

CRISTEL JULISSA CEDEÑO MARTINEZ

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ACADEMIC BACKGROUND

Master's Degree in Higher Education with Specialization in Technology and Educational Didactics **Dec 2023**
Technological University of Panama

Bachelor's degree in civil engineering **Sep 2021**
Technological University of Panama
Thesis: Descriptive observational and statistical inferential study of safety systems in construction. Case Study: Fixed and Hanging Scaffolding.
Advisor: Milagros Pinto, PhD

RESEARCH AND PROFESSIONAL EXPERIENCE

Center for Hydraulic and Hydrotechnical Research of Panama (CIHH) **February 2022-present**

- Formulation of a research project proposal within the Public Call for Educational Projects and Workshops of SENACYT, preparing the research background, objectives, budget, and managing the complete documentation to be sent. Following the administrative procedures after its adjudication.
- Writing scientific articles within the research projects of Zarafí River (FID 17-084 and APY-NI-2021-50). Preparing bibliographic reviews and statistically managing field data.
- Supporting fieldwork and performing the extraction of groundwater samples for isotopic analysis and physicochemical quality parameters, gauging in rivers, groundwater level measurement, and report writing within the FID 17-084 project.
- Coordinating the symposium "Pasado y Presente de la Extracción de Aguas Subterráneas en Panamá" [Past and Present of Groundwater Extraction in Panama] and the discussion "Iniciativa Ciudadana Pro-Rescate del Agua Potable" [Citizen Initiative Pro-Rescue of Drinking Water].
- Managing the social networks of the Center (Instagram, Facebook, and Twitter) and communicating the activities carried out within the research projects, platforms in which there is currently growth in reach and followers.
- Providing support for the follow-up of the 2022 and 2023 work plan of Global Water Partnership Panama under the presidency period granted to the CIHH, managing emails, preparing progress reports, and writing news about the activities carried out, which are later published in a bulletin at the Central American level.
- Participating as a co-investigator in the educational project on regenerative agriculture, providing follow-up on administrative tasks, budgeting, coordinating field activities, and research.

Research Intern **Nov 2021- Feb 2022**

Project: Formulation of the optimization of a water treatment plant through mathematical modeling and in-situ calibration (IOMA 19-006).

Mathematical modeling of the unit of the water treatment plant named contact tank, using the OpenFOAM software, under the direction, guidance, and supervision of the lead project researcher, including the following activities:

- Editing the model in AutoCAD/Civil 3D and Blender.
- Study of the finite volume method and OpenFOAM software to perform numerical modeling.
- Drafting of progress report of the modeling of the unit in charge.

PROJECTS

Soils and climate change: Incrementar habilidades analíticas en los IPTs agropecuarios de educación media en la calidad de los suelos y la producción agrícola resiliente al cambio climático **Dec 2022-Present**
[Increasing analytical skills in secondary education agricultural IPTs on soil quality and agricultural production resilient to climate change]

- **Co-researcher**

PRESENTATION AND PUBLICATIONS

Publications

- **Cedeño, C.**, Flores, E., Leiva, J., & Fábrega, J. (2023). Potenciando la Agricultura Regenerativa a Través de la Enseñanza-Aprendizaje sobre Calidad de Suelos en IPTs de Educación Media en Panamá [Enhancing Regenerative Agriculture Through High School Education in Panama]. National Congress of Science and Technology- APANAC, 349–255. <https://doi.org/10.33412/APANAC.2023.3958>

