DR. IDALIA FLORES DE LA MOTA



OCCUPATIONAL FIELD

Tenure Professor
Simulation/optimization
Facultad de Ingeniería
Departamento de Investigación de Operaciones e Ingeniería Industrial

EDUCATION

University of Mexico

Ph.D Operations Research
Universidad Nacional Autónoma de México
1998

MEng in Operations Research, graduated with Honours
Universidad Nacional Autónoma de México
1990

Mathematician
Universidad Nacional Autónoma de México
1985

WORK EXPERIENCE

Researcher at PEMEX
Mexican Oil Company

Exploration and Production
January - December 2018

Tenure profesor
Universidad Nacional Autónoma de México

Operations Research Department
Engineering Faculty
2008 - to date

Associate professor
Universidad Nacional Autónoma de México

Operations Research Department
Engineering Faculty
1987-1989

PERSONAL INFORMATION

Address: Edificio Bernardo Quintana tercer piso Ciudad Universitaria Circuito Exterior, Alcaldía Coyoacán

idalia@unam.mx

PROJECTS

Estímulo del proceso de aprendizaje a través de tecnologías móviles para las materias de probabilidad y estadística
PAPIME PE112019 DGAPA UNAM
2018-2020

Accesibilidad y movilidad del transporte público urbano en la Ciudad de México, el caso de la delegación Tlalpan
PAPIIT IT102117 DGAPA UNAM Principal Investigator
2017-2019

50 años de Investigación de Operaciones en México
PAPIME PE107116 DGAPA UNAM
2016-2017

TRAINING

Supervision PhD Thesis
Graduated

Ph.D Operations Research
Metodología para la Identificación de Riesgos,
Oroselfia Sánchez Sánchez
UNAM
2022

Ph. D Operations Research
Metodología basada en redes complejas para desarrollar la estructura de los modelos matemáticos en los problemas de ruteo de vehículos, Gabriel Policroniades Chipuli
UNAM
2022

Ph.D Operations Research
Optimización y Simulación de la Distribución de los Hidrocarburo, Emilio Sampayo Trujillo
UNAM
2022

Ph.D Operations Research
Metodología para el manejo adecuado, eficiente y sostenible del agua, Adrielly Ramos Alvarez.
UNAM
2022 (Work in progress)

Ph.D Operations Research
Metodología para la determinación y reducción del consumo energético y de las emisiones del transporte público de pasajeros, Carmen Angelina García Cerrud
UNAM
2021 (Work in progress)

Supervision Master Thesis
Graduated

Master in Operations Research
Estudio de vulnerabilidad de una red de transporte público: caso de estudio Alcaldía Tlalpan
Verónica González Pacheco,
UNAM
2020

Master in Operations Research
Optimización de precios de una cartera de productos en un Análisis Conjoint
Blanca Esthela García Flores
2019

Master in Operations Research
Simulación de puertas de embarque en T1 del AICM
Francisco Javier Mendoza Flores
2018

Master in Operations Research
Redes complejas del flujo de pasajeros en aeropuertos mexicanos., Sashiko Shirai Reyna
2018

BOOKS & CHAPTERS

EDITOR

Applied Simulation and Optimization 2
"New Applications In Logistics, Industrial and Aeronautical Practice"

Springer
2017
ISBN 978-3-319-55810-3

Applied Simulation and Optimization: In Logistics, Industrial and Aeronautical Practice

Springer
2017
ISBN 978-3-319-15032-1

Guest Editor Special Issue Journal Case
Studies on Transport Policy, Journal of World Conference on Transport Research Society.
Mujica Mota,M., Flores De La Mota I., Nosedal J., Ochoa

Issue Journal
2020

AUTHOR

Algebra lineal y sus aplicaciones

Facultad de Ingeniería, UNAM
2021
ISBN 978-607-30-4139-3

Robust Modelling and Simulation: Integration of SIMIO with Coloured Petri Nets

Springer
2017
ISBN 978-3-319-53321-6

Modelos de Simulación usando SIMIO y redes de Petri

UNAM
2013
ISBN 978-607-02-4689-0
Language: Spanish.

