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LiTA - Architectural Innovation and Technology Laboratory

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Publications and theses

Article in a journal

Habibi, S.; Pons-Valladares, O.; Peña Villamil, D.M.. **Sustainability performance by ten representative intelligent Façade technologies: A systematic review.** *Sustainable Energy Technologies and Assessments*. 2022. Volume: : 52. URL: <https://www.sciencedirect.com/science/article/pii/S2213138822000534>. DOI: <https://doi.org/10.1016/j.seta.2022.102001>. CiteScore. IF: 5.9.

Refalian, G.; Coloma, E.; Moya, J.. **Formal grammar methodology for digital visualization of Islamic geometric patterns.** *INTERNATIONAL JOURNAL OF ARCHITECTURAL COMPUTING*. 2022. URL: <https://journals.sagepub.com/doi/10.1177/14780771211039079>. DOI: <https://doi.org/10.1177/14780771211039079>. ESCI - Emerging Sources Citations Index of Web of Science.

Sindy Suárez S.; Roca, X.; Calderon, L.. **A comparative Life Cycle Assessment between recycled aggregate and natural aggregate.** *Revista EIA*. 2022. Volume: : 19. Number: 38. URL: <https://revistas.eia.edu.co/index.php/reveia/article/view/1515>. DOI: <https://doi.org/10.24050/reia.v19i38.1515>.

Velázquez, J.; Coloma, E.; Amin, S.. **Environmental performance assessment: a comparison and improvement of three existing social housing projects.** *Cleaner Environmental Systems*. 2022. Volume: : 5. Number: 100077. Pages: 1~1. URL: <https://www.sciencedirect.com/science/article/pii/S2666789422000083>. DOI: <https://doi.org/10.1016/j.cesys.2022.100077>. ESCI - Emerging Sources Citations Index of Web of Science.

Publication in conference proceedings

Editing of a conference proceedings book

Book

Book chapter

Editing of an exhibition catalogue

Authorship of an exhibition catalogue chapter

Other scientific and technical documents

Manual, lecture notes

Other written output

Projects and industrial and intellectual property rights

Participation in a competitive R&D project

Scientific coordinator: de la Fuente, A. Participants: Galeote, E.; Totic, N.; Sanabra, M.. **Optimización topológica para una metodología de construcción de bajo impacto ambiental.** 03/10/2022-02/10/2025. Duration: 03.00.00. Funding: 122785.5€. Scope: National. Entity where it is developed: ENGINYERIA CIVIL I AMBIENTAL. Funding entities: AGENCIA ESTATAL DE INVESTIGACION;

Scientific coordinator: de la Fuente, A. Participants: Totic, N.; Etxeberria, M.; Segura, I.; Leporace, B.; Sadrolodabae, P.; Sanabra, M.. **Recycled aggregates for 3D printed concrete structures.** 01/05/2022-30/04/2025. Duration: 03.00.00. Funding: 187534.94€. Scope: National. Entity where it is developed: ENGINYERIA CIVIL I AMBIENTAL. Funding entities: AGENCIA ESTATAL DE INVESTIGACION;

Scientific coordinator: Muñoz, C. Participants: Albareda-Valls, A.; Garcia Carrera, D.; Sanabra, M.; Oliver-Saiz, E.; Calderon, L.. **Disseny i Càlcul d'Estructures Arquitectòniques.** 01/01/2022-31/12/2024. Duration: 03.00.00. Funding: 7000.0€. Scope: Regional. Entity where it is developed: Universitat Politècnica de Catalunya. Funding entities: Universitat Politècnica de Catalunya;

Scientific coordinator: Pons-Valladares, O. Participants: Muñoz, C.; Bosch, M.; Muros-Alcojor, A.; Crespo, E.; Masseck, T.; Paris, O.; Fortea, I.; Sanchez Riera, A.; Nikolic, J.; Calderon, L.; Ledesma, M.; Habibi, S.; Bagheri Moghaddam, F.. **Waste-based Intelligent Solar-control-devices for Envelope Refurbishment.** 01/12/2022-30/11/2024. Duration: 02.00.00. Scope: National. Entity where it is developed: Universitat Politècnica de Catalunya. Funding entities: MCINN; <https://sites.google.com/upc.edu/wiser>

Scientific coordinator: Pons-Valladares, O. Participants: Muros-Alcojor, A.; Bosch, M.; Masseck, T.; Crespo, E.; Muñoz, C.; Calderon, L.; Nikolic, J.; Sanchez Riera, A.; Paris, O.; Bagheri Moghaddam, F.; Ledesma, M.; Habibi, S.. **Dispositivos inteligentes de control solar para la rehabilitación de envoltentes a partir de residuos.** 01/12/2022-30/11/2024. Duration: 02.00.00. Funding: 152030.0€. Scope: National. Entity where it is developed: TECNOLOGIA DE L'ARQUITECTURA. Funding entities: AGENCIA ESTATAL DE INVESTIGACION;

