LUIS ALBERTO VILLANUEVA ESPINO

Candidate to PhD in Biological Science at Escuela Nacional de Estudios Superiores, Campus Morelia, Universidad Nacional Autónoma de Méxicofellowship (UNAM) | Domestication | Evolution | Bioinformatics | microbial ecology

CONTACT

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○ https://github.com/luisal21

in https://www.linkedin.com/in/luis-alberto-villanueva-espino-891215260/

🎓 EDUCATION

present
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2020

PhD., Biological Science
Escuela Nacional de Estudios Superiores, Campus Morelia, Universidad Nacional Autonoma de Mexico

📍 Morelia, Michoacan, Mexico

• Dr. Mauricio Quesada Avendaño
• Floral nectar and their biotic interactions

2020
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2017

M.Sc., Biological Science
Escuela Nacional de Estudios Superiores, Campus Morelia, Universidad Nacional Autonoma de Mexico

📍 Morelia, Michoacan, Mexico

• Dr. Mauricio Quesada Avendaño
• Pollination services in Persea americana: a comparative analysis of native pollinators and Apis mellifera

2016
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2010

B.S., Biology
Benemerita Universidad Autonoma de Puebla   📍 Puebla, Mexico

• Dra. Adriana Berenice Silva Gomez
• Thesis: Morphological differences of CA1 and CA3 pyramidal neurons of dorsal hippocampus of juvenile rats subjected to cognitive training.

💻 RESEARCH EXPERIENCE

Current
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2015

Graduate Research Assistant
TBILab (Yaomin Xu's Lab)   📍 Vanderbilt University
• Primarily working with large EHR and Biobank datasets.
• Developing network-based methods to investigate and visualize clinically relevant patterns in data.

2018
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2017

Data Science Researcher
Data Science Lab   📍 Johns Hopkins University
• Building R Shiny applications in the contexts of wearables and statistics education.
• Work primarily done in R Shiny and Javascript (node and d3js).

PROGRAMMING LANGUAGES

Expertise: R and Rstudio
Familiarity: Git/Github, python, bash

LANGUAGES

Spanish - Native
English - B1

2015
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2013

Undergraduate Researcher
Rubenstein Ecosystems Science Laboratory 📍 University of Vermont
- Analyzed and visualized data for CATOS fish tracking project.
- Head of data mining project to establish temporal trends in population densities of Mysis diluviana (Mysis).
- Ran project to mathematically model the migration patterns of Mysis (honors thesis project.)

2015
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2015

Human Computer Interaction Researcher
LabInTheWild (Reineke Lab) 📍 University of Michigan
- Led development and implementation of interactive data visualizations to help users compare themselves to other demographics.

2014
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2013

Undergraduate Researcher
Bentil Laboratory 📍 University of Vermont
- Developed mathematical model to predict the transport of sulfur through the environment with applications in waste cleanup.

2013
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2012

Research Assistant
Adair Laboratory 📍 University of Vermont
- Independently analyzed and constructed statistical models for large data sets pertaining to carbon decomposition rates.

👨‍🏫 TEACHING EXPERIENCE

2024
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2024

Estadistica aplicada a la Ecologia I
Licenciatura en Ecologia 📍 Morelia, Michoacan, Mexico
#Data Science Writing {data-icon=chart-line} #
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#{r} #CV %<>% print_section('data_science_writings') #

📖 PUBLICATIONS

2023

Influence of plant domestication on plant pollinator interactions: floral attributes and floral visitor communities in wild and cultivated squash plants
American Journal of Botany
- Sonja K. Glasser, Martín Hesajim de Santiago-Hernandez, Oliverio Delgado-Carrillo, Luis Alberto Villanueva Espino, Adonaji Cortes Perez, Antonio Gonzalez-Rodriguez, Rafael Lira-Saade, Mauricio Quesada

2021

barks from avocado trees of different geographic locations have consistent microbial communities,
archives of microbiology
- Eneas Aguirre-von-Wobeser, Alexandro Alonso-Sanchez, Alfonso Mendez-Bravo, Luis Alberto Villanueva Espino, Frederique Reverchon,

2019 Cognitive training increases dendritic arborization in the dorsal hippocampal CA1 and CA3 neurons of female and male Long–Evans rats
SYNAPSE

• Luis Alberto Villanueva Espino, Adriana Berenice Silva Gomez, Dolores Adriana Bravo Duran

🖳 TALKS AND POSTERS

2024 IX congreso mexicano de ecologia
Talk 📍 San Cristobal de las Casas, Mexico

• Luis Alberto Villanueva Espino, Irais Avila Eulogio, Rafael Lira Saade, Eric Fuchs Castillo, Mauricio Quesada Avendaño
• Efecto de la domesticacion sobre los caracteres florales y las recompensas florales en seis especies del genero Cucurbita

