ISBP2015

1st International Symposium on Building Pathology

PRELIMINARY SCIENTIFIC PROGRAMME

24-27 MARCH 2015
PORTO, PORTUGAL

FEUP/LFC/isbp2015 Secretariat:
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4200-465 Porto PORTUGAL
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1. INTRODUCTION

We are honoured to invite you to attend the 1st International Symposium on Building Pathology (ISBP-2015) that we will be hosting from 24th to 27th March 2015 in Porto, Portugal. This first International Conference will be held in cooperation with the CIB W086 Commission - Building Pathology supporting the discussion of the Problems on Building Pathology - The Research and the Practice. The main objectives are to produce information which will assist in the effective management of service loss; to develop and evaluate methodologies for the assessment of defects and failures; to propose methodologies for the prevention and mitigation of building defects; to analyze costs associated with building pathology and to disseminate findings among all those involved in the production and management of buildings. The ISBP-2015 Conference Themes are:

THEME 1	**Structural Pathologies**
THEME 2	**Hygrothermal Pathologies**
THEME 3	**Diagnosis Techniques**
THEME 4	**Building Pathology vs. Durability**
THEME 5	**Asset and Maintenance Management**
THEME 6	**Information Dissemination**
THEME 7	**Building Performance Simulation**
THEME 8	**Case Studies**

Established since the 12th Century, Portugal is one of the oldest countries in Europe. It has a mild climate characteristic of both the Atlantic and Mediterranean regions. The historic city of Porto is located in the North of Portugal and was classified as a World Heritage site by UNESCO in 1996.

We are happy to welcome you to Porto!

Vasco Peixoto de Freitas

Enrico de Angelis

2. SPONSORS / SUPPORT

SPONSORS

SUPPORTRS

3. CONFERENCE COMMITTEES

ORGANIZING COMMITTEE

Vasco Peixoto DE FREITAS	(Chair)
Enrico DE ANGELIS	(Co-Chair)
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João DELGADO	(Executive Comission)
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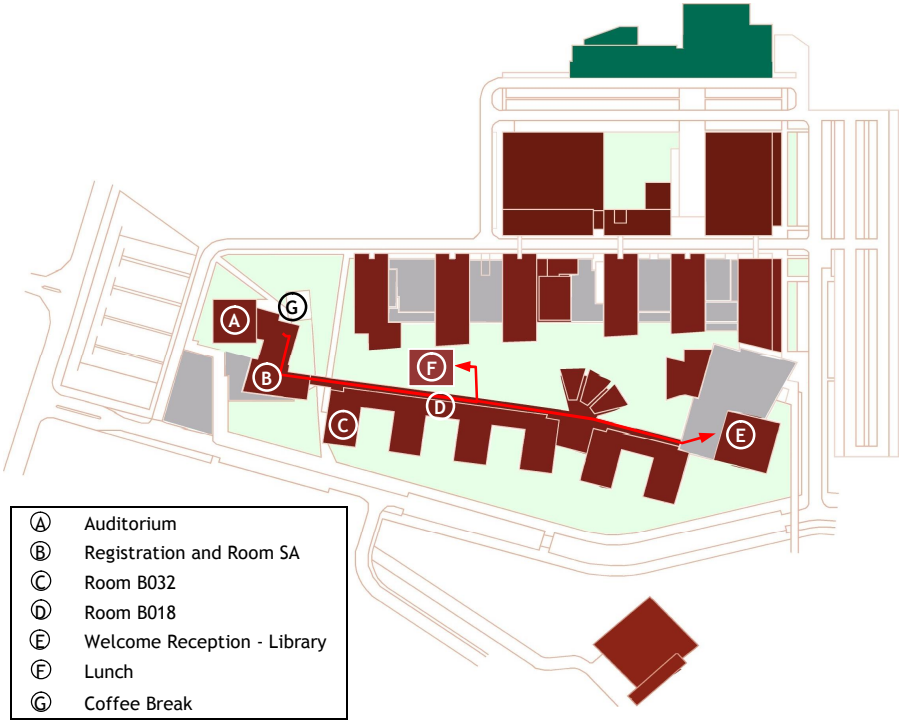
Sergio VERA	**Chile**	**UC**	Pontifícia Universidad Católica de Chile
Sara WILKINSON	**Australia**	**UTS**	University of Technology Sydney

4. CONFERENCE VENUE

The Conference is being held at the University of Porto – Faculty of Engineering.