Scientific coordinator: Zamora, J.LI. **'Amb bon peu'- Premi Mutuam.** 22/09/2022-31/12/2023. Duration: 01.03.10. Funding: 6000.0€. Scope: Regional. Entity where it is developed: TECNOLOGIA DE L'ARQUITECTURA. Funding entities: FUNDACIO PRIVADA MUTUAM CONVIURE;

Participation in a non-competitive R&D project

Scientific coordinator: Linares, O. Participants: Albareda-Valls, A.; Crespo, E.; de las Casas, I.. **FAÇANES ACTIVES EN FUSTA [A-WECO] / LLAVOR-UPC 22.** 01/12/2022-Funding: 12500.0€. Scope: National. Entity where it is developed: Universitat Politècnica de Catalunya. Funding entities: Universitat Politècnica de Catalunya;

Participation in a teaching innovation project

Ownership of industrial and intellectual property rights

Software

Theses and academic work

Doctoral theses

Master theses

Author: **Corona Ruiz, Blanca Estela**. **Prototipo metodológico para la mejora del espacio público en proyectos de regeneración urbana, programa del IMU (Instituto Municipal Urbano). Casos de estudio: el Besòs i el Maresme y Trinitat Vella.** 12/05/2022. Excellent. Supervisors: M. Y. Mayorga Cárdenas; Coloma, E.. Universitat Politècnica de Catalunya.

Author: **De La cruz castro, Carlos**. **La rehabilitación de viviendas con materiales sostenibles, Gestión de la Transición en República Dominicana.** 16/02/2022. A with honours. Supervisors: Villares, M.; Garrido, P.. Universitat Politècnica de Catalunya.

Author: **De La cruz castro, Carlos**. **La rehabilitación de viviendas con materiales sostenibles, Gestión de la Transición en República Dominicana.** 16/02/2022. A with honours. Supervisors: Villares, M.; Garrido, P.. Universitat Politècnica de Catalunya.

Minor theses, bachelor theses

Author: **Gràcia I vallès, Oriol**. **EROSIÓ QUOTIDIANA D'UNA ESQUERDA METROPOLITANA: Suavitant i articulant transicions a Nou Barris amb la transformació del triangle Aiguablava-Favència-Fenals cap a una nova centralitat cívica.** 25/05/2022. Very Good. Supervisors: Costales, I.; Sauquet, R.. Universitat Politècnica de Catalunya.

Author: **Egiluz Moreno, Eneritz**. **REHABI(LI)TAR, Proyecto piloto de transformación del parque edificado en el barrio de la Prosperitat. Aproximación a una manzana accesible, habitable y sostenible.** 02/02/2022. Excellent. Supervisors: Costales, I.; Sauquet, R.. Universitat Politècnica de Catalunya.

Author: **Valcárcel Quezada, Bertha Iraís**. **REANIMACIÓN URBANA (RCPU): Masterplan para devolver Barcelona a sus habitantes y renaturalizada, extendiendo el verde del Parque Natural de la Sierra de Collserola a su interior** . 25/05/2022. Very Good. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Author: **Maristany Brendle, Inés**. **Rehabilitación energética de la masía catalana en Empordà**. 13/09/2022. Pass. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Biosca Escartín, Mireia. L'ESTÀNDARD ENERPHIT: Viabilitat dels valors Passivhaus en una rehabilitació.** 07/07/2022. Very Good. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **García Palacios, Juan. Análisis de impacto ambiental del hormigón estructural fabricado con árido reciclado.** 07/07/2022. Very Good. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **López Arnau, Carla. Arquitectura sostenible i humana. Arquitectura regenerativa..** 13/09/2022. Excellent. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Gardeñes Luque, Núria. De Net Zero Energy Buildings (nZEB) a Net Zero Impact Buildings (nZIB): Camí cap a una arquitectura d'impacte nul o gairebé nul per al planeta i l'usuari que l'habita.** 13/09/2022. Pass. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Herrera Morales, Gloria Sthefany. NEURO-ARQUITECTURA. El modelo residencial para la tercera edad del futuro.** 08/07/2022. Very Good. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Anglada Tort, Mei. PASSIVHAUS I CTE. Estudi comparatiu d'un habitatge Passivhaus i un habitatge CTE.** 07/07/2022. Pass. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Bennassar Oliver, Jorge. Claroscuros. ¿Cómo afectan los espacios de vivienda a nuestros ritmos circadianos?.** 07/07/2022. Pass. Supervisors: Señis, R.. Universitat Politècnica de Catalunya.

