

RESEARCH TEAM

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Welcome to the 4th issue of TEMA newsletter where you can find an update of all the research activities carried out during the last seven months. Enjoy reading this Newsletter!!

Published Journals

A. San-Antonio González; M. del Río Merino; C. Viñas Arrebola; P. Villoria Sáez. "Lightweight material made with gypsum and XPS waste with enhanced thermal behaviour" *Construction and Building Materials* (Impact Factor: 2.3). 09/2015; 93. DOI: 10.1016/j.conbuildmat.2015.05.040

A.San-Antonio-González, M. Del Río Merino, C. Viñas Arrebola "Lightweight Material Made with Gypsum and EPS Waste with Enhanced Mechanical Strength" *Journal of Materials in Civil Engineering* 07/2015 DOI:10.1061/(ASCE)MT.1943-5533.0001382

S. Romaniega Piñeiro; M, del Río Merino; C, Pérez García. "New plaster composite with mineral wool fibres from CDW recycling" *Advances in Materials Science and Engineering*. Article ID 854192 (2015) DOI: 10.1155/2015/854192

F. Puertas; R. Santos Jiménez; M.M. Alonso; M. del Río Merino. "Alkali-activated cement mortars containing recycled clay-based construction and demolition waste." *Ceramics-Silikaty* 59 (3) 202-210 (2015)

M. del Río; P. Villoria; J. Santa Cruz; M. González; A. Rodríguez; C. Viñas. "Nuevos ecomateriales a partir de residuos de la rehabilitación energética de edificios" *RETEMA*, 182 52-55

Accepted Journals

M.J. Leiva; M. del Río Merino; P. Villoria "Feasibility of plaster composites with rice husk waste" *ZKG International*. In press Drymix Mortar Edition. March 2016

R. Fernández Martín, J. Santa Cruz Astorqui, S. Arbaiza Blanco-Soler y M. del Río. "Caracterización tipológica de las casas de corredor. El caso de las ciudadelas del casco histórico de La Habana y las corralas madrileñas". *Informes de la construcción*. In press. DOI: 10.3989/ic.15.036


Master Theses


S. Varela. "Diseño experimental, monitorización y análisis del comportamiento térmico del Sistema de aislamiento térmico por el exterior (SATE) en la rehabilitación de un edificio de viviendas" (Experimental design, monitoring and thermal behavior analysis of a housing building rehabilitation using exterior thermal insulation system (ETICS)) Supervisors: C. Viñas and A. Rodríguez


A. Fernández "Arquitectura bioclimática y ahorro energético" (Bioclimatic architecture and energy savings) Supervisors: A. Rodríguez Sánchez and C. Viñas Arrebola


Y. J. Rodríguez. "Comportamiento Físico mecánico del yeso de construcción con adición de residuos de poliestireno extruido y residuos cerámicos" (Physical mechanical behavior of building plaster with addition of extruded polystyrene waste and ceramic waste.) Supervisor: M. del Río

Current Research Projects

 **2014-2017** "W2R: De residuos a recursos" Ministry of Economy and Competitiveness

 **2012-2015** GtoG "From cradle to cradle: a circular economy for the European gypsum industry with the demolition and recycling industry" Life+

 **2012-2016** "Trigger" funded 7th Framework Programme for Research (FP7).

 **2015-2016** III COINVEDI Ministry of Economy and Competitiveness. BIA2015-62950-CIN

2015-2016 "Peritaje edificio de viviendas" (Residential Building Assessment). Private funding

PATENTS

P201531793 "Procedimiento para obtener una chapa de titanio con actividad fotocatalítica" (Procedure to obtain a titanium plate with photocatalytic activity)

III INTERNATIONAL CONGRESS ON CONSTRUCTION AND BUILDING RESEARCH (III COINVEDI)

On 14th, 15th and 16th of December 2015 the Director's Conference of Building Engineering (CODATIE) held the 3rd COINVEDI, thanks to the Escuela Técnica Superior de Edificación and in particular, TEMA Research Group. The congress received very positive feedback. There were an incredible number of presentations and discussions put together into twelve sessions. More than 250 participants registered at the Congress and more than 170 papers were received from Europe, America, Oceania and Asia. More than 130 papers were finally accepted and presented, of which 65% were presented as oral presentations and the rest as posters.

One of the highlights of the congress was the Journal's awards ceremony, were "Materiales de Construcción" and "Informes de la Construcción" Journals presented an award for the best extended abstract submitted to the Congress and included under their scope. Another interesting highlight of the congress was the 1st International Workshop on Construction Recycled Materials held during the second day of the congress. The workshop provided an opportunity to discuss about emerging technologies in the field of waste recycling processes and construction recycled materials.

Several construction companies -- Arpada and Proiescon--, and the Spanish Ministry of Economy and Competitiveness sponsored and partially funded the Congress.

Finally, we would like to thank everyone for their participation in the Congress and hope to see you back in the forthcoming editions of the Congress.



