

RESEARCH TEAM

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Welcome to the 5th 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

P. Villoria and M. del Río "How to minimize CDW during the execution of the construction works" (Como minimizar la generación de residuos durante la ejecución de obra) CERCHA. Revista de la Arquitectura Técnica, vol. 127. Feb 2016

M.J. Leiva; M. del Río Merino; P. Villoria "Feasibility of plaster composites with rice husk waste" ZKG International. 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. DOI: 10.3989/ic.15.036

P. Saiz Martínez, M. González Cortina, F. Fernández Martínez, A. Rodríguez Sánchez. Comparative study of three types of fine recycled aggregates from construction and demolition waste (CDW), and their use in masonry mortar fabrication. Journal of Cleaner Production. Vol 118, pp 162–169. April 2016

P. Villoria Sáez; V. W. Y. Tam; M. del Río Merino; C. Viñas Arrebola and X. Wang. Effectiveness of Greenhouse-Gas Emission Trading Schemes Implementation: A Review on Legislations. Journal of Cleaner Production. Vol 127, pp 49–58. July 2016

Accepted Journals


R. Talero, C. Arámburo, M. González, M.I. Sánchez, A. Blázquez, M. Frías, C. Pedrajas. "Sulfate resistance in OPC and SRPC containing calcined paper sludge waste: ettringite or thaumasite formation" ASCE's Journal of Materials in Civil Engineering, In press


PATENTS


No. P 201630096 "Composición de yeso térmicamente aislante" (Composition of a thermally insulating gypsum n) S. Romaniega; M. del Río Merino.

J. Santa Cruz Astorqui and C. Porras Amores. Sistema de doble cámara con dispositivo de control de flujo para ventilación de fachadas. (Dual camera system with a flow control device for ventilated façades) Under evaluation.

Current Research Projects

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

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

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

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

2016-2017 "Dictamen pericial de cuantificación de mano de obra en las obras de construcción" (Manpower quantification assessment in construction). Private funding

2016 "Mejora en los modelos de gestión para garantizar la calidad del producto. Particiones, acabados e instalaciones" (Improved management models to ensure the product's quality. Partitions, finishes and building facilities). Private funding

IMPLEMENTING BIM METHODOLOGY AT THE SCHOOL OF BUILDING CONSTRUCTION IN MADRID

In July 2015 the Spanish Ministry of Public Works launched the es.BIM Commission in order to implement Building Information Modeling (BIM) in Spain. The commission was created not only to promote the implementation of BIM in the Spanish construction sector, but also to encourage its use throughout the life cycle of civil and building constructions and to establish the way construction technicians will be trained. In addition, the es.BIM Commission established a milestone for the year 2020 were all public facilities and infrastructure projects --for both new construction and rehabilitation--, must be presented with BIM. Despite the BIM initiative has been launched, Spain is taking a considerable delay in the adoption of this methodology.

For this reason, the School of Building Construction (ETSEM) of the Technical University of Madrid (UPM) has decided to go ahead and anticipate the possible solution of commitment towards BIM training at University level. For this reason, a project to be implemented over the next four academic years in the Building Construction Degree was designed in collaboration with the Technical University of Valencia (UPV).

The project was divided into several stages: a first stage comprising the dissemination of the project, a second stage focused on lecturers' training and a final stage focused on students' training. The students' training will be done, course by course, through several BIM Workshops associated t specific subjects. BIM was implemented in the first-year subject "Introduction to Construction". The results achieved during the first year of implementation show that students have a strong interest in BIM issues and are eager to advance their knowledge in BIM methodology. It is therefore important to involve lecturers from other subjects in order to provide more BIM workshops of specific contents. This will promote the formation of multidisciplinary workshops to enhance students' collaborative work using BIM methodology. Finally, it is necessary to conduct a review and update the existing School Teaching Plans in order to include BIM competencies in the skills of undergraduate Building Construction Degrees.