Author: **Pol Moreno, Artús. LES FAÇANES DE L'EIXAMPLE DE BARCELONA A TRAVÉS DELS ANYS: Un estudi de les transformacions en els edificis construïts entre el 1850 i el 1950.** 21/06/2022. Pass. Supervisors: Garrido, P.. Universitat Politècnica de Catalunya.

Author: **Pérez I coma, Mònica. REANIMACIÓN URBANA (RCPU): Masterplan para devolver Barcelona a sus habitantes y renaturalizada, extendiendo el verde del Parque Natural de la Sierra de Collserola a su interior.** 25/05/2022. Very Good. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Author: **Gasa Barbal, Pau. EROSIÓ QUOTIDIANA D'UNA ESQUERDA METROPOLITANA: Suavitzant i articulant transicions a Nou Barris amb la transformació del triangle Aiguablava-Favència-Fenals cap a una nova centralitat cívica..** 25/05/2022. Very Good. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Author: **Comas Sala, Albert. 2027,5 m3. Transformació de la central Telefònica de La Prosperitat en un edifici híbrid de titularitat pública.** 02/02/2022. A with honours. Supervisors: Costales, I.; Sauquet, R.. Universitat Politècnica de Catalunya.

Author: **Debón Villagrasa, Miquel. CULTURA LATENTE. Reactivación de la planta baja de Verdún.** 02/02/2022. Very Good. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Author: **Martín I sepúlveda, Laura. 2027,5 m3. Transformació de la central Telefònica de La Prosperitat en un edifici híbrid de titularitat pública.** 02/02/2022. A with honours. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Author: Jane Font, Anna. REHABI(LI)TAR. Proyecto piloto de transformación del parque edificado en el barrio de la Prosperitat. Aproximación a una manzana accesible, habitable y sostenible.. 02/02/2022. Excellent. Supervisors: Sauquet, R.; Costales, I.. Universitat Politècnica de Catalunya.

Conferences, courses and other events

Work presented at a conference

Teaching of a course or seminar

Giving of a lecture

Collaboration in an exhibition

Membership of a conference organising committee

Organization of a course or seminar

Organization of an edition of an award

Membership of a scientific committee of a conference

Committees and societies

Membership of an advisory or assessment committee

Membership of an award panel or jury

Membership of a competition panel or jury

Membership of a scientific society

N, Torres Member. SMiA. Structural Morphology in Architecture. <http://smia-experimental.com/>. 01/01/2012 - 31/12/2022.

Contributions to publications and theses

Contribution to a journal

Contribution to a book

Contribution in the media

Personal distinctions

Award or distinction

Publication on one's own work

Architecture competition

Financial aid obtained, grant obtained

Stays and other activities

Stay in an R&D centre

R&D management

Other activities

Unit activities

Organization of events

Stay at the UPC of external staff

Other activities

Summary table

Publications and theses	
Article in a indexed journal	3
CiteScore	1
ESCI - Emerging Sources Citations Index of Web of Science	2
Article in a not indexed journal	1
Publication in conference proceedings	0
Editing of a conference proceedings book	0
Book	0
Book chapter	0
Editing of an exhibition catalogue	0
Authorship of an exhibition catalogue chapter	0
Other scientific and technical documents	0
Manual, lecture notes	0
Other written output	0
Projects and industrial and intellectual property rights	
Participation in a competitive R&D project	6
Participation in a non-competitive R&D project	1
Participation in a teaching innovation project	0
Ownership of industrial and intellectual property rights	0
Software	0
Theses and academic work	
Doctoral theses	0
Master theses	3
Minor theses, bachelor theses	18
Conferences, courses and other events	
Work presented at a conference	0
Teaching of a course or seminar	0
Giving of a lecture	0
Collaboration in an exhibition	0
Membership of a conference organising committee	0
Organization of a course or seminar	0
Organization of an edition of an award	0
Membership of a scientific committee of a conference	0
Committees and societies	
Membership of an advisory or assessment committee	0
Membership of an award panel or jury	0
Membership of a competition panel or jury	0
Membership of a scientific society	1
Contributions to publications and theses	
Contribution to a journal	0
Contribution to a book	0
Contribution in the media	0

Personal distinctions	
Award or distinction	0
Publication on one's own work	0
Architecture competition	0
Financial aid obtained	0
Grant obtained	0
Stays and other activities	
Stay in an R&D centre	0
R&D management	0
Other activities	0
Unit activities	
Organization of events	0
Stay at the UPC of external staff	0
Other activities	0