptiklis¹

1. Motu Economic and Public Policy Research

Prevalence and extent of moisture damage in Finnish housing

Dr. Jonathon Taylor¹, Dr. Anniina Salmela², Dr. Martin Täubel², Prof. Anne Karvonen², Prof. Jukka Lahdensivu¹, Prof. Juha Pekkanen²

1. Tampere University, 2. THL

Energy and hygrothermal performance challenges in the renovation of a over 100-year-old wooden apartment building into a nearly zero-energy building

Prof. Targo Kalamees¹, Ms. Anni Evard¹, Mr. Endrik Arumägi¹, Mr. Siim Lomp¹

1. Tallinn University of Technology

Incomplete resistance; mould growth and built in furniture in a 1930's Dublin clinker concrete apartment building.

Mr. Gearoid Carvill¹, Mr. Joseph Little¹, Mr. Andrew Lundberg¹

1. TU Dublin

IWI Thermal Properties and the Risk of Condensation and Mould Growth Imposed upon Neighbors at a Party Wall Junction

Mr. Felix Thomas¹, Prof. Fiona Fylan¹, Prof. David Glew¹

1. Leeds Beckett University

Freeze-Thaw Risk in Solid Masonry Walls: Impact of Climate Change over Europe and the Mediterranean subjected to RCP 4.5

Ms. Isabeau Vandemeulebroucke¹, Dr. Lola Kotova², Prof. Steven Caluwaerts¹, Prof. Nathan Van Den Bossche¹

1. Ghent University, 2. Climate Service Center Germany



2nd International Conference on Moisture in Buildings 2023 (ICMB23)

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Tuesday - 04 July 2023

10:00am

Keynote speaker

Prof Juha Vinha



Venue

G20 Lecture Theatre (Ground floor)

10:30am

Parallel sessions

Modelling of Moisture in Buildings 1

10:30am - 11:30am



Venue

Lecture Theatre 1



Chaired By

Prof. Nathan Van Den Bossche (Ghent University)

Hygrothermal criteria for design of cross-laminated timber external walls

Dr. Villu Kukk¹, Prof. Targo Kalamees¹, Prof. Jaan Kers¹, Dr. Lin Wang², Prof. Hua Ge³

1. Tallinn University of Technology, 2. National Research Council Canada, 3. Concordia University

Hygrothermal risk assessment of external wall insulation (ewi) retrofit to non-traditional wall types in an Irish context-using the glaser method and numerical modelling

Mr. Gareth Mc Donnell¹, Mr. Joseph Little¹

1. TU Dublin

Shading of flat roofs

Dr. Christian Bludau¹

1. Fraunhofer Institute for Building Physics (IBP), Department of hydrothermics

Assessing wind-driven rain loads on traditional buildings using computational fluid dynamics and 3D digital documentation data

Mr. Adam Frost¹, Dr. Scott Orr¹, Dr. Josep Grau-Bove¹, Dr. Lyn Wilson²

1. University College London, 2. Historic Environment Scotland

11:30am

Coffee break



Venue

1st floor coffee break

11:45am

Parallel sessions

Modelling of Moisture in Buildings 1

11:45am - 12:45pm



Venue

Lecture Theatre 1



Chaired By

Prof. Targo Kalamees (Tallinn University of Technology)

A guide to predicting the redistribution of excess moisture in concrete floor slabs with moisture-sensitive flooring

Prof. Lars-Olof Nilsson¹, Mr. Anders Kumlin², Dr. Sture Lindmark³, Mr. Mathias Lindskog⁴, Dr. S. Olof Mundt-Petersen⁵, Dr. Nilla Olsson⁶, Dr. Mikael Oxfall⁶, Mr. Johan Tannfors⁵

1. Moistenginst AB & Lund University, 2. Anders Kumlin AB, 3. FuktCom, 4. Fuktanalys AB, 5. Polygon Sverige AB, 6. NCC Sverige AB