The rooms in which the technical sessions are held include: Auditorium, *Sala de Actos* (SA) and B032.



5. PROGRAMME

	24th March	25th March	26th March	27th March
08h00 09h00		Registration		
09h00 09h15			Parallel Sessions	Parallel Sessions
09h15 10h00		Opening Session Auditorium	**S5** T4 SA / **S6** T8 B032	KN9 / **S13** T2 B032 / **S14** T3 SA
10h00 11h00		Plenary Session KN1•KN2•KN3 Auditorium		
11h00 11h30		Coffee Break	Coffee Break	Coffee Break
11h30 13h10		Plenary Session KN4•KN5•KN6•KN7•KN8 Auditorium	Parallel Sessions **S7** T8 SA / **S8** T3 B032	Plenary Session KN10•KN11 Auditorium
12h30				Closing Session KN12 Auditorium
13h10 14h30		Lunch	Lunch	Lunch
14h30 16h00		Parallel Sessions **S1** T7 Aud / **S2** T5 SA	Parallel Sessions **S9** T3 B032 / **S10** T6 SA	
16h00 16h30		Coffee Break	Coffee Break	
16h30 17h30		Parallel Sessions **S3** T4 Aud / **S4** T8 SA	Parallel Sessions **S11** T1 B032 / **S12** T8 SA	
17h30		CIB W086 Building Pathology G032		
18h10 18h30	Registration			
18h30 19h30				
19h30 20h30	Welcome Reception FEUP Library			
20h30 23h30			Conference Banquet Fundação Cupertino de Miranda - Porto	

Other Related Meetings:

ISO/TC59/SC14/WG4 Maintenance and life cycle costing 25th, 9h30-13h00, G128/129
ISO/TC59/SC14/WG7 Condition Assessment and Feed-back of Relevant... 25th, 14h30-17h30, G128/129
ISO/TC59/SC14 Design Life 26th, 9h30-13h00, G128/129
CIB W080 Prediction of Service Life of Building Materials Components .. 27th, 14h00-17h00, G128/129

6. OPENING SESSION

25th March		
09h15 - 09h45 Auditorium	Vasco Peixoto de Freitas	Chair of ISBP-2015 Organizing Committee Faculty of Engineering , University of Porto Portugal
	Enrico de Angelis	Co-Chair of ISBP-2015 Organizing Committee Politecnico di Milano Italy
	Head of the DEC	Head of the Civil Engineering Department Faculty of Engineering, University of Porto Portugal
	Wim Bakens	CIB Secretary General The Netherlands
09h45 - 10h00 Auditorium	Musical interlude	João Reis (piano) Daniel Pina (piano) Excerpts of: Hungarian Dance n.º 1 (J. Brahms) Hungarian Dance n.º 5 (J. Brahms)

7. PLENARY SESSIONS

25th March			
10h00 - 11h00	*Chairs*	To be defined / To be defined	
Auditorium	*Keynote speakers*	KN1	**Building pathology in a new context** Wim Bakens CIB Secretary General The Netherlands
		KN2	**Structural pathology: Challenges and applications** Paulo Lourenço Universidade do Minho Portugal
		KN3	**Service life prediction** Bruno Daniotti POLIMI – Politecnico di Milano Italy
11h30 - 13h10	*Chairs*	To be defined / To be defined	
Auditorium	*Keynote speakers*	KN4	**Façades pathology systems: A state-of-the-art and future trends** Jorge de Brito Instituto Superior Técnico, Universidade de Lisboa Portugal
		KN5	**Degradation and rehabilitation of roofs: a never ending battle for old city centres?** J. Mendes da Silva Universidade de Coimbra Portugal
		KN6	**Algal growth on the exterior walls of buildings** Shuichi Hokoi Kyoto University Japan
		KN7	**Building pathology: Importance and assignment** André Thomsen Delft University of Technology The Netherland
		KN8	**Sustainable renovation and challenges in building technology** Kristina Mjornell Technical Research Institute of Sweden Sweden