2024 IX congreso mexicano de ecologia
Poster 📍 San Cristobal de las Casas, Mexico

• Luis Alberto Villanueva Espino, Irais Avila Eulogio, Violeta Patiño Conde, Rafael Lira Saade, Eric Fuchs Castillo, Mauricio Quesada Avendaño
• Cambios en la composicion de la microbiota del nectar floral de calabazas debido a la domesticacion, el sexo floral y la visita de polinizadores,

2024 Annual meeting of Society for molecular biology and evolution (SMBE)
Poster 📍 Puerto Vallarta, Mexico

• Luis Alberto Villanueva Espino, Irais Avila Eulogio, Violeta Patiño Conde, Rafael Lira Saade, Eric Fuchs Castillo, Mauricio Quesada Avendaño
• Composition of microbiota of floral nectar in wild and domesticated squash (Cucurbita)

2023 Simposio del Laboratorio Nacional de Analisis y Sintesis Ecologica
Talk 📍 Morelia, Mexico

• Luis Alberto Villanueva Espino
• Servicios ecosistemicos de polinizacion y salud de la abeja melífera en Mexico

2022 VIII CONGRESO MEXICANO DE ECOLOGIA
Poster 📍 Oaxaca, Mexico

• Luis Alberto Villanueva Espino, Mauricio Ricardo Quesada Avendaño, Rafael Lira Saade, Eric Fuchs Castillo, Irais Avila Eulogio
• El microbioma del nectar floral y sus interacciones bioticas

2015 LVIII CONGRESO NACIONAL SOCIEDAD MEXICANA DE CIENCIAS FISIOLOGICAS
Poster 📍 San Miguel de Allende, Mexico

• Luis Alberto Villanueva Espino
• Diferencias morfologicas en neuronas piramidales del hipocampo dorsal de ratas juveniles sometidas a trabajo cognitivo

🎓 COURSES

2024 ● **Bash Shell para bioinformatica**

📍 Virtual event

• ISCB Regional Student Group, México,

2024 ● **Tools for better science writing in English-intensive spring course**

📍 Virtual event

• Main instructor:
• Universidad Nacional Autonoma de Mexico, UNAM-Tucson, Centro de estudios mexicanos

2021 ● **Diplomado en Bioinformatica**

📍 Virtual event

• Main instructor:
• Universidad Autonoma de Sinaloa

2021 ● **Herramientas Basicas de Bioinformatica 1**

📍 Virtual event

• Main instructor:
• Centro de Investigaciones Biologicas del Noroeste S.C. (CIBNOR)

2020 ● **Curso Teorico de secuenciación masiva**

📍 Virtual event

• Solaria Biodata

2017 ● **Escritura de articulos de divulgacion cientifica**

📍 Morelia, Mexico

• Universidad Michoacana de San Nicolas de Hidalgo, Mexico

2016 ● **Nuevos enfoques en comunicacion endocrina**

📍 Puebla, Mexico

• Benemerita Universidad Autonoma de Puebla

2015 ● **Estadistica Basica con R**

📍 Puebla, Mexico

• Benemerita Universidad Autonoma de Puebla

2013 ● **Biología Sensorial y comportamiento**

📍 Puebla, Mexico

• Benemerita Universidad Autonoma de Puebla

2013 ● **Como hacer una coleccion de insectos**

📍 Puebla, Mexico

• Benemerita Universidad Autonoma de Puebla

2012 ● **Tecnicas para la biopreservacion de vertebrados y estudios anatomicos**

📍 Puebla, Mexico

• Benemerita Universidad Autonoma de Puebla

⚛ SCIENCE COMMUNICATION

2024 ● **Fiesta de las ciencias y las humanidades 2024**
workshop 📍 Morelia, Mexico
• Escuela Nacional de Estudios Superiores, Campus Morelia, UNAM

2024 ● **Tianguis de la ciencia 2024**
workshop 📍 Morelia, Mexico
• Escuela Nacional de Estudios Superiores, Campus Morelia, UNAM

2023 ● **Influencia de la domesticacion en la interaccion calabaza-polinizador-microorganismo**
Talk 📍 Morelia, Mexico
• Tecnologico Nacional de Mexico, campus Valle de Morelia

2023 ● **Feria infantil y juvenil de ciencias y artes**
workshop 📍 Morelia, Mexico
• Escuela Nacional de Estudios Superiores, Campus Morelia, UNAM

2023 ● **Fiesta de las ciencias y las humanidades**
workshop 📍 Morelia, Mexico
• Escuela Nacional de Estudios Superiores, Campus Morelia, UNAM

2023 ● **Polinizadores de Morelia y sus alrededores,**
workshop 📍 Morelia, Mexico
• Universidad Michoacana de San Nicolas Hidalgo

2023 ● **Erase una vez… una Peponapis**
workshop 📍 Morelia, Mexico
• Universidad Michoacana de San Nicolas Hidalgo

2023 ● **Jardines de polinizadores**
workshop 📍 Morelia, Mexico
• Centro ludico inclusivo pegadogico clip