



# HMC 08

1<sup>st</sup> HISTORICAL MORTARS CONFERENCE

Detailed program



LISBON | LNEC | 24<sup>th</sup> to 26<sup>th</sup> September 2008

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Detailed Program

# September, 24th

08.30	Registration and open	
09:00-09:30	Opening Session:	
09.30-11.00	Plenary session: Invited lectures	
	Theme I – Jan Elsen: Chemical-mineralogical characterization of historic mortars	
	Theme II – Vladko Bosiljkov: Low vs. high tech diagnosis techniques for assessment of masonry structures	
11.00-12.00	Coffee break and POSTER SESSION (themes I and II)	
11.00-12.00	I.01	Some considerations about the durability of historic mortars Pacheco Torgal F., Castro Gomes J.P., Jalali S.
	I.02	Natural Cement and Stone Restoration of Bourges Cathedral (France) Gosselin C., Verges Belmin V., Royer A., Martinet G.
	I.04	The use of metakaolinite as hydraulic agent of aerial lime plasters and mortars. A case study of Genoa (Italy) Pesce GL., Ricci R.
	I.05	Assessment of the binder amount of mortars by various techniques Miranda J., Pires J., Carvalho A.P.
	I.14	Characterisation of mortars in Tróia Archaeological Site Esteves A.M., Catarino J., Delgado Rodrigues J.
	I.18	Recuperation mortars: methods used to identify mortar composition and soluble salts extracted from old constructions Guterres P.
	I.24	Petrographical and mineralogical characterisation of mortars in our Lady Church from Prague Castle Zeman A., Válek, J., Frolík J., Langrová A., Růžičková E.
	I.26	Characterization of historical mortars with gypsum in São Paulo, Brazil Souza, M.L., Del Lama E.A., Oliveira M.C.
	I.27	Characterization of historical mortars in rupestal churches in Romania. A case study Mohanu I., Amzica F., Mohanu D., Vlad N., Cionoiu C.
	I.30	Thermal study of historic mortars from Mallorca Genestar C., Palou J., Pons C.
	I.38	The Petrographic Study in the Ancient Mortars Characterization Fratini F., Pecchioni E., Cantisani E.

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I.59 Tamagnini Mendes M., Farinha Antunes J.L., Freitas Coroado J.	Conservation and restoration of glazed tiles. A study of setting mortars
II.06 Ferreira L.M., Coroado J., Freitas V., Olabarria I.M.	Tile and lime mortars in the city of Oporto (1850-1920). Symptoms and causes of degradation
II.12 Valentini M., Visentini R.	Cause of decay and intervention on external mortars of the S. Vittore Church - Stresa (Italy)
I.15 * Leslie A.	The applied petrography group: bridging a gap in BS/ EU standard methodologies
I.36 * Adriano P., Santos Silva A., Pires J., Carvalho A.P., Cruz A.J., Veiga R., Magalhães A.C., Mirão J., Candeias A.	Chemical-physical and mechanical characterization of old mortars from The Santa Maria Church in Évora, Portugal
I.40 * Miriello D., Bloise A., Crisci G.M., Barrese E. Gattuso C.	Milling between clay brick powder and calcium hydroxide: implications on the durability of historical mortars
I.41 * Crisci G.M., Gattuso C., Miriello D.	Mortars and multivariate statistical analysis of compositional data: a tool to identify the constructive phases in historical buildings
I.47 * Coroado J., Velosa A., Silva R., Pacheco A., Rocha F.	Characterization of mortars used in construction and rehabilitation of Aeminium "Criptoportico"
I.48 * Ferreira L.M., Coroado J., Velosa A., Rocha F.	Characterization of old tile mortars from Oporto (1850-1920)
I.56 * Valadas S., Martins R., Fialho S., Mirão J., Tavares D., Botto M., Adriano P., Santos Silva A., Candeias A.	Mortars characterization and biodegradation assessment of the mural paintings from the Casa de Fresco dos Sanches Baena (Vila Viçosa, Portugal)
II.17 * Matias, L. Vilhena, A. Pina dos Santos, C. Veiga, M. R. Magalhães, A.C.	Infrared thermography applied to the evaluation of moisture in ancient buildings
* without full paper (work in development)	

