We know the difficulties that the centers and universities that have organized previous INGEGRAF Congress have had, but now we have, like them, the satisfaction of having been here working to improve day-to-day the training of future European engineers and have shared our educational experiences.

We have enjoyed three days for discussions, exchange of ideas, knowledge of best practices that are being made in other centers and thus have the moral support that comes from knowing you’re not alone.

I would like to thank you on behalf of all those who have contributed with their work so that this joint international conference INGEGRAF - ADM - AIP-PRIMECA has been undertaken.

For all of us it is important that you inform us in XXIII@congresoingeograf.es your assessment and improvements that can be introduced in the organization and development of the next conference to contribute to all to continue and enhance INGEGRAF Congress and new joint conferences, to showcase the strength of the engineering in the framework of the European Higher Education Area.

Pr. David Corbella Ribes
Chairman of XXIII CONGRESO INGEGRAF
Introduction

The cooperation of university professors, Spanish, Italian and French, has promoted this joint international conference INGERGRAF - ADM - AIP-PRIMECA that has aimed to connect the research projects and professional activities on the area of graphic design and engineering. It facilitates the diffusion of research results and it makes use of the results of all stakeholders at regional, national and international levels. At the same time it improves, among others, joint programming initiative for future events to strengthen the "Graphic Engineering" in Europe and other continents.

In this conference it is sought to draw conclusions about the progress being made in the area of innovation on engineering and technical education in recent years, in each of the thematic areas of the Congress and also to analyze the current status in which we are without forgetting new open lines of work and research in future years.

From all this reflection and sharing it is expected, as in previous editions, to write a document of conclusions that reflects the current theory and practice in the area of educational innovation in engineering design graphics and technical education.

We have prepared with enthusiasm a scientific program and also a social program according to the same philosophy, for the delegates and other attendees staying in the city of Madrid. We hope it has been useful and enjoyable for all.

Thank you very much for participating.
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VIRTUAL REALITY, MODELING

ADVANCED PROTOTYPING

CAD Data Workflow toward the Thermal Simulation and Visualization in Virtual Reality

NUGRAHA BAHAR, Yudi; LANDRIEU, Jérémie; PERE, Christian; NICOLLE, Christophe
Arts et Metiers ParisTech France
Freeform surfaces adaptation through developable strips.

GONZALEZ QUINTIAL, Francisco; SANCHEZ PARANDIET, Antonio
UPV-EHU
Method for 3D printing of highly complex geometries: The first flat torus printed in 3D

HENOCQUE, Thierry; MARIN Philippe
University of Grenoble / AIP Primeca Dauphine-Savoie

BEHAVIORAL SIMULATION

Analytical study of an interference fit fastener assembly

PAREDES, Manuel; SARTOR, Marc; NEFISSI, Naoufel
INSA, Institut Clément Ader
A new methodology to evaluate the flying shape of a sail

INGRASSIA, Tommaso; NIGRELLI, Vincenzo; GELSOMINO, Gabriella
Università degli Studi di Palermo

INTERACTIVE VIRTUAL

CAD Data Workflow toward the Thermal Simulation and Visualization in Virtual Reality

NUGRAHA BAHAR, Yudi; LANDRIEU, Jérémie; PERE, Christian; NICOLLE, Christophe
Arts et Metiers ParisTech France
METHODS AND SIMULATION FOR ASSEMBLY DESIGN

Implementation of Service-Learning Projects Based on Dynamic Documentation in Engineering Colleges

GARCÍA ALONSO, Jesús Manuel; SORIANO HERAS, Enrique; GARCÍA VICARIO, Imanol; BLAYA HARO, Fernando

CARLOS III DE MADRID, POLITÉCNICA DE MADRID, SALESIANOS ATOCHA

PLM

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Towards new processes to reverse engineering of digital mock-ups from a set of heterogeneous data

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Université de Technologie de Compiègne

SIMULATION AND VIRTUAL APPROACHES

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Survey of jointed rock mass from 3D point clouds for the wedge stability analysis

MENÉNDEZ DÍAZ, Agustín; ORDÓNÉZ GALÁN, Celestino; BOUZA RODRÍGUEZ, Benito; GARCÍA CORTÉS, Silverio

Universidad de Oviedo

Performance Evaluation of CUDA programming for machining simulation

ABECASSIS, Felix; LAVERNHE, Sylvain; TOURNIER, Christophe; BOUCARD, Pierre-Alain

Ecole Normale Supérieure de Cachan

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Virtual simulation of chimney shaft of Valdeazogues

ALMANSZA, Emilian; FUENTES, Demetrio; MONTES TUBIO, Francisco de Paula; CASTRO, Miguel.

