



## Josué García Ávila

Ph.D. Student in Mechanical Engineering, admitted Summer 2022

### Bio

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#### BIO

Josué García-Ávila, a highly accomplished individual from Guerrero, Mexico, boasts a strong educational background, having earned a Bachelor's degree in Mechatronics Engineering from Universidad Anáhuac and a Master's degree in Manufacturing Systems from Tecnológico de Monterrey. As a graduate student in the Advanced Manufacturing Research Group, Josué excelled and was recognized with an academic scholarship from the National Council of Science and Technology of Mexico (CONACyT).

Josué's expertise in the field of engineering is further highlighted by his successful career in the automotive industry, where he worked as a Sr. Manufacturing Engineer (Machining & Assembly) at Bocar Group for several years. In addition to his professional achievements, Josué also demonstrated his commitment to making a positive impact, having lived in Costa Rica for two years where he dedicated himself to humanitarian work.

His passion for innovation and technology shines through in his current research interests, which include exploring the data-driven mechanics of architected, multifunctional, sustainable, soft, and stretchable materials to create mimetic artificial living matter for biomedical applications and beyond. His impressive research accomplishments are evidenced by his first-author publications.

Josué's dedication to his field and drive for success has not gone unnoticed. He has been awarded the EDGE Doctoral Fellowship, by nomination of the graduate admissions committee and most recently awarded the prestigious Claudio X. Gonzalez Graduate Fellowship to pursue PhD in Mechanical Engineering at the prestigious Stanford School of Engineering.

#### HONORS AND AWARDS

- Claudio X. Gonzalez Graduate Fellowship in Engineering, Stanford School of Engineering (2023)
- EDGE Doctoral Fellowship, Stanford University (2022)
- The Kleiner Perkins, Mayfield, Sequoia Capital Fellowship, Stanford University (2022)
- Excellence Scholarship for Master's degree, Tecnológico de Monterrey (2020)
- National Quality Graduate Fellowship for Master's degree, Mexican National Council of Science and Technology (CONACyT) (2020)
- National Award for Excellence in the Mechatronics Engineering Graduate General Examination, National Center for the Evaluation of Higher Education (CENEVAL) (2017)
- 15 Global Challenges Program National Award – The Millennium Project, Permanent Mission of Mexico to the United Nations (2014)
- Merit and Academic Excellence Award, Guerrero State Government (Mexico) (2012)
- Silver Medal Award, Mathematical Olympiad of Central America and the Caribbean (2012)

- Silver Medal Award, Asian Pacific Mathematics Olympiad (AMPO) (2012)
- Gold Medal Award, “Pierre Fermat” National Math Competition, IPN (2011)
- Silver Medal Award, "A.N. Kolmogorov" XIV National Math Competition, Universidad Anahuac (2011)
- Weizmann Institute of Science Scholarship, Government of Israel and the Mexican Academy of Sciences (2011)

## EDUCATION AND CERTIFICATIONS

- Master's degree, Tecnológico de Monterrey , Manufacturing Systems (2022)
- Bachelor's degree, Universidad Anáhuac , Mechatronics Engineering (2017)

## LINKS

- LinkedIn: <https://www.linkedin.com/in/josuegarciaavila/>
- Twitter: [https://twitter.com/\\_JosueGarcia\\_](https://twitter.com/_JosueGarcia_)

## Research & Scholarship

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### LAB AFFILIATIONS

- Joseph DeSimone, DeSimone Research Group (1/9/2023)
- Renee Zhao, SIMLab (9/11/2022 - - 12/2/2022)
- Zhenan Bao, Bao Group (6/20/2022 - - 9/5/2022)

## Professional

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### WORK EXPERIENCE

- Senior Manufacturing Engineer - Bocar Group (December 1, 2015 - August 1, 2022)

## Publications

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### PUBLICATIONS

- **Predictive Modeling of Soft Stretchable Nanocomposites Using Recurrent Neural Networks.** *Polymers*  
Garcia-Avila, J., Torres Serrato, D. d., Rodriguez, C. A., Martinez, A. V., Cedillo, E. R., Martinez-Lopez, J. I.  
2022; 14 (23)
- **Novel porous structures with non-cubic symmetry: Synthesis, elastic anisotropy, and fatigue life behavior** *MATHEMATICS AND MECHANICS OF SOLIDS*  
Garcia-Avila, J., Cuan-Urquiza, E., Ramirez-Cedillo, E., Rodriguez, C. A., Vargas-Martinez, A.  
2022
- **E-Skin Development and Prototyping via Soft Tooling and Composites with Silicone Rubber and Carbon Nanotubes** *MATERIALS*  
Garcia-Avila, J., Rodriguez, C. A., Vargas-Martinez, A., Ramirez-Cedillo, E., Martinez-Lopez, J.  
2022; 15 (1)