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12.00-13.00	Parallel session room #1	
	Session #1: Theme I	
	I.07 Bolondi L., Papayianni I., Binda L.	Lucchesian Villas renders: bases for a research guideline on diffused heritage systems
	I.08 Balksten K., Steenari B.	The influence of particle size and structure in hydrated lime on the properties of the lime putty and lime mortar
	I.09 Sanjurjo Sánchez J., Trindade M.J., Dias M.I., Fernández Mosquera D.	Thermoluminescence and X- ray diffraction of mortars as tools to evaluate suitability of bricks to luminescence dating
I.10 Teixeira B., Valente C.S., Velosa A.L., Veiga M.R., Ferreira I.M.	Development of lime based mortars for repairing glazed tiles coatings of historic buildings in the city of Ovar, Portugal	
12.00-13.00	Parallel session room #2	
	Session #2: Theme IV	
	IV.02 Matero F., Verhosek J.T., Colon E., del Cueto B.	Argamasa as a traditional render on the 17th century dome of Capilla de Nuestra Señora del Rosario, Iglesia San José, San Juan, Puerto Rico
	IV.03 Veiga R., Fragata A., Velosa A., Magalhães A., Margalha G.	Air lime based mortars: discussion of their viability to be used as substitution renders in historical buildings
	IV.06 Arizzi A., Cultrone G., Sebastián Pardo E.	Influence of the aggregate composition on textural properties of calcitic lime mortars
IV.11 Ruiz-Agudo E., Rodriguez-Navarro C.	Effects of additives on lime putty rheology: applications in the design of mortars for conservation purposes	
13.00-14.00	LUNCH	

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14.00-16.00	Parallel session room #1	
	Session #3: Theme II	
	II.01 Gonçalves T.D., Pel L., Delgado Rodrigues J.	Worsening of dampness and salt damage after restoration interventions: use of water repellent additives in plasters and renders
	II.02 Lubelli B., Nijland T.G., Van Hees R.P.J.	Self-healing of lime based mortars
	II.03 Sanjurjo Sánchez J., Alves C.A.S., Vidal Romani J.R.	Characterization and decay of mortars in Heritage buildings of A Coruña (NW Spain)
	II.05 Rodrigues N., Ramos A.	Damage and Diagnosis of Masonry Bridges – A Case Study
	II.08 Magalhães A.C., Veiga R., Pina Santos C., Matias L., Vilhena A.	Methodologies for diagnosis of rendering anomalies due to moisture in walls
	II.11 Pinho F., Baião M., Lúcio V., Faria P.	Experimental Research on Rubble Stone Masonry Walls
	II.13 López-Buendía A.M., Fuente J.V.	Lime mortar decay by carbonation and dissolution in load-bearing wall of ashlar masonry
	III.35 Raimundo Mendes da Silva J.A., Martins S.	Appraisal and rehabilitation strategy for renders in the historical centre of Coimbra

14.00-16.00	Parallel session room #2	
	Session #4: Theme I	
	I.16 Kuckova S., Crhova M., Hynek R., Kodicek M.	Proteomic analysis of protein additives in historical mortars
	I.17 Diekamp A., Konzett J., Mirwald P.W.	Mineralogical characterization of historic mortars from Tyrol, Austria and South-Tyrol, Italy
	I.19 Bonilla T., Almeida H., Carneiro A.	Physical-chemical characterization of mortars in the church and Sacred Heart of Jesus Sanctuary, Igarassu, Pernambuco, Brazil
	I.20 Gregerova M., Vsiansky D.	Geovisualization of the deterioration processes of the Charles Bridge (Prague, Czech Republic) mortars: the interdependence of microchemical and mineral composition
	I.21 Letourneux J.-P., Feneuille S.	Chemical and physical analyses of meroitic mortars
	I.22 Starinieri V., Papayianni I., Stefanidou M.	Study of materials and technology of ancient floor mosaics' substrate
	I.23	Study of properties of historic mortars and renders – development of

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	Válek J., Slížková Z., Zeman A., Frolík J., Bruthans, J.,	a comparative data base
	I.43 Cwirzen A., Habermehl-Cwirzen K.M.E., Flege S., Balogh A.G.	Characterisation of mortars and plasters of Palatium and Einhard Basilica in Seligenstadt, Germany
14.00-16.00	Parallel session room #3	
	Session #5: Theme IV	
	IV.30 Papayianni I	Requirements for flooring lime-based mortars
	IV.44 Carmona P., Martinez- Ramirez S., Sanchez de Rojas M.I., Blanco- Varela M.T.	Surface water repellent-mediated change in lime mortar colour and brightness
	IV.45 Martins C., Paiva, H., Ferreira, V.M., Tavares M., Veiga, R., Velosa A.	Preliminary studies on a lime grout for built heritage conservation
	IV.31 Papayanni I., Stefanidou M., Konopisi S.	Pathology symptoms of lime-based repair mortars
	IV.48 Malinowski E., Hansen T.	Hot Lime Mortar in Conservation – Repair and Replastering of the Façades of Läckö Castle
	IV.49 Paiva H., Seabra M.P., Velosa A., Veiga R., Ferreira V.M.	Development of compatible mortars for adobe masonry
	IV.50 Ball R.J., Allen G.C.	Load dependent deformation and shrinkage in hydraulic mortars
	IV.07 Bokan Bosiljkov V., Bosiljkov V., Zarnic R.	Application and properties of pure lime façades – case study
16:00-16:30	Coffee break	

