

# CRISTIAN RENDON



## 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.



## CONTACT

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## EDUCATION

2015 - 2020

**Mechanical Engineering**

Universidad EAFIT

2020 - 2022

**Master of Science in Engineering**

Universidad EAFIT

2022 - Present

**PhD in Augmented Vision**

Université Paris-Saclay

## LANGUAGES

Spanish - Native

English - C1

French - B1

## SKILLS

Computer Geometry

Computational

Mechanics

Optics

Matlab

C++

Python

OpenCV

Javascript

Web Development

Latex