AUTHOR IN CHAPTER

Simulation and Optimization for urban transport infrastructure

Flores De La Mota I, Segura E.
Estudios Iberoamericanos en Ingeniería de Tránsito, Transporte y Logística
UNAM, Instituto de Ingeniería
2020

Simulation-Optimization of the Mexico City Public Transportation Network: A Complex Network Analysis Framework

Huerta A., Flores De La Mota I.
Springer-Verlag
2017
ISBN 978-3-319-55809-7

ARTICLES IN JOURNALS

AUTHOR

Simulation models for public transportation: a state-of-the-art review

García-Cerrud C. Flores De La Mota I. Procedia Computer Science, Volume 217C
2023

Reaching sustainability through a smart water crisis-proof industry

Ramos Álvarez Adrielly Nahomee, Molina Soler Gloriveth de Fátima, Francisca Irene Soler Anguiano, Flores De La Mota I.

Procedia Computer Science 180
2021

Proposal for greenhouse gas emissions reduction in public passenger transportation

Carmen García Cerrud C. Flores De La Mota I., Soler Anguiano F.I., Case Studies on Transport Policy

Journal of World Conference on Transport Research Society
2021

Applying complex network theory to the analysis of Mexico City metro network (1969 – 2018)

Hernández González S., Flores De La Mota I. Case Studies on Transport Policy

Journal of World Conference on Transport Research Society
2021

Analysis, design and reconstruction of a VRP model in a collapsed distribution network using simulation and optimization

Policroniades Chipuli G., Flores De La Mota I. Case Studies on Transport Policy

Journal of World Conference on Transport Research Society.
2021

Complex networks analysis: Mexico's city metro system during the pandemic of Covid

Shirai Reyna S. Flores De La Mota I., Rodríguez Ordaz K. Case Studies on Transport Policy

Journal of World Conference on Transport Research Society
2021

State of the Art for the Optimization and Simulation of the Distribution of Hydrocarbons"

Emilio Sampayo Trujillo E., Flores De La Mota I.

International Journal of Combinatorial Optimization Problems, and Informatics, 10(3), Sep-Dec 2019, 59-71.
ISSN: 2007-1558

Wealth and income distribution: a review towards new trends

Lara de Paz J. Flores De La Mota I., Policroniades G., Shirai

International Journal of Social Science and Economic Research

ISSN: 2455-8834
2019

Model-based Methodology for Identifying Capacity Limitations in Airports: Mexico City Airport Case.

Miguel Mújica Mota M. Flores De La Mota I. Journal on Developments and Trends in Modelling and Simulation

ISBN Print 978-3-903024-78-6.
2019

Revisiting the Flaws and Pitfalls using Simulation in the Analysis of Aviation Capacity Problems
Mújica Mota M., Flores De La Mota I.
Case Studies on Transport Policy
2018

ARTICLES IN JOURNALS

AUTHOR

Optimisation and simulation of an e-bike manufacturing system: the case of a small assembly factory

González P., Huerta A., Flores De La Mota I.

Int. J. Service and Computing Oriented Manufacturing,
Vol. 3, Nos. 2/3
2018

The Vehicle Routing Problem Complex Network Analysis

PolicroniadesChípuliG. Flores De La Mota I., Sihirai ReynaS.

Journal of Applied Mathematics and Computation (JAMC)
2018

State of the Art of the Different Models of Transportation Most Used in the Supply Chain of Automotive Industry

Policroniades Chipuli G., Flores De La Mota I.

International Journal of Combinatorial Optimization Problems and Informatics
2017

Risks and Operational Research. The new challenges based on the approaches used

Sánchez Sánchez O., Flores De La Mota I.

International Journal of Combinatorial Optimization Problems and Informatics
2017

Modeling the Adoption of Sustainable Practices in the Supply Chain: A Game Theory Approach

Huerta A., Flores De La Mota I.

Journal of Advanced Management Science
2017

Numerical analysis of minimum cost network flow with queuing stations: the M/M/1 case

Hernández S., Flores De La Mota I.

Revista Electrónica Nova Scientia
ISNN 2007 - 0705
2017

ARTICLES IN INTERNATIONAL CONFERENCES

AUTHOR

Assignment model for courses online

Zárate Pérez A., Flores De La Mota I.

