CURRICULUM VITAE

1. DATOS PERSONALES

NOMBRES Y APELLIDOS: German Omar Barrionuevo Chiluiza
FECHA DE NACIMIENTO: 21/10/1988
LUGAR DE NACIMIENTO: Píllaro - Ecuador
CÉDULA DE IDENTIDAD: 1723010813

2. INFORMACIÓN DE CONTACTO:

Teléfono: 0998893674
Correo electrónico: gobarrionuevo@espe.edu.ec

3. PÁGINA WEB PERSONAL EN EL SITIO WEB DE IES, o en su defecto página web personal "Google, Academia, Research Gate u ORCID"

https://decem.espe.edu.ec/personal-docente-e-investigadores/
https://scholar.google.es/citations?user=5S4i5bMAAAAJ&hl=es&authuser=4
https://www.researchgate.net/profile/German-Barrionuevo
https://orcid.org/my-orcid?orcid=0000-0002-4613-3234

4. POSICIÓN:

Profesor Ocasional 2 (TC).

5. TÍTULOS OBTENIDOS:

- Ingeniero en Mecatrónica
- Magister en Manufactura y Diseño asistidos por computador
- Doctor en Ciencias de la Ingeniería

6. EXPERIENCIA LABORAL EN LA INSTITUCIÓN:

Profesor de Ciencia de los Materiales (abril 2023 - actual)

7. EXPERIENCIA LABORAL EN OTROS INSTITUCIONES

- Universidad Politécnica Salesiana, Docente a tiempo completo, Departamento de Ingeniería Mecatrónica, Quito, Ecuador. (10/2022 – 04/2023)
- University of Alberta, Research Assistant, Department of Chemical and Materials Engineering, Edmonton, Canada. (01/2022 – 06/2022)
- Pontificia Universidad Católica de Chile, Profesor asistente, Departamento de Ingeniería Mecánica y Metalúrgica, Santiago, Chile. (03/2019 – 12/2019)
- ECUAMATRIZ, Jefe de Matricería, Ambato, Ecuador. (10/2017 – 02/2018)
- LETRA SIGMA, Analista de costos, Quito, Ecuador. (03/2016 – 09/2017)
- EMPAC MACHINE, Ingeniero de Diseño, Quito, Ecuador. (06/2014 – 02/2016)

8. PRINCIPALES INTERESES DE INVESTIGACIÓN PUBLICACIONES PRINCIPALES (ÚLTIMOS 5 AÑOS)

1) (2024) "Influence of the Processing Parameters on the Microstructure and Mechanical Properties of 316L Stainless Steel Fabricated by Laser Powder Bed Fusion". *Journal of Manufacturing and Materials Processing*. DOI: 10.3390/jmmp8010035
2) (2024) "Microstructure effect on sliding wear of 316L stainless steel selectively laser

