

June 20, WEDNESDAY

| 8:00 - 9:00 | Registration | | | Language |
|---------------|---|--|--|----------|
| 9:00 - 9:10 | Opening and Welcome of the Congress: Iñaki San Sebastian - CEO of Tecnalia / Pablo García Astrain - Director of Housing and Architecture of the Basque Government | | | |
| | ROOM 1+2 | ROOM 1+2 | ROOM 1+2 | Language |
| 9:10 - 9:30 | Facades: past, present and future use of aluminium - marking 50 years of FAECF - Justin Furness (FAECF) | | | English |
| 9:30 - 10:00 | Shaping the Built Environment of Tomorrow. How and Who - Norbert Praille (ED. Züblin AG) | | | English |
| 10:00 - 10:30 | WASL Tower, computational solutions for a complex façade - Ger Gijzen (UNStudio) | | | English |
| 10:30 - 11:00 | The envelope, a decisive element in a sustainable building certification - Patrick NOSSENT (CERTIVEA-CERWAY) | | | English |
| 11:00 - 11:30 | COFFEE BREAK, B2B MEETINGS | | | |
| | ROOM 3 / ICT + FACADES | ROOM 4+5 / THERMAL IN BUILDING CONSTRUCTION | ROOM 1 / ROBOTICS AND CONSTRUCTION | Language |
| 11:30 - 11:45 | Towards a digital workflow for special façade constructions Juan Sebastián Sepúlveda - (SCHÜCO International KG) | An analysis of the potential for envelope-integrated solar heating and cooling technologies for reducing energy consumption in European climates - Peru Elguezabal, Beñat Arregi - (TECNALIA) | Use of robots for facades installation - Hephaestus Project Julen Astudillo - (TECNALIA) | English |
| 11:45 - 12:00 | BIM based software tools for the design and simulation of building-integrated photovoltaic systems Philippe Alamy ¹ , Van Khai Nguyen ¹ , Maider Machado ² , Ingrid Weiss ³ - (CADCAMation SA - ¹ TECNALIA - ² WIP Renewable Energies) | Building guidelines to provide as-designed solutions for energy-efficient envelopes Benedetta Marradi ¹ , Emanuele Piaia ² , Rizal Sebastian ³ , Eva Kassotaki ³ - (¹ University of Pisa and AICE Consulting, ² University of Ferrara, ³ DEMO Consultants) | Cable-Driven Parallel Robots: Principle and Applications of an Advanced Crane System - JeanBaptiste Izard ¹ , Marc Goutteferde ² , Hussein Hussein ³ , Christoph Martin ³ , Werner Kraus ³ , Andreas Pott ³ , and Mariola Rodriguez ⁴ - (¹ TECNALIA France - ² Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier - ³ Fraunhofer Institute for Manufacturing Engineering and Automation IPA - ⁴ TECNALIA) | English |
| 12:00 - 12:15 | BIM from concept design to fabrication: An optimized methodology for façade consultations Ana Gallego Fernández, Miguel A. Núñez Díaz, A. Mateo Marcos Núñez - (ENAR, Architectural Envelopes) | Concept for adaptive wall elements with switchable U- and g-value Nikolaus Nestle ¹ , Thibault Pflug ² , Christoph Maurer ² , Frank Prissok ³ , Andreas Hafner ⁴ , Frank Schneider ⁵ - (1BASF SE Advanced Materials and Systems Research - 2Fraunhofer ISE - 3BASF Polyurethanes GmbH - 4BASF Schweiz AG - 5Okalux GmbH) | Development of a Modular End Effector for the installation of Curtain Walls with cablerobots Meysam Taghavi ¹ , Homero Heredia ² , Kepa Iturralde ¹ , Håvard Halvorsen ² , and Thomas Bock ¹ - (¹ Chair of Building Realization and Robotics, Technical University of Munich - ² Link AS) | English |
| 12:15 - 12:30 | Dynamic Façade Albert López Crespo - (SOMFY) | Unglazed Solar Thermal Systems for building integration, coupled with District Heating Systems. Conceptual Definition, Cost & Performance Assessment - Mikel Lumbereras ¹ , Roberto Garay ² , Koldobika Martín ¹ - (¹ University of the Basque Country - ² TECNALIA) | Construction Robotics – The potential for automation in lightweight metal construction - Prof. Markus Kuhnhenne ¹ , Dominik Pyschny ¹ , Prof. Sigrid Brell-Cokcan ² , Daniel Haarhoff ³ - (¹ Faculty of Civil Engineering, ² Faculty of Architecture - RWTH Aachen University) | English |