Conferences

M. del Río Merino; J. Santa Cruz Astorqui; P. Villoria Sáez; C. Rodríguez Liñán; M.P. Mercader Moyano. "Waste to Resources". III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid

R. Santos Jiménez; M.M. Alonso; M. del Río Merino; F. Puertas. "Reuse of construction and demolition recycled aggregates for the preparation of alkali activated cement mortars. Characterization and mechanical behaviour." III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid

P. Saiz Martínez; M. González Cortina; F. Fernández Martínez. "Fraction of recycled aggregates from construction and demolition waste in masonry mortar fabrication". III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid

P. Villoria Sáez, M. del Río Merino, C. Porrás-Amores. "Plasterboard partitions: a way out to reduce construction waste on site". III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid

J. Santa Cruz Astorqui; M. del Río Merino; P. Villoria Sáez. "Re-design of plaster prefabricated elements". III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid

R. Felices Puertolas; C. Viñas Arrebola; J.C. Losada González. "General methodology applied to monitoring a building and assess its energy performance" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

S. Varela Luján, C. Viñas Arrebola, A. Rodríguez Sánchez. "Experimental design, monitoring and analysis of the thermal behavior of the external thermal insulation system (ETICS) in the retrofitting of a residential building" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

N. González Pericot, M. Del Río Merino, O. Liébana Carrasco and E. Martínez Sierra "Packaging impact reduction in product stage: Eco-redesign of cardboard boxes" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

C. Piña Ramirez, C. Viñas Arrebola and M. del Río Merino "Studying the behaviour of ceramic flooring as heat energy collector, in buildings constructed following bioclimatic criteria" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

A. Pedrosa González and M. del Río Merino "Experimental performance of synthetic waterproofing membranes in the inverted flat roof" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

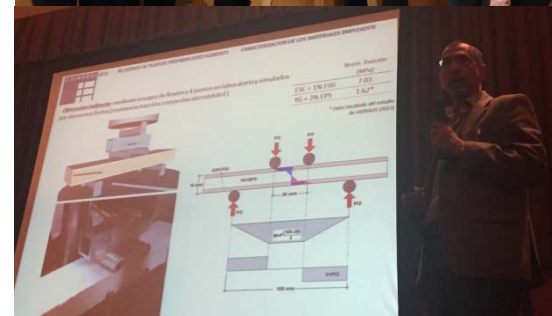
N. Rouyet Ruiz, M. Del Río Merino and C. Viñas Arrebola "Residential environment quality and its repercussion on human health. A preliminary approach" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

P. Yanes González and M. del Río Merino "Study of the acoustic resistance of traditional Canarian mortar with polystyrene additives" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

I. González Morán, M. V. Diamanti, M. P. Pedferri, F. F. Martínez and M. del Río Merino "Anodization of titanium for the building envelope using different cathodes and their photocatalytic behavior." III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

J.Francisco Alamillo, B. Arranz, S. Vega, M. Del Río "Influence of the position of the insulation within the construction in roofing retrofitting in Madrid" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.

D. Caballol, M. González and A. Rodríguez "Analysis measuring transmission loss in concrete samples with a standing wave tube" III International Congress on Construction and Building Research. 14-16 Dic 2015, Madrid.



News

Mercedes del Río is a member of the Editorial Board of the World Construction Journal. ISSN: 2251-3329

Jaime Santa Cruz, Carmen Viñas, Antonio Rodríguez, Mariano González, Paola Villoria and Mercedes del Río participated as members of the Scientific Committee at the III international Congress III COINVEDI. Madrid, Dec 2015.

Mercedes del Río was a member of the Honor Committee at the III international Congress III COINVEDI. Madrid, Dec 2015.

Mercedes del Río was an invited speaker at the Conference regarding the future of the Building Engineering Degrees organized by the CODATIE. (*Jornada sobre el futuro de los estudios de Arquitectura Técnica e Ingeniería de Edificación*) Barcelona, Dec 2015.

Antonio Rodríguez, Mariano González and Mercedes del Río were invited as Evaluation committee members of several PhD thesis at UPM, University of Seville, Valencia and Burgos, Nov-Dec 2015.

Mercedes del Río gave an invited guest lecture at the Master in diagnostic and interventional techniques in the heritage property (*Máster en técnicas de diagnóstico e intervención en bienes inmuebles del patrimonio histórico*) in Zamora. Oct 2015.

Paola Villoria was invited to participate in the Sustainability workshop organized by CGATE and CERMA, Sept 2015. <http://www.coatgr.es/noticias/oficio-533-cgate/>

Mercedes del Río was invited to give a lecture at the XIV General Assembly of Women Researchers and Technologists Association (*XIV Asamblea General de la Asociación de Mujeres Investigadoras y Tecnólogas*) "Women in technology and innovation. Women architects". Sept, 2015

Paola Villoria is part of the Editorial Board of the Journal of Sustainable Development of the Canadian Center of Science and Education, Aug 2015.



MORE INFORMATION

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