UCLM / UCO
3D Land Models with simple modeling tools

SANTAMARÍA, Jacinto; SANZ, Félix
UNIVERSIDAD DE LA RIOJA

VIRTUAL AND AUGMENTED REALITY

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CARLOS III DE MADRID, POLITÉCNICA DE MADRID, SALESIANOS ATOCHA

A global approach of the intermediary object: A case study in virtual environment

AL KHATIB, Ahmad; MAHDJOUB, Morad; BLUNTZER, Jean-Bernard; SAGOT, Jean-Claude.
Université de technologie Belfort-Montbéliard

VIRTUAL AND GEOMETRIC MODELS

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Universidad de Oviedo

3D Human Face Modelling: Soft Tissues Landmarking

ZOMPI, Antonio; TORNINCASA, Stefano; VEZZETTI, Enrico; MOOS, Sandro; VIOLANTE, Mariagrazia; MARCOLIN, Federica
DIGEP-Politecnico di Torino

Teaching geometric modeling and analysis of tensegrity structures

GOMEZ JAUREGUI, Valentín; OTERO, Cesar; ARIAS, Ruben; MANCHADO, Cristina
Universidad de Cantabria

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CARLOS III DE MADRID, POLITÉCNICA DE MADRID, SALESIANOS ATOCHA

Geometric documentation of mining industrial historical heritage: application to a metallic headframe from the ancient mining district in Linares-La Carolina (Jaen)

MONTALVO GIL, Juan Manuel; ROJAS SOLA, José Ignacio; CASTRO GARCÍA, Miguel
Universidad de Jaén
Adding value to natural fiber reinforced materials by means of product design and development

JULIÁN, Fernando; VERDAGUER, Narcis; TRESSERRAS, Josep; ESPINACH, Francesc Xavier
University of Girona

Geometric documentation of the flour factory El puente Colgante in Aranjuez (Madrid)

MILLÁN GHISLERI, Juan; ROJAS SOLA, José Ignacio; SAN ANTONIO GÓMEZ, Carlos
Technical University of Madrid & University of Jaén

Geometric documentation of mining industrial historical heritage: application to a Cornish pumping engine house from the ancient mining district in Linares-La Carolina (Jaen)

ROJAS SOLA, José Ignacio; MONTALVO GIL, Juan Manuel; CASTRO GARCÍA, Miguel
UNIVERSIDAD DE JAÉN

Engineering and Architecture Applications based on Unmanned Aerial Vehicles, UAV

CARVAJAL, Fernando; AGÚERA, Francisco; PÉREZ, Mónica
University of Almería

VIRTUAL ENVIRONMENT AND PROTOTYPING FOR HUMAN HEALTH

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DIGEP-Politecnico di Torino

Design and processing of a virtual female pelvic cavity for gynecological and obstetrical teaching of medical students

PATROUIX, Laurent; QUAEGEBEUR, Philippe; GIRAUDET, Géraldine; BRIEU, Mathias; COSSON, Michel; LECOMTE, Pauline.
Ecole Centrale de Lille

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COMPUTING

CAE, CAD

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A graph-based approach to CAD modeling: a digital pattern application to the sizing and modeling of manual transverse gearboxes

LANZOTTI, Antonio; PATALANO, Stanislao; VITOLO, Ferdinando
UNIVERSITY OF NAPLES FEDERICO II

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Associative modeling of manufacturing information in CAD-Systems

FASSI FIHRI, Nabil; GOTTWALD, Martin; DENEUX, Dominique; BOHN, Martin
ENSIAME / DAIMLER