27th March			
09h00 - 09h20	*Chairs*	To be defined / To be defined	
B032		KN9	**Monitoring rising damp in historic buildings** Ana Sofia Guimarães Universidade do Porto Portugal
11h30 - 12h30	*Chairs*	To be defined / To be defined	
Auditorium	*Keynote speakers*	KN10	**Identifying the causes of building degradation and finding appropriate solutions through hygrothermal analysis** Hartwig Künzel Fraunhofer Institute for Building Physics Germany
		KN11	**Thermal insulation, a blessing YES, but…** Hugo Hens University of Leuven, Belgium
12h30 - 13h00 Auditorium	Keynote speakers	KN12	**Reasearch in building pathology and publication in international journals** Mark Shelbourn Editor-in-chief of Structural Survey UK

8. PARALLEL SESSIONS

25th March	14h30 - 16h00	
Session 1	**T7 - Building Performance Simulation**	
Auditorium	*Chairs*	To be defined / To be defined
	Speakers	**The use of fibre reinforced polymers in the rehabilitation of damaged masonry wallets** Júnia Soares Nogueira Chagas, Gray Farias Moita Brazil **Uncertainty in the life cycle cost analysis of a school building** Ricardo M.S.F. Almeida, Nuno M. M. Ramos Portugal **Energy efficient rehabilitation measures for the Portuguese residential buildings constructed in the 1960-1990 period** Ana Brandão de Vasconcelos, Manuel D. Pinheiro, Armando Costa Manso, António Cabaço Portugal **Using building energy models in the evaluation of retrofit strategies for industrial buildings in Italy** Matteo Iommi, Giuseppe Losco, Eduardo Barbera Italy **Environmental, economic and energy (3E) life cycle assessment of thermal insulating rendering Mortar using cork as lightweight aggregate** José D. Silvestre, José Júlio Correia da Silva, André M.P. Castelo, Jorge de Brito, Manuel D. Pinheiro Portugal **Ventilation system for drying out buildings after a flood** Isabel Torres, Óscar López Portugal **Permeability assessment from porous size distribution function** Nathan Mendes, Lorena Freitas Dutra Brazil
25th March	**14h30 - 16h00**	
Session 2	**T5 - Asset and Maintenance Management**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**Housing pathology** André Thomsen The Netherlands **Fire Safety in Buildings - Facility management** Miguel Chichorro Gonçalves Portugal **Building refurbishment - economical relevance of the several construction elements** Frederico Ferreira, Pedro Mêda, Hipólito Sousa Portugal **Analysis of the microclimate in a historical building to assess the probability of recurrence of filamentous fungi** Fernanda Lamego Guerra, Rosilena Martins Peres, Eduardo Grala da Cunha, Fábio Galli Brazil **Mantenance as a tool to avoid building pathology. The Oporto building example** Rui Calejo Rodrigues, Patricia Fernandes Rocha Portugal **An interoperable ICT tool for asset and maintenance management** **- Advances in research -** Bruno Daniotti, Sonia Lupica Spagnolo Italy

25th March	16h30 – 17h30	
Session 3	**T4 – Building Pathology vs. Durability**	
Auditorium	*Chairs*	To be defined / To be defined
	Speakers	**Evaluation of the service life of external painted surfaces applying statistical tools** Ana Silva, Pedro L. Gaspar, Jorge de Brito Portugal **Fungal decay and microclimate in log constructions at Røros, Norway** Johan Mattsson, Mari Sand Austigard Norway **Corrosion propagation phase studies on Finnish reinforced concrete facades** Arto Köliö, Mari Honkanen, Jukka Lahdensivu Finland **The effect of salt solutions in the wetting processes of walls with multiple layers** Ana Sofia Guimarães, J.M.P.Q. Delgado, Tiago Rego, Vasco Peixoto de Freitas Portugal