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16:30-18:30	Parallel session room #1	
	Session #6: Theme IV	
	IV.13 Matias G., Faria P., Torres I.	Lime mortars with brick dust and grounded particles for ancient masonry: development and evaluation
	IV.17 Demellenne M., Scaillet J.-C., Dagrain F., Descamps T.	Project for research on historical and contemporary lime based mortars in the Walloon region (Belgium)
	IV.18 Jornet A., Romer A.	Lime Mortars: Relationship between Composition and Properties
	IV.19 Katsiotis M., Karatasios I., Kontos A.I., Likodimos V., Papavasiliou G., Falaras P., Kilikoglou V.	Study of Lime - TiO <sub>2</sub> Self-cleaning Repair Mortars
	IV.21 Čechová E., Papayianni I., Stefanidou M.	The influence of linseed oil addition on the properties of lime-based mortars
	III.04 Tavares M., Veiga R., Fragata A.	Conservation of old renderings - the consolidation of rendering with loss of cohesion
	IV.41 Erdogmus E., Armwood C.	Feasibility of Fiber-Reinforced Mortar for the Reconstruction of an Ancient Roman Temple

16:30-18:30	Parallel session room #2	
	Session #7: Theme I	
	I.60 Adriano P., Santos Silva A., Veiga R., Mirão J., Candeias A.	Unravelling the secrets of traditional lime mortars
	I.31 Santos Silva A., Veiga R., Adriano P., Magalhães A., Pires J., Carvalho A., Cruz, A. J. Mirão J., Candeias A.	Characterization of historical mortars from Alentejo's religious buildings
	I.32 Reyes J., Gutiérrez G., Centeno G., Trevino D., Bartolo P., Quintana P., Azamar J.A., Pérez T.	Chemical characterization of crusts formed in mortars of historic buildings in San Francisco de Campeche City, Mexico
	I.33 Stokely S.C., Matero F.	Using Analytical Techniques to Understand Historic Mortar Traditions at Cairo's Ayyubid Wall
	I.34 Vela F., Sanz-Arauz D., López de Andrés S	Survey and characterization of historical mortars of the church of San Pedro Apóstol in Polvoranca (Lagánes, Madrid): constructive aspects and petrological analysis
	I.11	The scratching test, an alternative technique for the determination



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	Dagrain F., Van Parys L., Scaillet J.C	of the strength properties of historical mortars
	I.13 Coroado J., Paiva H., Velosa A., Veiga R., Ferreira V.M.	Characterization of renders, joint mortars and adobes from traditional constructions in Aveiro-(Portugal)
16:30-18:30	<b>Parallel session room #3</b>	
	Session #8: Theme III	
	III.19 Papayianni I., Stefanidou M., Christodoulou S.	Influence of design parameters on the performance of plasters and renderings used for restoration of historical buildings
	III.07 Donas Botto M., Salema S.	Presenting project CATHEDRAL - Characterization and Conservation of Traditional Historic Mortars in Religious Buildings in Alentejo
	III.12 Fernandes, M.	Earth mortars and earth-lime renders
	III.21 Donas Botto, M.	Decorated plastered surfaces in Amieira do Tejo Castle, Nisa: Wall Paintings, sgraffito, ancient grafittis and "fake masonry"
	III.30 Margalha G., Appleton J., Carvalho F., Veiga M. R., Santos Silva A., Brito J.	Traditional lime kilns - Industry or archaeology?
	III.08 Kanan M.I.	Experiences to conserve the lime fabric of our built heritage illustrated by Santa Catarina's island, Brazil
	III.34 Raimundo Mendes da Silva J.A., Subtil A.	General characterization of Coimbra's uptown building's facades
	III.36 Raimundo Mendes da Silva J.A., Moura A.	Defects of inadequate paintings over mortars renders in old facades
18:00-18:30	DISCUSSION PANEL	