| 12:30 - 12:45 | An ICT energy management system for the management of innovative ventilated envelopes José L. Hernández, Roberto Sanz, Álvaro Corredera, Susana Gutiérrez, Ricardo Palomar, Isabel Lacave (CARTIF technology centre) | Transpired solar air heating & cooling collector Alfonso Perez Carballo, Almudena Galiana ¹ y J. Emilio Vega ² , Isabel Lacabe ³ (¹ SolarWall Spain, ² Acciona Construcción) | NEW MATERIALS FOR THE ENVELOPE (BIOCOMPOSITES) New Biocomposites for Innovative Construction Facades and Interior Partitions - Julen Astudillo ¹ , Miriam Garcia ² , Javier Sacristán ³ , Nayra Uranga ⁴ , Marckku Leivo ⁵ , Michaela Mueller ⁶ , Inma Roig ⁷ , Sarka Langer ⁸ , Gianluca Gemignani ⁹ , Marckku Vilkkii ¹⁰ , Ger Gijzen ¹¹ , Susana Silva ¹² , M.A. Nuñez ¹³ , Michal D bek ¹⁴ , Marius Sprenger ¹⁵ - (¹ TECNALIA, ² IK4-Lortek, ³ Acciona Construcción, ⁴ VTT, ⁵ Fraunhofer/FHR, ⁶ Aimplas, ⁷ IVL, ⁸ Collanti Concorde, ⁹ Conenor Oy, ¹⁰ UNStudio, ¹¹ Amorim, ¹² ENAR, ¹³ Bergamo Technologie, ¹⁴ SICC GmbH) | English |
| 12:45 - 13:00 | IOT and Data Analytics: Saving potential for Building Envelopes and Occupancy based office building management Ivan Araquistain, Unai Saralegui, Miguel Angel Antón, Amaia Castelruiz, Jose Manuel Olaizola - (TECNALIA) | Low Temperature Solar Thermal System for Building Envelope Integration Marina Palacios ¹ , Roberto Garay ² , Ignacio Gomis ³ , Paul Bonnamy ⁴ , Saed Raji ⁵ , Koldobika Martín ¹ - (¹ Euskal Herriko Unibertsitatea - ² TECNALIA - ³ Nobatek-Inef)) | Architectural advantages/disadvantages of using biocomposites in construction Ger Gijzen - UNStudio | English |
| 13:00 - 13:15 | ADDITIVE MANUFACTURING AND 3D MODELS | ARCHITECTURAL BUILDING GLASS | Influence of material on curtain wall design | Language |
| 13:15 - 13:30 | Les Pavillons des Boulingrins, example of parametric ephemeral architecture. 3d cladding modelling with re-usable criteria C.Valderrama, M.Plociekiewicz, J.Ocampo, F.Cottaz - (Acieroid S.A.) | Structural Glass Connections Carles Teixidor, Jordi Torres, Francesc Arbós - (Bellpart S.A.U.) | Miguel A. Núñez Díaz - (ENAR, Architectural Envelopes) | English |
| 13:15 - 13:30 | SPONG3D: Developing an integrated 3D-printed façade for thermal regulation in complex geometries - Maria-Valentini Sarakinioti ¹ , Thaleia Konstantinou ¹ , Michela Turrin ² , Martin Tenpierik ³ , Roel Looenen ⁴ , Marie L. de Klijin-Chevalerias ⁵ , Ulrich Knaack ¹ - (¹ Delft University of Technology - ² Eindhoven University of Technology) | High-quality edge enameling for architectural glass Ralf Greiner - (Guardian Glass Europe) | | English |
| 13:30-15:00 | LUNCH, B2B MEETINGS | | | |
| | NEW DEVELOPMENTS | CALCULATION - SIMULATIONS | NEW SOLUTIONS RELATED TO REHABILITATION | Language |
| 15:00 - 15:15 | EZVENT: an energy efficient ventilated façade retrofitting system. Presentation of the embedded energy storage system A. Dugué ¹ , A. Navarro ¹ , S. Raji ² , P. Bonnamy ³ , D. Bruneau ⁴ (¹ Nobatek/INEFA - ² EnsapBx, GRECAU) | Simulation-based performance prediction of an energy-harvesting façade system with selective daylight transmission Hemshikha Saini, Roel C.G.M. Looenen, Jan L.M. Hensen (Eindhoven University of Technology) | Breakthrough adaptable envelopes: a solution to accelerate the refurbishment of the existing building stock? - D. Hernandez Maldonado ¹ , K. Laffont-Eloire ¹ , I. Lacave ² , I. Apraiz Egaña ³ , and R. Garay Martinez ⁴ (¹ TECHNOFI - ² ACCIONA Construcción S.A. - ³ TECNALIA) | English |
| 15:15 - 15:30 | Innovative curtain wall with solar preheating of ventilation air and integrated control system - Diego González ¹ , Beñat Arregi ² , Roberto Garay ² , Izaskun Álvarez ² , Gorka Sagarduy ¹ - (¹ UXAMA Fachadas Singulares - ² TECNALIA) | Characterisation of the thermal performance of the roof ridge Sunridge® solar hot water system - E. Fuentes, J. Salom - (Catalonia Institute for Energy Research (IREC)) | Assessment method for developments in building envelope renovation with prefabricated modules - Kepa Iturralde ¹ , Nagore Tellado ² , Thomas Bock ¹ , Ignacio Gomis ³ - (¹ Chair for Building Realization and Robotics, Technical University of Munich - ² TECNALIA) | English |