25th March	16h30 – 17h30	
Session 4	**T8 – Case Studies**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**Repair of face brick facades in two ovoid-shaped residential buildings in Granollers (Barcelona)** César Díaz Gómez, Còssima Cornadó Bardón, Ramon Gumà Esteve Spain **Refurbishment of a ceramic tiles roof in a XIXth century building – The case of "Villa Portela"** Bruno O. Santos Portugal **Survey and identification of pathological manifestations in Olympic Stadium of Cascavel city** Guilherme Perosso Alves, Ligia Eleodora Francovig Rachid Brazil **When mother nature blows: wind damaged roof systems: case studies, prevention and design** Thomas W. Hutchinson USA

26th March	09h00 – 11h00	
Session 5	**T4 – Building Pathology vs. Durability**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**How to promote new building products and technologies without knowing their service life** Ernst Jan de Place Hansen, Eva B. Møller Denmark **Biocementation as rehabilitation technique** Rafaela Cardoso, Rita Pedreira, Sofia Duarte, Gabriel Monteiro Portugal **Microclimate in Norwegian historic buildings and damages caused by House Longhorn Beetle (Hylotrupes bajulus)** Johan Mattsson, Ole Martin Stensli Norway **Study of pozzolanic admixtures effects in the concretes under chemical attack** Henrique Catuzzo, Giovanna Patricia Gava, Camila Salvi Malacarne Brazil **Natural ageing tests to study in-service different façade solutions - ETICS and premixed one-coat rendered walls** Luís Silva, Inês Flores-Colen, Nuno Vieira, Ana Barros Timmons Portugal **Prevention of algal growth on clay façades by photocatalytic TiO_2 nano-coating** Lorenzo Graziani, Enrico Quagliarini, Marco D'Orazio Italy **Rehabilitation of concrete industrial building facades attacked by acids** Agnus R. Rosa, Antônio N. Carvalho Júnior, Eduardo Chahud, Luiz A.M. Nunes Branco Brazil **Pathologies - Incompatibility of materials and human intervention in a historic building of Elvas** Rui Franco da Silva, António José Morais, Soheyl Sazedj, Maria Teresa Pinheiro-Alves Portugal

26th March	09h00 - 11h00	
Session 6	**T8 - Case Studies**	
B032	*Chairs*	To be defined / To be defined
	Speakers	**Pathology Analysis and Intervention at the Pavilhão Mourisco Roof Terraces - Rio de Janeiro, Brazil** Barbara Cortizo de Aguiar, Giovanna Martire Brazil **Overview of damage to facades and interior surfaces of medieval rural churches in Estonia** Paul Klõšeiko, Targo Kalamees Estonia **A decision support tool for guiding building owners to choose the most sustainable renovation alternative applied in renovation of an apartment building** Linus Malmgren, Stefan Elfborg, Kristina Mjörnell Sweden **Extensive renovation the pathology of heritage buildings** Torben Valdbjørn Rasmussen Denmark **Implementing BIM on rehabilitations projects for improved work preparation and production management** João Parreira, José Costa, José Clemente Portugal **Analysis of hygrothermal pathologies for a two-storey office building in Sicily (Italy). Causes identification and proposal for an effective removal** Annalisa Andaloro, Fabrizio Leggio Italy **Systematic diagnostic procedures to identify failures in the waterproofing systems in a structure** Vesely Samuel Israel **Finding faults in residential buildings** Nigel Isaacs, Jim Bowler, Ethan Duff, Christian Heath New Zealand

26th March	11h30 – 13h10	
Session 7	**T8 – Case Studies**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**Experience from Using Prefabricated Elements for Adding Insulation and Upgrading of External Façades** Kristina Mjörnell Sweden **Assessment of state-supported mould renovations in Finland** Tero Marttila, Jommi Suonketo, Paavo Kero, Petri Annila Finland **Recovery and enhancement of modern architectures: the case of cinema Ariston in Potenza (Italy)** Antonella Guida, Ippolita Mecca, Silvia Michela Scavone Italy **Rain infiltration mechanisms in ventilated façades: literature review, case studies, understanding common practice flaws** María Arce Recatalá, Soledad García Morales, Nathan Van Den Bossche Spain **Cracks on ETICS due to the properties of thermal insulation** Sara Stingl de Freitas, Vasco Peixoto de Freitas Portugal **Plumbing system´s pathologies based on the record of technical assistance and design procedures** Ruany Ferreira, Leticia Carvalho, Marcus A.S. Campos Brazil