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# September, 25th

09.00-10.30	Plenary session: Invited lectures	
	Theme III – José Aguiar: When architecture had colour and ornament was not a crime! Conservation of architectonic surfaces	
	Theme IV – Thorborg Von Konow: Design of non-hydraulic and hydraulic lime mortars appropriate for restoration in the nordic climate	

Coffee break and POSTER SESSION (themes III and IV)

10.30-11.30	III.03	Social and sustainable development of the architectural heritage
	Menezes M., Tavares M.	
	III.06	A Future for Old Symmetry
	Gilsanz-Mayor M.A., Martínez-Serrano M.F.	
	III.27	Color essays: an inside look into Alentejo traditional limewash paintings and colored lime mortars
	Gil M., Veiga R., Aguiar J., Seruya A., Carvalho L., Vargas H., Mirão J., Candeias A.	
	IV.10	Studies on a water-repellent agent and a thickener as additives for lime-based mortars
	Izaguirre A, Lanas J., Alvarez J.I.	
	IV.12	Mortars and their compatibility for the conservation of masonry walls in Tróia Archaeological Site
	Delgado Rodrigues J., Esteves A.M., Catarino J.	
	IV.14	Recuperation mortars: essay to commend propose mortars applied on laboratory panel (experimental model adopted)
	Guterres P.	
	IV.26	Microstructure and compatibility of lime putty
Vecchiattini R.		
III.31 *	Sounding procedures and historical plasters identification for its conservation (study cases in Portugal)	
Llera F., Barreiros B., Tavares M.		
III.32 *	Chromatic reintegration of lime renders	
Candelária P., Tavares M., Veiga M.R., Coroado J.P.F., Costa F.		
III.33 *	Render restoration in historic architecture (study cases in Portugal)	
Llera F., Barreiros B., Tavares M.		
IV.46 *	Influence of the curing conditions on the characteristics of air lime and metakaolin mortars	
Aguiar I., Veiga R., Pinto A.P.		
* without full paper (work in development)		

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11.30-13.00	Parallel session room #1	
	Session #9: Theme III (Session with simultaneous translation Portuguese to English)	
	III.22	Past construction techniques observed in present time
	Alvarez J.	
	III.24	Consolidation Mortar for Old Masonry
	Sequeira C., Frade D., Gonçalves P.	
	III.10	Textual sources for the study of ancient roman and greek mortars
	Ribeiro L.C., Lopes R	
11.30-13.00	III.23	From Vitruvius's ceramic powder additives to modern restoration
	Mendonça de Oliveira M.	
	II.15	Treatment of humidity in an habitacional enterprise - Convento dos Inglesinhos practical case
	Ferreira N.	
	III.29	Conservation of the historical render in the Church of Nossa Senhora da Assunção in Elvas
	Salema S., Proença N., Cardoso I.	
	Parallel session room #2	
	Session #10: Theme I/II	
I.53	Compression tests on non-standard historic mortar specimens	
Drdácký M., Mašín D., Mekonone M.D., Slížková Z.		
I.54	Characterization of Portuguese Historical Gypsum Mortars	
Freire T., Santos Silva A., Veiga M.R., Brito J.		
I.55	Experimental investigation and numerical modelling of eccentrically loaded historic brickwork for railway arch bridges assessment	
de Felice G., de Santis S.		
I.58	Investigation of lime mortar/tesserae adhesion in medieval mosaics from the Basilica di San Marco, Venice	
Allen G.C., Edwards D.D., Ciliberto E., La Delfa S.		
II.14	Materials Considerations Regarding Rain Penetration in Historic Fired Clay Brick Masonry	
Groot C., Gunneweg J.		
II.16	Environmental cycling of lime mortars	
Allen G.C., Ball R.J., El- Turki A., Holmes S., Allen W.J.		
13.00-14.00	LUNCH	