melted". *Materials Science and Technology*. DOI: 10.1177/02670836231217
3) (2024) "Tensile/Compressive Response of 316L Stainless Steel Fabricated by Additive Manufacturing". *Ingenius*. DOI: 10.17163/ings.n31.2024.01
4) (2023) "Microhardness and wear resistance in materials manufactured by laser powder bed fusion: Machine learning approach for property prediction". *CIRP Journal of Manufacturing Science and Technology*. DOI: 10.1016/j.cirpj.2023.03.002
5) (2023) "Microstructure simulation and experimental evaluation of the anisotropy of 316L stainless steel manufactured by laser powder bed fusion". *Journal of Rapid Prototyping*. DOI: 10.1108/RPJ-04-2022-0127
6) (2022) "Comparative analysis and experimental validation of statistical and machine learning-based regressors for modeling the surface roughness and mechanical properties of 316L stainless steel specimens produced by selective laser melting". *Journal of Manufacturing Processes*. DOI: 10.1016/j.jmapro.2022.06.021
7) (2022) "A machine learning approach for the prediction of melting efficiency in wire arc additive manufacturing". *International Journal of Advanced Manufacturing Technology*. DOI: 10.1007/s00170-022-08966-y
8) (2022) "Vibration-assisted laser welding: Frequency and amplitude vibration effect on the microhardness of A36 steel". *Journal of Materials: Design and Applications*. DOI: 10.1177/14644207221102659
9) (2022) "Recovery of Hydro Turbines: From Welding to Additive Manufacturing". *Solid State Phenomena*. DOI: 10.4028/p-lx8uye
10) (2022) "Waste Biomass Selective and Sustainable Photooxidation to High-Added-Value Products: A Review". *Catalysts*. DOI: 10.3390/catal12101091
11) (2022) "Design and construction of a friction welding equipment with laser assistance for the joint of AISI 1045 steel and aluminum 2017-T4 shafts". *Ingenius*. DOI: 10.17163/ings.n27.2022.07
12) (2022) "Numerical analysis of the effect of processing parameters on the microstructure of stainless steel 316L manufactured by laser-based powder bed fusion". *Materials Today: Proceedings*. DOI: 10.1016/j.matpr.2021.10.209
13) (2021) "Comparative Evaluation of Machine Learning Regressors for the Layer Geometry Prediction in Wire arc Additive manufacturing". IEEE Xplore. DOI: 10.1109/icmimt52186.2021.9476168
14) (2021) "Predicting the ultimate tensile strength of AISI 1045 steel and 2017-T4 aluminum alloy joints in a laser-assisted rotary friction welding process using machine learning: a comparison with response surface methodology". *International Journal of Advanced Manufacturing Technology*. DOI: 10.1007/s00170-021-07469-6
15) (2021) "Effect of laser heat treatment on the mechanical performance and microstructural evolution of AISI 1045 steel – 2017-T4 aluminum alloy joints during rotary friction welding". *Journal of Materials Engineering and Performance*. DOI: 10.1007/s11665-021-05614-6
16) (2021) "Comparative evaluation of supervised machine learning algorithms in the prediction of the relative density of 316L stainless steel fabricated by selective laser melting". *International Journal of Advanced Manufacturing Technology*. DOI: 10.1007/s00170-021-06596-4
17) (2020) "Machine Learning for Optimizing Technological Properties of Wood

Composite Filament-Timberfill Fabricated by Fused Deposition Modeling*", Communications in Computer and Information Science*. DOI: 10.1007/978-3-030-42520-3_10

18) (2020) "Computational fracture mechanics: Evaluation of the structural integrity in a penstock applying the BS7910 standard and finite element analysis". *IOP Conference Series: Materials Science and Engineering*. DOI: 10.1088/1757-899x/925/1/012023

9. MEMBRESÍA EN SOCIEDADES CIENTÍFICAS Y PROFESIONALES

N/A

10. PREMIOS Y HONORES

- Beca de Postdoctorado, Luleå University of Technology, Suecia.
- Beca *Emerging Leaders in the Americas Program* (ELAP), Canadá
- Beca de Investigación para candidatos a Doctor por la Pontificia Universidad Católica de Chile, Chile
- Mejor paper en la Conferencia ICCEMS 2020- *INTERNATIONAL CONFERENCE ON COMPUTATIONAL ENGINEERING AND MATERIAL SCIENCE*, India
- Beca de Doctorado – SENESCYT, Ecuador.
- Mejor egresado de la Maestría en Manufactura y Diseño asistidos por computador (ESPE), Ecuador

11. CURSOS EN EL AÑO ACADÉMICO ACTUAL (2023-2024)

- Uso y Manejo de la Plataforma virtual MOODLE 4.1 (40 horas)
- Curso Básico de SOLIDWORKS (30 horas)
- Manufactura de materiales de alto desempeño (32 horas)

12. OTRAS RESPONSABILIDADES EN EL AÑO ACADÉMICO, ACTUAL, CANTIDAD DE HORAS POR SEMANA. INDIQUE SI SE PAGAN POR SEPARADO.

N/A

13. INFORMACIÓN SOBRE EL DESARROLLO PROFESIONAL.

Firmado electrónicamente por:
GERMAN OMAR BARRIONUEVO CHILUIZA

Omar Barrionuevo, Ph.D.