26th March	11h30 – 13h10	
Session 8	**T3 – Diagnosis Techniques**	
B032	*Chairs*	To be defined / To be defined
	Speakers	**Practical Experiences from several moisture performance assessments** Petri J. Annila, Jukka Lahdensivu, Jommi Suonketo, Matti Pentti Finland **Use of three dimensional laser scanner to substrate/mortar contact area quantification and main parameters affecting this property identification** Carina Mariane Stolz, Angela Borges Masuero Brazil **Evaluation of the thermal behaviour of mortars applied on brick substrate** António Soares, Humberto Melo, Maria da Glória Gomes, Inês Flores-Colen, Jorge de Brito Portugal **ETICS' pathologies** Filiberto Lembo, Francesco Paolo R. Marino Italy **Status determination of historical buildings an example** Jesper Arfvidsson, Björn Bjelke Holtermann, Johan Mattsson Sweden **Radar investigation of masonry structures: from methodology to practice** Fabio Fatiguso, Mariella De Fino, Albina Scioti, Rocco Rubino Italy

26th March	14h30 – 16h00	
Session 9	**T3 – Diagnosis Techniques**	
B032	*Chairs*	To be defined / To be defined
	Speakers	**Criteria for application and identification of anomalies on the facades of buildings with the use of passive infrared thermography** Elton Bauer, Eliane Kraus de Castro, Elier Pavón, Antonio Hildenberg Brazil **Application of infrared thermography in the pathology study of back-ventilated façades with stone panels** Carlos Lerma, Ángeles Mas, Enrique Gil, Jose Vercher, Quiteria Angulo Spain **Comparative hygrothermal tests of thermal insulating mortars applied as renderings and ETICS, for a reliable application in rehabilitation** Pedro F. Pereira, Nuno M. M. Ramos, Vasco Peixoto de Freitas Portugal **The use of microwave method for diagnosis of moisture content of massive dolostone walls of medieval churches** Lembit Kurik, Targo Kalamees, Urve Kallavus Estonia **Sensitivity analysis of quantitative infrared thermography** Eva Barreira, Ricardo M.S.F. Almeida, Vasco Peixoto de Freitas, Tânia Soares Portugal **The wind driving rain and the building pathologies: directional driving rain, experimental simulation and quantification of wetness areas** Lais Zucchetti, Patricia Poyastro, Silvia Trein Heimfarth Dapper, Angela Borges Masuero, Acir Mércio Loredo-Souza Brazil

26th March	14h30 – 16h00	
Session 10	**T6 – Information Dissemination**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**Watertightness and water management of curtain walls** Nathan Van Den Bossche, Stephanie Van Goethem, Simon Scharlaken, Stefanie Sulmon, Arnold Janssens Belgium **BIM methodology used in the maintenance of buildings** Alcínia Zita Sampaio, Diogo G. Simões Portugal **Concrete Splitting for Rebars Post-Installed with High Bond Adhesives** J. Almeida, Jakob Kunz Austria **ERBmarket: a Platform for Diagnostic and Energy Renovation of Buildings** José Júlio Correia da Silva, Jorge Sirgado Portugal **Rainwater as degradation agent for facades of all times: Strategies and techniques for prevention and rehabilition** J. Mendes da Silva, Isabel Torres Portugal **Managing built cultural heritage, from condition assessment to risk assessment** Maria Paola Borgarino Italy

