

MEXICAN WORKSHOP ON FRACTIONAL CALCULUS

ACTIVITY SCHEDULE

7-9 October 2026

DATE

HOOR

TOPIC

9:00 - 10:00

INAUGURATION

10:00 - 11:00



PROF. DUMITRU BALEANU (ONLINE) **Plenary**

Lebanese American University, Lebanon
Modified singular fractional operators:
Theory and Applications

11:00 - 11:30

J. JUAN ROSALES

Universidad de Guanajuato
Applications of derivaties with non-
singular kernels

11:30 - 12:00



RENATO MONTALUISA (ONLINE)

Universidad San Francisco de Quito
Evolution type Fractional operator: A
Numerical Implementation Related to
FOPID Controllers

12:00 - 12:30

ROBERTO CARLOS BALCÁZAR ARAIZA

Universidad Autónoma de Yucatán
Fractional Theory of Curves Immersed in
Pseudo-Euclidean Spaces

12:30 - 13:00



PABLO MOREIRA (ONLINE)

Universidad Anáhuac Querétaro
Conformable Fractional Newton's Law of
Cooling for Extended Time Periods

13:00 - 13:30

OSCAR ALEJANDRO ANGELES-RAMIREZ

Universidad Iberoamericana
Finite-Time Decentralized Formation
Control of Multi-Agent Systems via a
Hybrid Switching General Multivariate
Conformable Fractional Framework

13:30 - 14:00



JUAN CARLOS NAJERA-TINOCO (ONLINE)

Universidad Autónoma de Guerrero
Artificial Neural Networks for growth
models with Hausdorff derivative

LUNCH

15:30 - 16:00

DAVID ALARCÓN GONZÁLEZ

Universidad Iberoamericana
Black-Scholes conformable model with
delay-induced memory effects for option
valuation.

16:00 - 16:30

DANIEL ALEJANDRO MELCHOR-AGUILAR

IPICYT
Some remarks on the stability region of
linear fractional delay differential
equations

16:30 - 17:00



JOSUÉ NEFTALI GUTIÉRREZ CORONA (ONLINE)

Universidad Politécnica Metropolitana de Hidalgo
A Generalized Conformable Variable
Transformation for Heat Conduction in
Functionally Graded Materials

7TH
OCTOBER

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PROF. DUARTE VALÉRIO (ONLINE) **Plenary**
University of Lisbon – Instituto Superior Técnico, Portugal
Fractional Order Dynamical Models:
Simple Rules for Identification and
Control from Step Responses

10:00 - 10:30

J. JUAN ROSALES
Universidad de Guanajuato
A consistent Gompertz tumor growth
model: fractional and conformable

10:30 - 11:00



RONNY CHALCO (ONLINE)
Universidad San Francisco de Quito
Fractional Weighted Convolution
Operators Applied to FOPID Controller
Implementation

11:00 - 12:00



PROF. JUAN E. NÁPOLES (ONLINE) **Plenary**
National University of the Northeast, Argentina
Local Fractional Calculus: Between
Criticisms and Applications

12:00 - 12:30

**RICARDO ENRIQUE PADILLA HERNÁNDEZ,
ALDO ANDRÉS DÍAZ JIMÉNEZ**
Universidad Anáhuac Querétaro
Thermal Equilibrium Between Finite
Reservoirs Using the Conformable
Derivative

12:30 - 13:00



NELSON RICARDO OJEDA (ONLINE)
Instituto de Matemática Aplicada – Universidad Nacional
del Litoral
An Inverse Problem for the Backward Heat
Equation with a \Psi-Caputo Time Derivative
and a Spectral Fractional Laplacian

13:00 - 13:30

JESÚS ENRIQUE ESCALANTE-MARTINEZ
Universidad Veracruzana
A multi-order fractional model for bat-
ectoparasite–human transmission with
environmental persistence

13:30 - 14:00

LAURA ROCÍO GONZÁLEZ RAMÍREZ
ESFM-IPN
Fractional-order stimulus-induced traveling
fronts of cortical synaptic activity

LUNCH

15:30 - 16:00



FERNANDO OLIVAR ROMERO (ONLINE)
Instituto Tecnológico y de Estudios Superiores de Monterrey
Fractional Time-Space Viscoelastic Wave
Equation with Memory: Cauchy Problem and
Green's Function

16:00 - 16:30

FRANCISCO HERNANDEZ-CABRERA
Universidad Autónoma de Nuevo León
Fractional Weibull Modeling of Survival,
Incidence, and Prevalence in Chronic
Diseases

16:30 - 17:00

**FERNANDO DANIEL HERNANDEZ-GUTIERREZ
(ONLINE)**
Universidad de Guanajuato
FAR-UNet: A Fractional-Order Skip-Attention
U-Net for Retinal Vessel Segmentation

8TH
OCTOBER

MEXICAN WORKSHOP ON FRACTIONAL CALCULUS

ACTIVITY SCHEDULE

7-9 October 2026

DATE

HOOR

TOPIC

9TH
OCTOBER

9:00 - 10:00



PROF. GUILLERMO FERNÁNDEZ ANAYA (ONLINE)

Plenary

Universidad Iberoamericana,
Ciudad de México, México

Advantages and Disadvantages of
Conformal Calculation in Applications

10:00 - 10:30



NAOUFEL HATIME (ONLINE)

Sultan Moulay Slimane University

Uniform-Mesh Schemes for Nonlinear ψ -
Caputo Differential Equations

10:30 - 11:00

JORGE RAMOS-GREZ

Pontificia Universidad Católica de Chile

Fractional generalization of the Beddoes-
Leishman-Sheng dynamic-stall model: non-
local memory as a substitute for visually
tuned empirical constants

11:00 - 11:30

GUILLERMO CHACÓN-ACOSTA

Universidad Autónoma Metropolitana Cuajimalpa

Effects of fractional memory and fractal
geometry in diffusion processes with
resetting

11:30 - 12:00



DUARTE VALÉRIO (ONLINE)

IDMEC, Instituto Superior Técnico, Universidade de Lisboa

Second-species non-commensurate
fractional order transfer function identified
from its step response

12:00 - 12:30



PEDRO ROMERO-MARTÍNEZ (ONLINE)

Universidad Veracruzana

Euler-Lagrange Conditions and Convexity for
Higher-Order Conformable Variational
Problems

12:30 - 13:00

FRANCISCO A. GODÍNEZ

UNAM

A Physically Interpretable Operational
Internal Clock for the ψ -Caputo Fractional
Derivative with Application to Bacterial
Disinfection Kinetics

13:00 - 13:30



JORGE ANTONIO MORALES BUENAVENTURA (ONLINE)

UAGRO

A generalization for the d'Alembert formulae

13:30 - 14:00

EDGAR HIRAM ROBLES SAUCEDA

Universidad de Guanajuato

Optimization and Experimental Comparison
of a Fractional-Order Controller Applied to an
Electrohydraulic System

LUNCH

15:30 - 16:00

FRANCISCO HERNANDEZ-CABRERA

Universidad Autónoma de Nuevo León

Fractional diffusion maps for nonlinear
analysis of high-dimensional datasets

16:00 - 16:30



JORGE ALBERTO CEDEÑO VAZQUEZ (ONLINE)

Universidad Michoacana de San Nicolás de Hidalgo

Fractional Miransky Scaling Law