Geometrical definition and virtual reconstruction of the vertical cage and horizontal plate presses for extraction grape must

RAMIREZ FUENTES, M Angeles; CASTRO GARCÍA, Miguel; CARRANZA CAÑADAS, M Pilar; BURGOS LADRON DE GUEVARA, E; MONTES TUBIO, Francisco de Paula
Universidad de Córdoba; Universidad de Jaén

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Université de Technologie de Compiègne

Mobile device application to calculate and simulate energy expenditure in households using CAD tools

ÁLVAREZ PEÑÍN, Pedro Ignacio; BUSTO PARRA, Bernardo; PANDO CERRA, Pablo
Oviedo

CAD Modeling and Simulation of a New Semi-Automatic Machine for Olive Oil Packaging

SPERANZA, Domenico
University of Cassino

IMAGE PROCESSING AND ANALYSIS

Radiometric Comparison between GeoEye-1 and WorldView-2 Panchromatic and Multispectral Imagery

AGUILAR, Manuel Ángel; SALDAÑA DÍAZ, Maria del Mar; AGUILAR, Fernando; FERNÁNDEZ LUQUE, Ismael
University of Almería
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  CARLOS III DE MADRID, POLITÉCNICA DE MADRID, SALESIANOS ATOCHA

Impervious surface areas classification from GeoEye-1 satellite imagery using OBIA approach in a coastal area of Almeria (Spain)

  FERNÁNDEZ LUQUE, Ismael; AGUILAR TORRES, Fernando J.; AGUILAR TORRES, Manuel A.; ÁLVAREZ TABOADA, Flor; SALDAÑA DÍAZ, María del Mar
  University of Almería

Ergonomic design of an object detector device for blind people

  LENGUA, Ismael; DUNAI, Larisa; PERIS FAJARNÉS, Guillermo; DEFEZ, Beatriz
  Universitat Politècnica de València

Detection of small features in flat-field images of astronomical cameras: application to the OSIRIS instrument on board the Rosetta (ESA) mission

  BENITEZ, Alicia D.; LARA, Luisa M.;
  Instituto de Astrofísica de Andalucía (IAA-CSIC)

CIVIL ENGINEERING

AUTOMOTIVE

Associative modeling of manufacturing information in CAD-Systems

  FASSI FIHRI, Nabil; GOTTWALD, Martin; DENEUX, Dominique; BOHN, Martin
  ENSIAME / DAIMLER

Proposal about the design and the choice of road signs

  ROVIDA, Edoardo; VIGANO, Roberto;
  Politecnico di Milano - Dipartimento di Meccanica

BUILDING INFORMATION MODELING

Represent mean condense complex information: the updating of new media for the construction field

  LO TURCO, Massimiliano; NOVELLO, Giuseppa
  Politecnico di Torino

Engineering and Architecture Applications based on Unmanned Aerial Vehicles, UAV

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NAUTICAL, AERONAUTICS AND AEROSPACE DESIGN AND MODELING
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SURVEYING MAPPING AND GIS TECH
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Remote Sensing for Monitoring the Effects of Agricultural Policies: the Case of the Irrigated Area of Tadla Azilal (Morocco)
NEMMAOUI, Abderrahim; AGUILAR, F.J.; GARCÍA LORCA, A.; AGUILAR, M.A.
University of Almería
Impervious surface areas classification from GeoEye-1 satellite imagery using OBIA approach in a coastal area of Almería (Spain)
FERNÁNDEZ LUQUE, Ismael; AGUILAR TORRES, Fernando J.; AGUILAR TORRES, Manuel A.; ÁLVAREZ TABOADA, Fior; SALDAÑA DÍAZ, María del Mar
University of Almería
GIS analysis for settlements accuracy study on Madrid Province (AGE Tomas Lopez 1804)

FERNÁNDEZ SÁNCHEZ, José Salvador; MANZANO AGUGLIARO, Francisco; SAN ANTONIO GÓMEZ, Carlos
University of Almería/ Polytechnic University of Madrid

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