26th March	16h30 – 17h30	
Session 11	**T1 – Structural Pathologies**	
B032	*Chairs*	To be defined / To be defined
	Speakers	**Restoration and targeted seismic strengthening of the Washington National Cathedral** Matthew C. Farmer USA **Pathologies in reinforced concrete structures** Elaine Garrido Vazquez, Assed Naked Haddad, Eduardo Linhares Qualharini, Lais Amaral Alves, Itálo Amorim Féo Brazil **Mechanical pathologies of reinforced concrete corbel and repair by bonding composite carbon fabrics** Ivelina Ivanova, Jules Assih, Alex Li, Dimitar Dontchev France **Modeling building attributable risks from old housing: results from Scottish Housing condition survey, 2009** Ivy Shiue, Nick Bearman UK

26th March	16h30 – 17h30	
Session 12	**T8 – Case Studies**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**How design mistakes can make a building "sick" from the beginning: the case of a paradigmatic building of the brutalist architecture in Potenza (Italy)** Francesco Paolo R. Marino, Filiberto Lembo Italy **Cracks of masonry partition walls in multifloor building: case study** Alberto C. Lordsleem Jr. Brazil **Survey and dynamic behaviour of the Our Lady of Conception Church, Portugal** Nuno Mendes, Paulo B. Lourenço, Marianna Besca, Elisabetta Trufelli, Luís F. Ramos Portugal **Extent and reasons for biodeterioration, salt distribution and damage of plaster in Estonian medieval churches** Urve Kallavus, Targo Kalamees, Lembit Kurik, Rainer Traksmaa Estonia

27th March	09h00 - 11h00	
Session 13	**T2 - Hygrothermal Pathologies**	
B032	*Chairs*	To be defined / To be defined
	Keynote KN9	**Monitoring rising damp in historic buildings** Ana Sofia Guimarães Portugal
	Speakers	**Hygrothermal behaviour of compact roofs under Belgian climate** Glenn De Meersman, Nathan Van Den Bossche, Arnold Janssens Belgium **Assessment and rehabilitation of industrial building for the production of ammonium nitrate low density** Mara Regina Pagliuso Rodrigues, Raphael Mairal, Osny Pellegrino Ferreira Brazil **Effect of Temperature on Water Capillary Rise Coefficient of Building Materials** Antonia Moropoulou, Asterios Bakolas, Maria Karoglou, Nikolaos Karagiannis Greece **Runoff simulations from heterogeneous building facades during extreme weather events with a 2D numerical model** Stephanie Van Goethem, Nathan Van Den Bossche, Hua Ge, **Arnold Janssens** **Bekgium** **Field Survey and Analysis on Frost Damage of Roof Tiles under Climatic Impact** Chiemi Iba, Ayumi Ueda, Shuichi Hokoi Japan **Comparison between uniform rain loads and point sources to simulate rainwater leakage with commercial HAM-models** Kim Carbonez, Nathan Van Den Bossche, Hua Ge, Arnold Janssens Belgium

27th March	09h00 – 11h00	
Session 14	**T3 – Diagnosis Techniques**	
SA	*Chairs*	To be defined / To be defined
	Speakers	**Assessment of pre-fabricated bathrooms from the 1990s** Martin Morelli, Erik Brandt Denmark **Good practice: analysis of the vulnerability of the seven churches of Monza** Cecilia Bolognesi, Cristiana Achille, Francesco Fassi Italy **On the use of infrared thermographic measurements for evaluating the airtightness of the building envelope** Katrien Marcy, Nathan Van Den Bossche, Marijke Steeman, Sven Van De Vijver, Kim Carbonez, Arnold Janssens Belgium **Drying behaviour of floor and wall constructions after water damage with artificial drying methods** Andreas Zegowitz, Anna Maria Renzl, Wolfgang Hofbauer, Joerg Meyer, Hartwig Künzel Germany **Rising Damp in Portuguese Cultural Heritage – A Flood Risk Map** Raquel Boinas, Ana Sofia Guimarães, J.M.P.Q. Delgado Portugal **Risk assessment of urban fire - Proposal of a method for analysis and management of existing building** Miguel Chichorro Gonçalves, André Correia Portugal **Evaluation of moisture transfer in external plaster finishing to improve their conservation** Silvia Erba, Bruno Daniotti, Elisabetta Rosina, Antonio Sansonetti Italy **Hygrothermal analysis of historic buildings – Statistical methodologies and their applicability in temperate climates** Hugo Entradas Silva, Fernando M. A. Henriques Portugal