- Ortiz, A., Serrut, A., Fábrega, J., **Cedeño, C.**, & Flores, E. (2023). Análisis del efecto de la agricultura regenerativa en la Infiltración del suelo [Analysis of the effect of regenerative agriculture on soil infiltration]. National Congress of Science and Technology- APANAC, 363–638. <https://doi.org/10.33412/APANAC.2023.3960>
- Cedeño Martínez, C. J., Mc Naughton, Y. J., Pinto Nuñez, M. (2022). Criterios mínimos de seguridad en la etapa de diseño de andamios fijos y guindolas [Minimum safety criteria in the design stage of supported and suspended scaffolding]. Proceedings - 2022 8th International Engineering, Sciences and Technology Conference, IESTEC 2022
- González, A., Cedeño Martínez, C. J., Fábrega-Duque, J. R. (2022). Description of the availability of hydrological and hydrogeological information on wells in the Zaratí River sub-basin. Proceedings - 2022 8th International Engineering, Sciences and Technology Conference, IESTEC 2022.
- Noel Amaya, J. O., Cedeño Martínez, C. J., Espino, K., Sánchez, X., Fábrega, J. (2022). Relación de la precipitación con las variaciones de los niveles freáticos durante la época lluviosa en la subcuenca del río Zaratí [Relationship of precipitation with variations in water tables during the rainy season in the sub- basin of the Zaratí River]. Proceedings - 2022 8th International Engineering, Sciences and Technology Conference, IESTEC 2022.
- Rohim-Domínguez, C., Ayala-Valdés, A., Luzcando-González, A., Broce, K., & Cedeño, C. (2022). Propuesta para elaboración de bases concentradas a partir de cebolla excedente de la producción panameña [Proposal for the elaboration of concentrated bases from onion surplus of Panamanian production]. Revista de I+D Tecnológico, 18(2), 77–88. <http://revistas.utp.ac.pa>
- Blandón, K., Castillo, M., Rodríguez, D., Broce, K., Quintero, R., Cedeño, C., & Morales, D. (2022). Evaluación de un producto a base de cebolla (*Allium cepa* L.) como materia prima principal adicionando piña o manzana para un mercado artesanal [Evaluation of a product based on onion (*Allium cepa* L.) as the main raw material adding pineapple or apple for an artisanal market]. Revista de I+D Tecnológico, 18(2), 55–64. <http://revistas.utp.ac.pa>

Conference Presentations

XIX APANAC Congress 2023	2023
<ul style="list-style-type: none"> • Enhancing Regenerative Agriculture Through High School Education in Panama (poster) 	
VIII International Congress of Engineering, Science and Technology IESTEC 2022	2022
<ul style="list-style-type: none"> • Minimum safety criteria in the design stage of supported and suspended scaffolding (oral presentation) 	

AWARDS & CERTIFICATES

Certificate Program in Multiplatform Digital Graphic Design	2023
XXXI Civil Engineering Week. Second Place, Canoe Contest, Technological University of Panama.	2018
XXX Civil Engineering Week. Second Place, Truss Contest, Technological University of Panama.	2017
XXIX Civil Engineering Week. Second place, Photography Contest, Technological University of Panama.	2015
XXVII Civil Engineering Week. Diploma of Honor Don Guillermo Andreve. Ministry of Education.	2014

PROGRAMS

AutoCAD and Civil 3D: intermediate level | Microsoft Office: intermediate level | Basic of the XLSTAT plugin for data analysis | Microsoft Project: basic level | ArcGIS Pro: basic level | HEC-RAS: basic level

LANGUAGES

Spanish: native
English: fluent

COURSES AND SEMINARS

Learning AutoCAD Civil 3D 2016 Udemy: Online Courses 7 hours	2022
Integrity Management in the Water and Sanitation Sector in Latin America Cap-Net UNDP	2022
Science Journalism Workshop Center for Hydraulic and Hydrotechnical Research of the Technological University of Panama. 12 hours	2022
Industrial Safety and Professional Risk Basic Level INADEH	2020

40 hours	
Safety in Work at Heights	2020
COLASEH	
8 hours	
Industrial Safety and Professional Risk Basic Level	2020
INADEH	
40 hours	

EXTRACURRICULAR ACTIVITIES

Member of IAHR Panama Young Professionals Network	2022-present
University Ministry of the Technological University of Panama	2018-present
<ul style="list-style-type: none"> Participation in missions (community service), creation and publication of content for social networks for dissemination of activities 	
Panama Jazz Festival- volunteering with the Ecocreando Foundation	2017
<ul style="list-style-type: none"> Supervision of recycling points. 	