The 19th International Multidisciplinary Modeling & Simulation Multiconference - I3M
2022

A flow shop scheduling approach for the production-routing problem with complex setups Constraints

Cisneros Castañeda J.P. Flores De La Mota I.

The 19th International Multidisciplinary Modeling & Simulation Multiconference - I3M
2022

A multiobjective location-allocation model for day-care facilities planning

Luna Rojas M., Flores De La Mota I.

The 19th International Multidisciplinary Modeling & Simulation Multiconference - I3M
2022

Un modelo para el seguimiento de cursos de capacitación

Zárate Pérez A. Flores de La Mota I.
TICAL
2021

Simulation of elements of Industry 4.0 applied to the production processes of a company dedicated to the manufacture of plastic products.

A. M. Pérez Silva, V. Olvera Rodríguez, F. Soler Anguiano Flores De La Mota I.
2020

Complex network analysis: Mexico's city metro system Shirai S., Flores De La Mota I.
MULTILOG CONFERENCE
2019

Passengers public transport case: route 36: Central Taxqueña-puente de vaqueritos diagnosis

Garcia Cerrud C., Soler Anguiano F.I.,
MULTILOG CONFERENCE
2019.

Design of an automatic system of alert and flood measurement of the main roads of Mexico City

Perez Silva M., Olvera V., Flores De La Mota.I.
MULTILOG CONFERENCE
2019

Internet of things and industry 4.0 applied in Bicipuma bike-sharing system in UNAM-Mexico

Pérez Silva M., Olvera Rodriguez V., García Cerrud C., Soler Anguiano F. I., Flores de la Mota I.

The International Conference on Industry 4.0 and Smart Manufacturing
2019

Designing Human Mistake-Free Machine: a Mexico City Public Transport Commuters' Approach

Ramos Alvarez A., Soler Anguiano F.I., Flores De La Mota I., López Moncada J.

The International Conference on Industry 4.0 and Smart Manufacturing
Italy
2019

ARTICLES IN INTERNATIONAL CONFERENCES

AUTHOR

Complex network analysis: Mexico´s City Metro System

Shirai S., Flores. De La Mota I.

The 31st European Modeling & Simulation Symposium
Lisbon
2019

Simulation of the delivery system for the Bicipuma bike-sharing system in UNAM-Mexico

García Cerrud C., Pérez Silva M., Olvera Rodríguez V. Soler Anguiano F.I., Flores de la Mota I.

The 31st European Modeling & Simulation Symposium
Lisbon
2019

VRP complex network analysis and simulation

Policroniades Chípuli G., Flores de la Mota I., Lara de Paz J., Shirai Reyna S.

The 31st European Modeling & Simulation Symposium
Lisbon
2019

Households Income-Expenses network simulation

Lara de Paz J., Flores De La Mota I., Policroniades Chipuli G., Shirai Reyna S.

The 31st European Modeling & Simulation Symposium
Lisbon
2019

Simulation and Optimization of the Hidrocarburs Network

Sampayo Trujillo E., Flores De La Mota I.

The 15th European Modeling & Simulation Symposium
Budapest
2018

Complex networks of the air passenger traffic of Culiacan´s Airport

Shirai Ryna S., Flores De La Mota I.
The 15th European Modeling & Simulation Symposium,
Budapest
2018.

An Application of Complex Networks to the VRP

Policroniades G., Flores De La Mota I., Shirai Reyna S., Lara de Paz J.
MULTILOG
Mexico
2018

Sustainable urban transport:A diagnostic

Huerta A., Flores De La Mota I.

MULTILOG
Mexico
2018

CONSULTANCY ACTIVITY

Berumen Consultors
2017- To date

INTERNATIONAL INVITATIONS

Associate editor Simulation
https://journals.sagepub.com/editorial-board/SIM
2021

Body of scientific advisers of the doctoral program:
Doctorado de la Universidad de Santander, Panamá
2021

Industrial engineering advisory board Instituto Tecnológico de México Celaya
2019 to date

International Master's Committee MIPET Genoa Italy
2014 to date