XXIII International Conference on Graphic Engineering

Proceedings

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@congresoingegraf.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.

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Pr. David Corbella Ribes
Chairman of XXIII CONGRESO INGEGRAF

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

CARLOS III DE MADRID, POLITÉCNICA DE MADRID, SALESIANOS ATOCHA

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

BRUNEAU, Marina; DURUPT, Alexandre; ROUCOULES, Lionel; PERNOT, Jean-Philippe

Université de Technologie de Compiègne

SIMULATION AND VIRTUAL APPROACHES

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

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

MENÉNDEZ DÍAZ, Agustín; ORDÓÑEZ 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

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Virtual simulation of chimney shaft of Valdeazogues

ALMANSA, Emiliano; 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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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, Valentin; OTERO, Cesar; ARIAS, Ruben; MANCHADO, Cristina

Universidad de Cantabria

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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; AGÜERA, Francisco; PÉREZ, Mónica

University of Almeria

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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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 af 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, María 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 Almeria

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

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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

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Engineering and Architecture Applications based on Unmanned Aerial Vehicles, UAV

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INNOVATIVE METHODS IN ARCHITECTURAL DESIGN

Teaching geometric modeling and analysis of tensegrity structures

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Freeform surfaces adaptation through developable strips.

GONZALEZ QUINTIAL, Francisco; SANCHEZ PARANDIET, Antonio

UPV-EHU

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University of Almeria

NAUTICAL, AERONAUTICS AND AEROSPACE DESIGN AND MODELING

Analytical study of an interference fit fastener assembly

PAREDES, Manuel; SARTOR, Marc; NEFISSI, Naoufel

INSA, Institut Clément Ader

SURVEYING MAPPING AND GIS TECH

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

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Universidad de Oviedo

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.

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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 Almeria/ Polytechnic University of Madrid

3D Land Models with simple modeling tools

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