Performance of Materials and Building Decay 1

10:30am - 11:30am



Venue

Lecture Theatre 2



Chaired By

Dr. Marco Larcher (Eurac Research)

A Study of The Impact of Acrylic Based Surface Waterproofing on The Moisture Behaviour of Brick Masonry Through Dynamic Vapour Sorption (DVS) And Water Absorption Tests

Mr. Henry Zhu¹, Dr. Yasemin D. Aktaş², Prof. Dina D'Ayala³

1. Department of Civil Environmental and Geomatic Engineering (CEGE), UCL, 2. bDepartment of Civil Environmental and Geomatic Engineering (CEGE), Epicentre Research Group, University College London, London, UK, 3. Professor

Solar Radiation Test of Surface Waterproofing Products with Various Chemical Compositions on Brick Masonry

Mr. Henry Zhu¹, Dr. Yasemin D. Aktaş², Prof. Dina D'Ayala³

1. Department of Civil Environmental and Geomatic Engineering (CEGE), UCL, 2. bDepartment of Civil Environmental and Geomatic Engineering (CEGE), Epicentre Research Group, University College London, London, UK, 3. Professor

Hygrothermal limit curves and transient decay prediction for natural fibre insulation

Mrs. Eri Tanaka¹, Dr. Regina Schwerd¹, Mrs. Notburga Pfabigan², Mr. Johannes Tieben², Dr. Julia Bachinger², Dr. Daniel Zirkelbach¹

1. Fraunhofer Institute for Building Physics IBP, Holzkirchen, 2. Holzforschung Austria, Vienna

Water Vapour Adsorption on Moisture Buffering Building Materials

Ms. Gloria Lo¹

1. University of Strathclyde

Performance of Materials and Building Decay 1

11:45am - 12:45pm



Venue

Lecture Theatre 2



Chaired By

Dr. Daniel Zirkelbach (Fraunhofer Institute for Building Physics IBP, Holzkirchen)

A multi-functional hot box-cold box for heat, air and moisture studies on full-scale building components: feature overview and onset to validation

Dr. Evy Vereecken¹, Dr. Martin Prignon¹, Mr. Antoine Tilmans¹, Mr. Timo De Mets¹

1. Buildwise



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Modelling of Moisture in Buildings 1

11:45am - 12:45pm



Venue
Lecture Theatre 1

 **Chaired By**
Prof. Targo Kalamees (Tallinn University of Technology)

Flood capacity assessment of confined masonry school buildings for education disruption assessment

Dr. Ahsana Parammal Vatteril¹, Prof. Dina D'Ayala²
1. Post-doctoral research fellow, 2. Professor

The use of hygrothermal and bio-hygrothermal simulation to inform envelope design for residential buildings in southern Australia

Dr. Mark Dewsbury¹, Ms. Freya Su¹, Ms. Liqun Guan¹, Prof. Hartwig Kuenzel²
1. School of Architecture & Design, University of Tasmania, 2. Fraunhofer Institute for Building Physics

A numerical case study of a wall composed of pre-cast rapeseed concrete blocks

Dr. Maya Hajj Obeid¹, Dr. Lorena Freitas Dutra¹, Dr. Omar DOUZANE¹, Dr. Thierry Langlet¹
1. University of Picardie Jules Verne, Laboratory of Innovant Technologies

12:45pm Lunch and Poster session

Poster session

Towards a more reliable characterisation of wind-driven rain spells: Analysis of actual drying intervals in the Region of Murcia (Spain)

Dr. Javier Domínguez-Hernández¹, Dr. José Pérez-Bella¹, Dr. Rafael Tobajas Alonso¹, Dr. Alberto Ayensa Pardos², Mr. Lucas Sanso Navarro³
1. Department of Construction Engineering, Engineering and Architecture School, University of Zaragoza, Zaragoza, Spain., 2. San Jorge University Foundation, Villanueva de Gállego, Spain., 3. Department of Construction engineering, Engineering and Architecture School, University of Zaragoza, Spain

Moisture content influence on heat losses in ventilated façade

Dr. Patricia Alonso¹, Prof. Vasco Freitas²
1. University of A Coruña, 2. Construct- LFC, Faculty of Engineering University of Porto

'Are changes to Part L and Part F of the Building Regulations increasing the dampness, and deterioration of our traditional and historic buildings built with solid walls causing health issues for those who occupy them?'