| 15:30 - 15:45 | On the development of a façade-integrated solar water storage D'Antoni M., Bonato P. and Fedrizzi R. - (Eurac Research) | Façade impulse: experimental methods for stretching the envelope beyond human comfort - A. Luna-Navarro ¹ , M. Meizoso ² , H. De Bleecker ³ , Y. Verhoeven ⁴ , M. Donato ⁵ , M. Overend ⁶ - (¹ University of Cambridge - ² Ove Arup, London - ³ Pernasteeleisa group) | A multifunctional façade system for multifamily houses Roberto Fedrizzi - (EURAC Research) | English |
| 15:45 - 16:00 | BRESAER. Breakthrough Solutions for Adaptable Envelopes in Building Refurbishment Imanol Aguirre ¹ , Asier Azpiazu ¹ , Isabel Lacave ² , Izaskun Álvarez ² , Roberto Garay ³ - (¹ Department of Innovation, LKS - ² Acciona Infraestructuras - ³ TECNALIA) | OPTIMUS, physics simulations for optimal design Quim Moya Sala - (APOGEA) | Renovation of residential buildings: strengths and weaknesses of a research approach based on prefabrication and real case-studies - F. Babicha ¹ , R. Pinottia ² , R. Perneti ¹ , R. Lollini ¹ - (1EURAC Research, Institute for Renewable Energy, Bolzano - 2Free University of Bozen-Bolzano) | English |
| 16:00 - 16:15 | An optimized system that combines industrialized waterproof roofing with high thermal performance insulation in one prefabricated solution - Valérie Huet ¹ , Guillermo Sebastian ² , Didier Bridoux ³ - (¹ Advanced Coatings & Construction Solutions – CRM GROUP, ² ArcelorMittal Construcción España Distribution Solutions Iberia, ³ ArcelorMittal Global Research & Development) | Hybrid numerical and experimental performance assessment of structural thermal bridge Roberto Garay Martinez - (TECNALIA) | Barriers to overcome for an increase of the innovation in the renovation sector. Elements of feedbacks from the EZVENT project A. Dugué, G. Adell - (Nobatek/INEFA) | |
| 16:15 - 16:45 | COFFEE BREAK, B2B MEETINGS | | | |
| 16:45 - 17:00 | Smart modular heat recovery unit (smhru) installed in the cavity of a ventilated façade Alberdi Lizaso, H. Urrea Mardaras, I. Martínez Urrutia, A. - (TECNALIA) | TOOLS | NEW MATERIALS | |
| | | Façade taxonomy: A shared tool for new façade developments Cristina Pardal, Oriol Roig, Ignacio Paricio - (Polytechnic University of Catalonia) | Exploring the potential of Smart and Multifunctional Materials in Adaptive Opaque Façade Systems Miren Juaristi, Aurora Monge-Barrio, Ana Sánchez-Ostiz, Tomás Gómez-Acebo - (University of Navarra) | English |
| 17:00 - 17:15 | Design, fabrication and demonstration of a multifunctional module for sustainable façade lighting based on ETFE architecture - A. Menéndez ¹ , A.L. Martínez ² , A. Santos ³ , B. Ruiz ⁴ , K. Moritz ⁵ , I. Klein ⁶ , J. Diaz ⁷ , A.R. Lagunas ⁸ , T. Sauermann ⁹ , J.R. De Las Cuevas ⁸ , D. Gómez ⁸ - (ITMA Materials Technology - ¹ Taiyo Europe GmbH - ² Fundación CENER-CIEMAT - ³ OPVIUS GmbH - ⁴ ACCIONA INFRAESTRUCTURAS) | Refurbishment of light facades: Jacobo P-Campomanes Guilbert, Jesús M. Cerezo Miguel, A. Mateo Marcos Núñez - (ENAR, Architectural Envelopes) | Performances of innovative variable diffusivity membranes integrated within prefabricated timber facades: computer-based modelling and experimental analysis Riccardo Pinotti ¹ , Stefano Avesani ² , Francesco Babich ³ , Andrea Gasparella ⁴ , Alice Speranza ⁵ - (¹ Free University of Bozen - ² Institute for Renewable Energy, EURAC - ³ Rothoblaas srl) | English |
| 17:15 - 17:30 | ACOUSTICS | Façade Leasing: Drivers and barriers to the delivery of integrated facades-as-a-service: Azcarate-Aguerre, J.F. (B.Arch.Ir.) [*] , Klein, T. (Prof.Dr.-Ing), Den Heijer, A.C. (Prof.Dr.Ir.), Vrijhoef, R. (Dr.Ir.), Ploeger, H.D. (Prof.Dr.), Prins, M. (Dr.Ir.) - (Delft University of Technology, Faculty of Architecture and the Built Environment) | | English |
| 17:30 - 17:45 | Problems in the acoustic design of the Wanda Metropolitano Stadium envelopes - Sánchez Ayuso, J; García Ruiz, J. - (GREENBACK) | Integrated Building Energy Management System for devices into ventilated facades Francisco J. Miguel and Roberto Sanz - (Fundación CARTIF) | | English |