9. CLOSING SESSION

27th March			
12h30 – 13h00 Auditorium	*Keynote speakers*	KN12	**Reasearch in building pathology and publication in international journals** Mark Shelbourn Editor-in-chief of Structural Survey UK
	Helena Corvacho		ISBP-2015 Executive Comission Faculty of Engineering , University of Porto Portugal
	João Delgado		ISBP-2015 Executive Comission Faculty of Engineering , University of Porto Portugal
	Ana Sofia Guimarães		ISBP-2015 Executive Comission Faculty of Engineering , University of Porto Portugal
	Enrico de Angelis		Co-Chair of ISBP-2015 Organizing Committee Politecnico di Milano Italy
	Vasco Peixoto de Freitas		Chair of ISBP-2015 Organizing Committee Faculty of Engineering , University of Porto Portugal
13h00 – 13h10 Auditorium	Musical moment		*Tuna de Engenharia da Universidade do Porto*

TUNA DE ENGENHARIA DA UNIVERSIDADE DO PORTO

The Portuguese word *Tuna* is used to designate a musical group playing cordophone instruments and singing. They are a tradition among university students. They sing popular songs typically devoted to student bohemian, love, *saudade*, etc. The songs may have a melancholic nature, somehow related with *Fado*, or naughty characteristics, joking with different aspects of the students' life.

Each school of the different Portuguese universities can have its own *Tuna*. They are distinguished from each other by the clothing of their members which, although having the same basis (black suit, white shirt and black cloak), have different details of color and symbols related with the school.

The *Tuna* of Engineering of the University of Porto was created in November 1988. It is the second eldest *Tuna* in the city of Porto still active, and the first one to be exclusive of a School. Since its beginning many other *Tunas* have been created, allowing the development of a musical movement closely related with Portuguese university life.

10. RELATED MEETINGS

25th March	**09h30 - 13h00**	
G128/G129		ISO/TC59/SC14/WG4 Maintenance and Life Cycle Costing
25th March	**14h30 - 17h30**	
G128/G129		ISO/TC59/SC14/WG7 Condition Assessment and Feed-back of Relevant Durability Data from Constructed assets
25th March	**17h30 - 18h30**	
B032		CIB W086 Building Pathology
26th March	**09h30 - 13h00**	
G128/G129		ISO/TC59/SC14 Design Life
27th March	**14h00 - 17h00**	
G128/G129		CIB W080 Prediction of Service Life of Building Materials and Components

International Council
for Research and Innovation
in Building and Construction

W086 – Building Pathology

Annual Meeting

25th March 2015, Porto, Portugal

CIB – W086 Meeting

The Annual Meeting of CIB W086 will be held at Porto University, on the 25th March 2015, 17:30 – 18:30.

Agenda

The conference agenda includes:

- Opening session
  - Welcome
  - Agenda Approval
  - Activities of the CIB W086
  - "A State of the Art on building Pathology", CIB publication 393
- CIB W086 future
  - Introductory presentation (Vasco Peixoto de Freitas and Enrico de Angelis)
  - Discussion of the topic
- Closing Session
  - Conclusions
  - Next W086 Meeting

The W086 meeting will be held in the same location as 1st ISBP.

1st ISBP 2015

The 1st International Symposium on Building Pathology (ISBP-2015) we will be hosting from 24th to 27th March 2015 in Porto, Portugal. This first International Conference will be held in cooperation with the CIB W086 Commission - Building Pathology supporting the discussion of the Problems on Building Pathology - The Research and the Practice. The main objectives are to produce information which will assist in the effective management of service loss; to develop and evaluate methodologies for the assessment of defects and failures; to propose methodologies for the prevention and mitigation of building defects; to analyse costs associated with building pathology and to disseminate findings among all those involved in the production and management of buildings.

Symposium Venue

The 1st International Symposium on Building Pathology (ISBP-2015) we will be hosting from 24th to 27th March 2015 in Porto, Portugal.