Mr. Anthony Gwynne¹
1. Local Authority Building Control

Similarities, differences, and tendencies of water damage in the Nordic countries

Mr. Christian Mattsson¹, Dr. Birgitta Nordquist¹, Dr. Dennis Johansson¹, Dr. Petter Wallentén¹, Dr. Hans Bagge¹
1. Lund University

Experimental investigation on Hygrothermal environment of spaces built with mortar and plaster layers of lime and cement.

Ms. Ayushi Singh¹, Dr. Rashmin Damle¹
1. CEPT University, Building Energy Performance

Performance of Materials and Building Decay 1

11:45am - 12:45pm



Venue
Lecture Theatre 2

 **Chaired By**
Dr. Daniel Zirkelbach (Fraunhofer Institute for Building Physics IBP, Holzkirchen)

Hygrothermal characterization of a plaster with recycled materials used as interior insulation

Ms. Eleonora Leonardi¹, Dr. Marco Larcher¹, Dr. Daniel Herrera Avellanosa¹, Dr. Alexandra Troi¹
1. Eurac Research

Durability performance of non-stabilized Compressed Earth Blocks against wind-driven rain

Mr. Rafail Panagiotou¹, Prof. Ioannis Ioannou¹
1. Department of Civil and Environmental Engineering, University of Cyprus, 75 Kallipoleos Str., P.O. Box 20537, 1678 Nicosia, Cyprus

Comparative simulations on hygrothermal performance of calcium silicate and wood fiber as capillary active internal insulation materials

Mr. Xinyuan Dang¹, Prof. Hans Janssen¹, Prof. Staf Roels¹
1. KU Leuven, Department of Civil Engineering, Building Physics and Sustainable Design



Venue
Lounge (1st floor)

Two guides for the introduction to interior insulation

Dr. Ulrich Ruisinger¹, Ms. Heike Sonntag¹
1. TU Dresden

The effect of underground chambers on the moisture balance of historical buildings in a hot and dry climate

Ms. Merve Karabeyeser¹, Dr. Hector Altamirano², Prof. Kalliopi Fouseki¹
1. Institute for Sustainable Heritage, UCL, 2. Institute for Environmental Design and Engineering, UCL

Aflatoxin biosynthetic pathway extrolites in airborne Aspergilli series Versicolores

Dr. Antoine Géry¹, Mr. Benoît Basset², Mr. Nathan Gounel¹, Mrs. Mathilde Gosselin¹, Dr. Estelle Richard¹, Dr. Virginie Seguin¹, Dr. Julie Bonhomme³, Prof. David Garon¹
1. Normandie Univ, Unicaen & Uniroouen, ToxEMAC-ABTE, Centre F. Baclesse, 14000 Caen, France, 2. Normandie Univ, Unicaen & Uniroouen, EcoTEA-ABTE, Bâtiment Sciences 2, Campus 2, 14000 Caen, France, 3. Microbiology department, Caen University Hospital, 14000 Caen, France

Informing professional practice whilst evaluating hygrothermal characteristics of traditional built assets.