NB: Conference sessions will be held in English or Spanish with simultaneous interpretation into Spanish or English.

June 21, THURSDAY

| ROOM 1+2 | | | | Language |
|---------------|--|--|---|--|
| 9:00 - 9:30 | Torre Europa, A Tower renovation or an Urban intervention? - Jorge Beroiz - Callison RTKL - (Conference sponsored by ACERINOX) | | | English |
| 9:30 - 10:00 | Small scale architecture with large format - Jesús Cerezo - (ENAR, Architectural Envelopes) | | | Spanish |
| 10:00 - 10:30 | The Digital Mentality: Beyond Fashion Technology - Javier Zamora - (Conference sponsored by SCHÜCO) | | | Spanish |
| 10:30 - 11:00 | Castellana Project 77 - Carlos González - (Luis Vidal + Arquitectos) (Conference sponsored by GUARDIAN GLASS) | | | Spanish |
| 11:00 - 11:30 | COFFEE BREAK, B2B MEETINGS | | | |
| 11:30 - 12:00 | Parc Glòries building (Barcelona) - Albert Gil (BATLLE I ROIG Arquitectes) (Conference sponsored by RIVENTI) | | | English |
| 12:00 - 12:30 | The Louvre Abu Dhabi – From Vision to Reality - Anna Wendt - (BuroHappold Engineering Façade Engineering) | | | English |
| 12:30 - 13:00 | Transparency and Glass Connections - Lisa Rammig - (Eckersley O'Callaghan) | | | English |
| 13:00 - 13:30 | The digital age in Façade Technology - Erik Rasker - (Conference sponsored by REYNAERS) | | | English |
| 13:30 - 14:00 | "Two Singular Projects: the Journey from Design to Execution" - Alberto Barba - (Laing O'Rourke) | | | English |
| 14:00 - 15:30 | LUNCH, B2B MEETINGS | | | |
| 15:30 - 18:30 | ROOM 2 - WORKSHOP 1 FIRE IN THE WORLD OF THE VENTILATED FACADES (Workshop sponsored by ALUICOIL) | ROOM 3 - WORKSHOP 2 FAÇADE RESTORATION, AN ALTERNATIVE MARKET (Workshop sponsored by GRUPO ALUMAN) | ROOM 4 - WORKSHOP 3 CONCRETE IN FACADES. NEW FEATURES FOR INNOVATIVE DESIGNS (Workshop sponsored by HEIDELBERGCEMENT HISPANIA) | ROOM 5 - WORKSHOP 4 - INDUSTRY 4.0 AND THE ENVELOPE (Workshop sponsored by SCHÜCO) |
| | CONFERENCES Different standards and full-scale fire spread tests around the world Pablo Garmendia (TECNALIA) The importance of isolation products in fire spread Mercedes Sánchez - (ROCKWOOL) The influence of different panel products in fire spread Zigor Marroquin - (ALUICOIL) Spanish reaction to Grenfell tragedy. Standards review Speaker under definition Specialist point of view of what's happening now and what will happen in future in ventilated façades due to Grenfell changes worldwide Nick Jenkins - (BOOTH MUIRIE) DISCUSSION | CONFERENCES Introduction and presentation of participants Xavier Ferrés (Ferrés architects and consultants) (10 min.) Short-presentations for contact and positioning (50 min.) - Ángel Cid. Architect. (2C Architects.) - Pablo Garrido (specialist in new Construction and refurbishment of large-format buildings - Universitat Politècnica de Catalunya) - Asset manager - To be determined - David Troca Garcia. Business development in the rehabilitation of architectural envelopes (Aluman Group) - Architect specialized in architectural heritage - Speaker under definition BREAK (20 min.) DISCUSSION (90 min.) CONCLUSIONS Xavier Ferrés (Ferrés architects and consultants) (10 min.) | CONFERENCES The void as a space that generates architecture Carlos Ferrater - (OAB) The unbearable lightness of the light facades Mario Sangalli (Estudio Peña Ganchequi) More sustainable enclosures with lightened architectural concrete Luis Ruano (PREHORQUISA) Prefabricated and industrialized concrete solutions for architectural envelopes: current state and projection Alejandro López (ANDECE) ROUND TABLE DISCUSSION AND DEBATE Participants: Manuel Aires Mateus, Carlos Ferrater, Luis Ruano, Mario Sangalli and Alejandro López Moderators: José Manuel Pozo and Daniel Rincón de la Vega FINAL CONFERENCE Projects: Manuel Aires Mateus (Aires Mateus e Associados) | CONFERENCES Introduction and presentation of the participants Digital transformation in everything. Digital mentality in the industry Prof. Javier Zamora (Senior Lecturer IESE) The construction industry 4.0. Traditional construction vs Construction 4.0. Reality and future A. Mateo Marcos Núñez (ENAR Architectural Envelopes) Façade 4.0. The new life cycle of facades. Dr. Daniel Artzmann (Detmold University, Germany) and Juan Sebastián Sepúlveda (SCHÜCO International KG) DISCUSSION AND CONCLUSIONS |
| Language | English-Spanish | Spanish | English-Spanish | English-Spanish |
| 20:00 | CONFERENCE DINNER (REAL CLUB TENIS) | | | |