To register for the conference or for additional information, please contact the organizing committee through the conference website:
http://paginas.fe.up.pt/~isbp2015/

Additional Information

For additional information about the CIB W086 please contact the joint coordinators: Vasco Peixoto de Freitas vpfreita@fe.up.pt and Enrico de Angelis at enrico.deangelis@polimi.it

You can find more information on the activities of CIB W086 at www.cibworld.nl.
Search under Databases/CIB Commissions.
Click on Commissions and type W086 in the search field.

11. WELCOME RECEPTION

24th March		
19h30 – 20h30	FEUP Library Musical moment	Porto

UNIVERSITY OF PORTO - FACULTY OF ENGINEERING (FEUP)

The The Faculty of Engineering of the University of Porto (FEUP) is a public institution of higher education with statutory, scientific and financial autonomy (www.fe.up.pt). Our mission is to train world-class engineers and our effort is on research and development of excellence. Founded in 1837, FEUP is one of 14 faculties at the University of Porto (UP). We are the largest faculty of UP, with 3 Graduation Programmes, 9 Integrated Masters (5 years), 12 Masters (2 years) and 22 Doctoral Programmes. With 90,000 square meters of campus, FEUP has more than 8000 students and 500 professors across 9 departments. Faculty of Engineering is the largest Faculty of the University of Porto with 3 Graduation Programmes, 9 Integrated Masters (5 years), 12 Masters (2 years) and 22 Doctoral Programmes.

FEUP works closely with several recognized institutions such as the European Space Agency, IBM, Microsoft and the European Organization for Nuclear Research. It also teams up with the Massachusetts Institute of Technology, the University of Texas at Austin and the Carnegie Mellon University. Supported on the R&D resulting from the excellence of its research units and international partnerships, FEUP seeks to ensure that students are able to conceive and operate complex systems, to generate added value in an environment of social and professional sustainability, based on ethical principles.

Among these research units, the Institute of R&D in Structures and Construction (CONSTRUCT), was rated as EXCEPTIONAL in the last FCT evaluation (www.fe.up.pt/construct). The evaluation panel stated that “the achievements of the Unit are very impressive, which come from basic and applicable research”.

The Laboratory of Building Physics (LFC) is one of the CONSTRUCT 6 Groups. LFC started its research activity in 1991 with a clear objective of increasing knowledge on the hygrothermal behaviour of buildings, components and materials, and transfer it to the Portuguese building industry (www.fe.up.pt/~lfc-scc). LFC is composed of 13 PhD, operating a test facility of about 400 m^2 with about 1M€ fully functional equipment. The main research areas are: Hygrothermal behaviour of components and whole buildings; Energy efficiency, user comfort and well-being in buildings; Measurement of hygrothermal properties; Monitoring of building performance in service conditions; Building pathology, rehabilitation and heritage conservation; Acoustic comfort.

12. CONFERENCE BANQUET

26th March			
20h30 - 23h30	Fundação Cupertino de Miranda		Porto
	Musical moment	Ana Célia Costa (violin)	

FUNDAÇÃO CUPERTINO DE MIRANDA

The Foundation was set up in 1964. It is a private, independently financed institution, whose aims are both cultural and educational. Right from the start, it did not have an easy time, undergoing three consecutive statutory modifications.

In January 1996, the Paper Money Museum - the focal point of the institution - was inaugurated. Since then, the Foundation has increased in size - the building now covers 4,000m^2. The centre has auditoriums and exhibition rooms equipped with the cutting-edge audio and video projection systems, videoconferencing and simultaneous translation. It also has a restaurant open every day. Congresses, temporary exhibitions, concerts and debates are held here. Apart from the activities and projects included in the Foundation's own programme, it also hosts initiatives by other entities, offering high quality cultural and artistic entertainment.

BUS TRANSPORTATION

There will be special buses going from the hotels to the banquet venue and back.

13. PORTO MAP

Feup
Fundação
Cupertino
de Miranda
Sra. da Hora
Ramalde
Paranhos
BOAVISTA
Parque da Cidade
Av. da Boavista
Estrada da Circunvalação