

Jaime Yair Pérez-Tezoco

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INTERESTS (theory and applications)

- Optimization: Convex, Discrete, Robust, Stochastic
- Supply Chain Analytics
- Discrete Event Simulation
- Routing and Transportation
- Simulation Based Optimization
- Mathematical modelling and Data Science

EDUCATION

Tecnológico Nacional de México - Instituto Tecnológico Orizaba Veracruz, México
Master of Engineering, Industrial Engineering (Area: Decision Analysis) Aug 2019-Dec 2021
Average: 95.62/100
Bachelor of Engineering (Licenciatura), **Industrial Engineering** Aug 2014-Dec 2018
Average: 94/100

University of Jyväskylä Finland
Summer School. Courses in Computational Sciences. [\[pdf transcripts\]](#) Aug 2021

- **COM1**: Stochastic Optimization - Models, Algorithms and Applications (3 ECTS gained).
- **COM3**: Multicriteria Design Optimization in the Age of Data Science (4 ECTS gained).

University of Arkansas Fayetteville, AR 72703
Long term English Program. [\[pdf\]](#) [\[pdf\]](#) [\[pdf\]](#) Oct 18th, 2021 - May 27th, 2022

- I was awarded with the Fulbright-García Robles scholarship to participate in this program.
- I volunteered as part of the student council program during the first term.

RELEVANT COURSEWORK

Bachelor's	Master's
- Statistical Inference I & II	- Artificial Intelligence
- Operations Research I & II	- Advanced Operations Research
- Economics; Financial Planning; Cost Management	- Economic Analysis
- Prob. and Sta.; Statistical Quality Control	- Logistics and Supply Chain
- Operations Management I & II	- Statistics
- Marketing; Project Management	- Decision Analysis
- Systems Simulation; Algorithms and Programming	- Simulation; Operations Management

SUBMITTED PAPERS

- [1] ***Hospital reconversion in response to the COVID-19 pandemic using simulation (DES) and multi-objective genetic algorithms***, with Alberto Alfonso Aguilar-Lasserre, Constantino Gerardo Moras-Sánchez, y Carlos Francisco Vázquez-Rodríguez (*submitted to Computers and Industrial Engineering, Impact factor: 5.431*).
- [2] ***Optimal design of temporary care centers in response to a sanitary contingency using multi-objective genetic algorithms***, with Alberto Alfonso Aguilar-Lasserre, y Carlos Francisco Vázquez-Rodríguez (*Soon to be submitted*).
- [3] ***Evaluation of drug-drug interaction in the treatment of SARS-CoV-2 patients using artificial neural networks***, with Alfonso Aguilar-Lasserre, Ramiro Meza-Palacios, Diana Fernanda Torres-Martínez, Norely Raquel Escobar-Merino, Hugo Vázquez-González, Carlos Francisco Vázquez-Rodríguez (*submitted to Revista del centro de investigación de la Universidad de la Salle, revista de índice CONACyT*).

TECHNICAL STRENGTHS

Simulation Software	SIMIO; AnyLogic; STELLA
Programming Languages	Python; Julia
Data Mining and Machine learning	Python (Tensorflow, Sklearn); RStudio
Optimization solvers	Gurobi; CPLEX; Risk Optimizer; Google OR-Tools
Applications	L ^A T _E X; Microsoft Office package (advanced excel)

RESEARCH EXPERIENCE

Instituto Mexicano del Seguro Social (IMSS) Orizaba General Hospital

Operations Analyst Intern

Apr 2020 - Sep 2021

- Collaboration project with the IMSS Hospital Regional de Orizaba to face the pandemic caused by SARS-CoV-2.
- Multi-objective mathematical models were developed to address the hospital reconversion problem and the design of temporary care centers.

Universidad Autonoma del Estado de México, Graduate Department of Computer Science

Analysis and design of signals through numerical integration. [\[pdf\]](#)

Aug-Dic 2018

- Project for participation in the Summer of Scientific Research of the [Mexican Academy of Sciences](#) and extended for a bachelor dissertation topic.
- i) Direct current motor signals and ii) heart rate signals were analyzed using different mathematical approximation methods.

PROFESIONAL EXPERIENCE

Transportes Especializados de Cordoba CARUS ABELLA

Logistics and Transportation Intern

Aug-Dic 2018

AWARDS

- Long term English program sponsored by COMEXUS; I was awarded by COMEXUS-Fulbright to participate in this English program.
- Master's degree with Honorable Mention, the highest distinction awarded to students with outstanding performance in the TecNM system. December 10th, 2021.
- Master's degree scholarship, Awarded by the National Council of Science and Technology (CONACyT), 2019-2021.
- French scholarship and mobility preparation, I was awarded by the embassy of France in México to participate in a French language course completing levels A1.2, A1.3, and A2.1 at [IFAL](#), the latter is equivalent to a basic intermediate level.
- Courtesies for attending courses:
 - *Escuela de Modelación y métodos numericos*, awarded by CONACyT-CIMAT [\[pdf\]](#) [\[pdf\]](#)
 - International Meeting on Artificial Intelligence and its Applications, awarded by [CONACyT Artificial Intelligence Consortium](#)

MISCELLANEOUS

Enjoy playing sports: running, swimming, biking

Music: play guitar, electric bass, and piano

LANGUAGES

Spanish: Native

English: Fluent (DET 120 points; TOEFL: 583 points [\[pdf\]](#))

French: Basic (A2.1).

REFERENCES

Alberto Alfonso Aguilar-Lasserre \diamond alberto.al@orizaba.tecnm.mx

Tecnológico Nacional de México - Campus Orizaba

Profesor - Researcher of the Master in Industrial Engineering and PhD in Engineering Sciences

Member of the National Research System (SNI) Level 1

[GoogleScholar](#)

Carlos Francisco Vázquez-Rodríguez \diamond carlos.vazquezr@imss.gob.mx

Mexican Institute of Social Security - IMSS Head of Medical Benefits

Member of the National Research System (SNI) Level 1

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Tecnológico Nacional de México - Campus Orizaba

Profesor - Researcher of the Master in Industrial Engineering and PhD in Engineering Sciences

Member of the National Research System (SNI) Level 2

[GoogleScholar](#)