Conferences

M. del Río Merino; P. Villoria Sáez; R. Santos Jiménez. "Mind the gap of leadership: the gender mentoring program of the building engineering school". 10th annual International Technology, Education and Development Conference (INTED2016). 7-9 Mar 2016, Valencia. Doi: [10.21125/inted.2016.0040](https://doi.org/10.21125/inted.2016.0040)

P. Villoria Sáez; J. Santa Cruz Astorqui; M. del Río Merino. "Ecofriendly building materials towards a circular economy". International Conference on Technological Innovation in Building (CITE 2016). 9-11 Mar 2016, Madrid

M. del Río Merino; J. Santa Cruz Astorqui; P. Villoria Sáez; C. Rodríguez Liñan; M.P Mercader Moyano. "Valorización integral de los residuos generados en la rehabilitación energética de edificios: de residuos a recursos" International Conference on Technological Innovation in Building (CITE 2016). 9-11 Mar 2016, Madrid

P. Villoria Sáez; J. Santa Cruz Astorqui; M. del Río Merino. "Valorization of the waste generated in building energy-efficiency rehabilitation works". 4th International Conference on Sustainable Solid Waste Management, 23-25 Jun 2016, Limassol (Cyprus)

M.González Cortina; P. Sáiz Martínez; F. Fernández. 4th International Conference on Sustainable Solid Waste Management, 23-25 Jun 2016, Limassol (Cyprus)

PhD Disertations

Francisco González Yunta defended his PhD dissertation "El estuco a fuego: técnica tradicional y posibilidades de actualización" on 21st January 2016. Supervisors: M. González Cortina; F. Lasheras Merino.

Pablo Saiz Martínez defended his European PhD dissertation "Utilización de arenas procedentes de Residuos de Construcción y Demolición, RCD, en la fabricación de morteros de albañilería" ("The use of recycled aggregates from construction and demolition waste in the manufacture of masonry mortars") on 29th January 2016. Supervisors: M. González Cortina; F. Fernández

Sonia Romaniega Piñero defended her PhD dissertation "New Plaster Composite with Mineral Wool Fibres from CDW Recycling" on 27th June 2016. Supervisor: M. del Río Merino; C. Pérez García



OUTGOING & INCOMING VISITING students

To **Kasper Clausen** from Denmark and **Alessandra Vilardi** and **Valentina** from Italy, who have joined ETSEM during this period as full time students.

We will also like to welcome **Manuel Alejandro Pedreño Rojas** from Seville and **Venedeta María Martino** from Rome who will join TEMA in the next months.

W2R follow-up meeting @ the University of Burgos

TEMA research group attended the follow-up meeting of the working packages 2.2, 2.3 and 2.4 of Waste2Resources project, which took place on April 15 at the University of Burgos.



Upcoming Events



III International Congress on Sustainable Building and Eco-Efficient Solutions (CICSE) to be held in Seville on March 2017. Deadline full paper submission: September 11.

For more information please visit: <http://congreso.us.es/sostenible/>

News

Mercedes del Río was chosen "[Researcher of the month](#)" by AMIT Association, Jan 2016.

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

Paola Villoria was invited to give a conference at the International Congress of Technological Innovation in Building (CITE 2016)

Mercedes del Río participated as a member of the Scientific Committee at the International Congress of Technological Innovation in Building (CITE 2016)

Antonio Rodriguez and Carmen Viñas participated as Chairs of a roundtable discussion at the VI National Conference of Building Engineering Students. Organized by ASAT Association. Apr

Mercedes del Río and Paola Villoria participated in different roundtable discussions at the VI National Conference of Building Engineering Students. Organized by ASAT Association. Apr

Mariano González achieved a six-year research recognition (sexenio) from the National Committee for the Assessment of the Research Action (CNEAI). Jun

Mercedes del Río and Mariano González visited the University of Palermo UNIPA (Italy), Jun 2016.

Mercedes del Río visited the University of Nysa Wrocklaw (Poland), Jul 2016.

Antonio Rodríguez and Mercedes del Río participate as members of the Scientific Committee at the VII Encuentro latinoamericano de Gestión y Economía de la Construcción (VII Elagec) and II Seminario Internacional de Innovación en la Gestión de la Construcción (II SeIN²Co) to be held in Nov 2016.

Paola Villoria participates as a member of the Scientific Committee at the National Congress CONAMA 2016 to be held in Nov 2016 in Madrid.

MORE INFORMATION

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