CRISTIAN RENDON

CONTACT

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Personal Website
LinkedIn
Paris

EDUCATION

2015 - 2020
Mechanical Engineering
Universidad EAFIT

2020 - 2022
Master of Science in Engineering
Universidad EAFIT

2022 - Present
PhD in Computer Science
Université Paris-Saclay

LANGUAGES

Spanish - Native
English - C1
French - B1

SKILLS

- Computer Geometry
- Computational Mechanics
- Optics
- Matlab
- C++
- Python
- OpenCV
- Javascript
- Web Development
- Latex

ABOUT ME

Passionate MSc Engineer with a predilection for research and science, always curious and attentive with an excellent level of receptiveness. Constantly strengthens and renovates his knowledge, works under pressure in any environment, adapts quickly and gives exceptional results.

EXPERIENCE

COMPUTER GRAPHICS ENGINEER

2020 - 2022 | Manufactura Cohesiva

- Led the development of computational geometry technologies using **JavaScript, Node.js, and Angular.**
- Key contributor to the company's 3D viewer, creating a reusable **Angular library** for seamless project integration.
- **Collaborated** with designers and clients to deliver **tailored web applications** for digital manufacturing.
- Co-authored a research paper on primitive geometry identification, **published** in MDPI with Universidad EAFIT.

RESEARCHER

2017 - 2022 | CAD CAM CAE Laboratory - EAFIT

- Conducted research in Computational Geometry, Mechanics, Fluid Dynamics, and Dynamic Systems.
- Worked on projects optimizing wing profiles for maximum lift using **CFD simulations** and conducted experimental fluid dynamics research on skin friction in turbulent flows.
- **Co-developed** a technology for identifying primitive geometries in poorly faceted meshes, implemented in industry with Cohesive Manufacturing.
- Used **Matlab, JavaScript, Ansys, and LaTeX** for simulations and **article writing**.
- Teaching Assistant for "Introduction to CAD/CAM."
- Published three research articles

RESEARCH INTERN - UNDER PROF. IVAN MARUSIC

2019 - 2019 | Walter Bassett Aerodynamics Laboratory - University of Melbourne

- Assisted in the project "Active Control of Large-scale Structures in High Reynolds Number Turbulent Boundary Layers," post-processing **Particle Image Velocimetry** (PIV) and **hot-wire anemometry** data.
- Developed expertise in turbulent boundary layers, PIV, hot-wire and hot-film anemometry, and **signal analysis.**
- Produced a research article in partnership with CAD/CAM/CAE Laboratory from Universidad EAFIT.

TEACHING ASSISTANT

2018 - 2020 | Universidad EAFIT

- Led weekly workshops on rigid and non-rigid transformations, projection, and parametric curves and surfaces.
- Assisted students in mastering fundamental CAD/CAM concepts and techniques.

PUBLICATIONS

Cristian Rendon-Cardona, Jorge Correa, Diego A. Acosta, Oscar Ruiz-Salguero. Analytic Form Fitting in Poor Triangular Meshes. Algorithms, 14(11): 304-331, October 2021

Cristian Rendon-Cardona, Zhoushun Ruan, Oscar Ruiz-Salguero. Skin-friction Measurements in Turbulent Boundary Layers. International Journal of Engineering and Technology, 12(1): 1-15, February 2020

Cristian C. Rendon, José Hernandez, Oscar Ruiz-Salguero, Carlos A. Alvarez, Mauricio Toro. Wing profile evolution driven by computational fluid dynamics. UIS Ingenierías, 18(2): 139-149, January 2019.