Mr. Trevor Francis¹
1. University of Wales Trinity Saint David

Moisture Compatibility of Portland Stones and other Oolitic Limestones

Ms. Sara Sesma Costales¹, Dr. yasemin aktas², Dr. Sudeshna Basugupta³, Dr. Felat Dursun⁴, Mr. Toby Cambray⁵
1. University College London, 2. Department of Civil Environmental and Geomatic Engineering (CEGE), University College London, London, UK, 3. Department of Earth Sciences, University College London, London, United Kingdom, 4. Department of Civil, Environmental and Geomatic Engineering, University College London, London, United Kingdom, 5. Institute for Environmental Design and Engineering, University College London, London, United Kingdom



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Venue
Lounge (1st floor)

Poster Session

The effect of natural and extreme weathering on the mechanical properties of structural timber mortise and tenon joints

Ms. Regina Dufu Muller-Uri¹, Ms. Yueyao Wang¹

¹. *University College London*

Basic solutions for the renovation of lightweight brick walls of Estonian detached houses

Mr. Mihhail Suvalov¹, Mr. Siim Lomp¹, Prof. Targo Kalamees¹

¹. *Tallinn University of Technology*

2:00pm

Keynote speakers

Dr Anne Mette Madsen
Mrs Tabitha Binding



Venue
G20 Lecture Theatre (Ground floor)

2:45pm

Coffee break



Venue
1st floor coffee break

3:15pm

Parallel sessions

Modelling of Moisture in Buildings 3

3:15pm - 5:00pm



Venue
Lecture Theatre 1



Chaired By

Mr. Joseph Little (TU Dublin)

The effect of brick properties on hygrothermal performance of solid walls

Dr. Christopher Tsang¹, Mr. Felix Thomas¹, Dr. Adam Hardy¹, Prof. David Glew¹

¹. *Leeds Beckett University*

Surface condensation risk pre- and post-retrofit at suspended timber ground floors and external wall junctions

Prof. David Glew¹, Mr. Felix Thomas¹, Dr. Christopher Tsang¹, Mr. Dominic Miles-Shenton¹

¹. *Leeds Beckett University*

Combining insights from HAM-simulations with case-specific knowledge

Ms. Kaat Janssens¹, Dr. Valentina Marincioni², Prof. Nathan Van Den Bossche¹

¹. *Ghent University*, ². *University College London*

Evaluation of a new numerical method for solving hygrothermal transfer through walls in the context of a historical city centre

Ms. Margot Ruiz¹, Dr. Marion Bonhomme¹, Dr. Valéry Masson², Prof. Stéphane Ginestet¹

¹. *LMDC, Université de Toulouse, INSA, UPS, Toulouse, France*, ². *CNRM, Université de Toulouse, Météo-France, CNRS, Toulouse, France*

Representative data sets of wood-based materials created for moisture control analysis by hygrothermal simulation

Mrs. Beate Stöckl¹, Prof. Hartwig Kuenzel², Dr. Daniel Zirkelbach¹

¹. *Fraunhofer Institute for Building Physics IBP, Holzkirchen*, ². *Fraunhofer Institute for Building Physics*

Monitoring of Moisture in Buildings

3:15pm - 5:00pm



Venue
Lecture Theatre 2



Chaired By

Prof. Staf Roels (KU Leuven, Department of Civil Engineering, Building Physics and Sustainable Design)

Lime-hemp as wall insulation: long-term monitoring system to investigate the hygrothermal performance

Mr. Timo De Mets¹, Mr. Antoine Tilmans¹, Dr. Elke Knapen²

¹. *Buildwise*, ². *Faculty of Architecture and Arts, Hasselt University*

Drying behaviour of masonry using quantitative infrared thermography

Mr. Luke Dickens¹, Dr. Luigi Di Sarno²

¹. *Department of Civil Engineering and Industrial Design, Resilient and Sustainable Infrastructure group, University of Liverpool*, ². *Department of Civil Engineering and Industrial Design, Resilient and Sustainable Infrastructure group, University of Liverpool, Liverpool*

Continuous measurement of moisture content in building materials with Time-Domain Reflectometry

Ms. Teresa Stingl Freitas¹, Prof. Ana Sofia Guimarães¹, Prof. Staf Roels², Prof. Vasco Freitas¹, Prof. Andrea Cataldo³