June 22, FRIDAY

| ROOM 1+2 | | | | Language |
|---------------|--|--|--|----------|
| 9:00 - 9:30 | Double Skin Glass Box - Banco Popular HQ Auditorium Case Study - Pedro Rodrigues - (Martifer Metallic Constructions) | | | English |
| 9:30 - 10:00 | COST Action "Adaptive Facades Network" - Andreas Luible - HSLU& TA | | | English |
| 10:00 - 10:30 | South Terminal of Tocumen Airport - Swinging facades in Panama - Paulo Alexandre - (GRUPO ALUMAN) | | | English |
| 10:30 - 11:00 | Prado at a Glance - Yamen Badr - (BENYO) - (Conference sponsored by LANIK) | | | English |
| 11:00 - 11:30 | COFFEE BREAK, B2B MEETINGS | | | |
| 11:30 - 12:00 | Adaptability and flexibility of light skins - Pablo Garrido - (Universitat Politècnica de Catalunya) | | | Spanish |
| 12:00 - 12:30 | Facades for extreme architecture - Xavier Ferrés - (Ferrés arquitectos y consultores) | | | Spanish |
| 12:30 - 13:00 | Greenspire building - Julián Franco (Conference sponsored by EQUITONE) | | | Spanish |
| 13:00 - 13:30 | Glass Design: Are We Sure? - Adrián Roiz ¹ , Miguel Ángel Núñez ² - Spanish structural glass standardisation group (Eurocode) (1ARUP, ² ENAR, Architectural Envelopes) | | | Spanish |
| 13:30 - 13:50 | System Integration in unitized curtain Wall - Andrés Campos - (ACV Ingeniería de Fachadas) | | | Spanish |
| 13:50 - 14:00 | Closing remarks | | | |
| 14:00 - 15:30 | LUNCH - END OF CONGRESS | | | |

REGISTRATION OFFICE
CONTACT DETAILS

Email: icae@tecnalia.com

T. +34 647 402 258
T. +34 667 115 975
T. +34 664 109 217

#icae2018

ORGANIZED BY

tecnalia Inspiring Business

www.tecnalia.com