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14.00-16.00	Parallel session room #1	
	Session #11: Theme IV	
	IV.23	Lime mortars with rice husk ash for ancient masonry
	Almeida N., Faria P., Pinto A.P.	
	IV.34	In-situ testing of compatible mortars for adobe masonry
	Velosa A., Miguel P., Paiva H., Ferreira V.M., Veiga R.	
	IV.28	Shear behaviour of interfaces between masonry units and hydraulic-lime grouts
	Adami C.E., Vintzileou E., Moutselis M.	
	IV.35	Hydraulic lime mortars to use in old buildings: advantages and drawbacks
Penas F., Veiga R., Gomes A.		
IV.47	On compatible dilation limits of masonry joint mortars	
Drdácký M., Beran P.		
IV.36	Evaluation of the compatibility of lime mortars for superficial repairs on "Brecha da Arrábida"	
Ferreira I., Rato V., Dionísio A.		
IV.37	Research concerning the durability assessment of lime masonry mortars	
Smits A., Dirx I., Grégoire Y.		
IV.40	Evaluation of compatible mortars to repair 19th century natural cement cast stone from the French Rhône-Alpes region	
Bouichou M., Cailleux E., E. Marie-Victoire, Sommain D.		

14.00-16.00	Parallel session room #2	
	Session #12: Theme III	
	III.18	Studies of building techniques and mortars of historic industrial and rail brickwork architecture of Campinas, Brazil
	Tirello R.	
	III.20	Architecture surfaces conservation: (re)discovering sgraffito in Portugal
	Salema S., Aguiar J.	
	III.05	A method to recreate historic mortars applied at Norrlanda church on the island of Gotland, Sweden
	Balksten K., Steenari B.-M.	
	III.01	Calcareous hydraulic binders from a historical perspective
	Mertens G., Lindqvist J.E., Sommain D., Elsen J.	
III.26	Traditional materials and techniques of spontaneous buildings in Cilento. Characterization, decay and recovery	
Sansone C.		
III.40	Grouting Mortar for Restoration of 18th Century Defensive Walls "Not Too Strong and Not Too Weak"	
Von Konow Th., Lind T.		
III.02	Earth mortars constructive use on eolithic domestic structures. Some case studies in Alentejo, Portugal	
Bruno P., Faria P.		
III.38	Sgraffito restoration at Pernes-les-Fontaines (France) – working site report May 14-16, 2008	
Algros J.-J., Morot-Sir		

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16:00-16:30	Coffee break	
16:30-18:00	Parallel session room #1	
	Session #13: Theme I	
	I.37 Horta G., Lobo de Carvalho J.M., Rato V.M.	Reconstruction of the Chalet of the Condessa de Edla: preliminary evaluation of the effects of fire in the architectural surfaces
	I.42 Kramar S., Lux J., Mirtic B.	Characterisation of Mortars from the Roman Archaeological Site near Mošnje (Slovenia)
	I.44 Habermehl-Cwirzen K.M.E., Cwirzen A., Flege S., Balogh A.G.	Characterization of mortars from the historic iron work in Teijo, Finland- a case study
	I.51 Binal A.	The properties of khorasan mortar and brick used in stone and brick masonry buildings in Kula (Manisa-Turkey)
	I.52 Pineda S., Bustamante R.	Lime rendering of the houses of historical core of Maracaibo, Venezuela
16.30-18.00	Parallel session room #2	
	Session #14: Theme IV	
	IV.22 Agostinho C., Pinto A.P., Gomes A.	Advantages of using lime putty on the formulation of compatible replace mortars
	IV.43 Freitas V., Gonçalves P.	Specification and time required for the application of a lime-based render inside historic buildings
	IV.25 Karatsios I., Kilikoglou V.	Durability of lime-based barium mortars against sulphates
	IV.27 Hughes J.J., Young M.E., Laing S.	Mortars for pointing granite; a feasibility study
	IV.29 Adami C.E., Toumbakari E.E., Vintzileou E.	Lime-pozzolan-cement compositions for the repair and strengthening of historic structures
18:00-18:30	DISCUSSION PANEL	
18.30	Closing of work sessions	

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## September, 26th - TECHNICAL VISIT TO EVORA

8.00	Departure from Lisbon
9.30	Arrival to Montemor-o-Novo to visit Soudação Convent and Santiago Church
11.00	Arrival to Évora, visit to Évora Cathedral and presentation about the places to visit
12.30	LUNCH IN "Jardim do Paço"
14.30	Visit to S. Mamede church, and to S. Mamede Place fountain, which has been recently restored
15.00	Visit to "Casas Pintadas" and "Condes de Basto" Palace
16.30	Visit to Santa Clara Church, temporary headquarters of Évora Museum, where an exhibition about the restoration of "Sé de Évora" old panels is installed
17.00	Visit to S. Francisco Church, passing by 5 de Outubro street, Giraldo Place and Serpa Pinto street fountain
18.00	Closing Session in D. Manuel Palace
19.00	Departure to Lisbon