¹. *Construct- LFC, Faculty of Engineering University of Porto*, ². *KU Leuven, Department of Civil Engineering, Building Physics and Sustainable Design*, ³. *Department of Innovation Engineering, University of Salento*

Limitations of embedded relative humidity (RH) microsensors in monitoring the moisture content of damp masonries

Mr. Valentin Juhasz¹, Mr. Miklos Gasz²

¹. *University of Strathclyde*, ². *Core Conservation Ltd*

Hygrothermal Monitoring of Replacement Infill Panels for Historic Timber-Frame Buildings: Next Steps

Dr. Christopher Whitman¹, Dr. Riccardo Maddalena², Prof. Oriel Prizeman¹, Prof. Pete Walker³, Mr. Iain McCaig⁴, Ms. Joanne Williams⁵, Mr. Nigel Gervis⁶

¹. *Welsh School of Architecture, Cardiff University*, ². *School of Engineering, Cardiff University*, ³. *Department of Architecture & Civil Engineering, University of Bath*, ⁴. *Formerly Historic England*, ⁵. *Historic England*, ⁶. *Ty Mawr Lime Ltd*

5:00pm

Closing session



Venue
Here East G20 Lecture Theatre (Ground floor)



2nd International Conference on Moisture in Buildings 2023 (ICMB23)

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Organising Committee

Dr Yasemin D Aktas

Conference chairperson and responsible for publications:

Dr Hector Altamirano

Scientific Committee chair:

Dr Valentina Marincioni

Responsible for paper submission system and dissemination:

Dr Peter Rickaby & Dr Colin King

Responsible for industry engagement:

Scientific Committee

Dr David Allinson

Loughborough University, UK

Dr Julia Bachinger

Holzforschung, AUSTRIA

Prof Phil Banfill

Harriot Watt University, UK

Prof Alessandra Bonazza

University of Bologna, ITALY

Prof Peter Brimblecombe

City University of Hong Kong, HONG KONG SAR

Prof Tor Brostrom

Uppsala University, SWEDEN

Prof Jan Carmeliet

ETH Zurich, SWITZERLAND

Dr Thibaut Colinart

Université de Bretagne Sud, FRANCE

Dr Peter Cox

Carrig Conservation International, IRELAND

Prof Miloš Drdácý

The Institute of Theoretical and Applied Mechanics CAS

(ITAM), CZECHIA

Prof Caroline Duchaine

Université Laval, CANADA

Dr Lorena Freitas Dutra

Université de Picardie Jules Verne, FRANCE

Dr Sebastiaan Godts

Royal Institute for Cultural Heritage (KIK-IRPA), BELGIUM

Dr Ipek Gursel-Dino

Middle East Technical University (METU), TURKEY

Prof Lars-Erik Harderup

Lund University, SWEDEN

Prof David Hawksworth

Royal Botanic Gardens, UK

Dr Ioannis Ioannou

University of Cyprus, CYPRUS

Dr Pernilla Johansson

RISE Research Institutes, SWEDEN

Prof Targo Kalamees

Talinn University of Technology, ESTONIA

Dr Georgios Kokogiannakis

University of Wollongong, AUSTRALIA

Prof Hartwig Kuenzel

Fraunhofer-Institut für Bauphysik IBP, GERMANY

Prof Yuguo Li

Hong Kong University, HONG KONG SAR

Dr Barbara Lubelli

Delft University of Technology (TUDelft), NETHERLANDS

Prof Anne Mette Madsen

National Research Centre for the Working Environment,
DENMARK

Dr Robyn Pender

Historic England, UK

Prof Vasco Peixoto de Freitas

University of Porto, PORTUGAL

Dr José M. Pérez-Bella

University of Zaragoza, SPAIN

Dr Ulrich Ruisinger

Dresden University of Technology, GERMANY

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