STOCHASTIC MODELING AND UNCERTAINTY QUANTIFICATION (SMUQ)

July 8th -9th 2024

ETS Informática, Salón de Actos and Room 1E.01, Building 1E,

Universitat Politècnica de València, València, Spain

Webpage: https://imm.webs.upv.es/smuq/2024/home.html

Schedule

- Communications: 15 min (exposition) + 5 min (for questions).

Timetable

	Monday July 8th	Tuesday July 9th
9:00 9:20	Registration	Nikita Kopylov Joaquín Valencia Cristina Luisovna Pérez José Carlos R. Alcantud Ana Navarro Ioan-Lucian Popa
9:40 10:00	Opening	
10:20 10:40 11:00	Rubens Sampaio Tomás Caraballo Laura Villafuerte	
11:20 11:40	Coffe Break	Coffe Break
12:00 12:20 12:40 13:00 13:20 13:40	Sergio Torregrosa Silvia Carpitella Roberta de Queiroz Lima Marcos Llamazares Sorina Madalina Sferle Francisco Rodríguez J. Alberto Conejero	Clara Burgos Simón Hugo A. de la Cruz Eduardo Souza de Cursi
14:00 14:20 14:40 15:00 15:20		Closing of the Congress
15:40		Conference Lunch
16:00 16:20 16:40 17:00 17:20	Gilberto González-Parra Carlos Andreu-Vilarroig Lamia Hammadi Rubén Vicente Arévalo Yofre H. Garcia Saúl Díaz Infante	
17:40 18:00 18:20	Coffe Break	

Online Rooms

All the sessions of the congress will be streamed online using Microsoft Teams. Only an internet browser is required, but the free desktop application will provide a more stable connection. All participants are welcome.

- Salón de Actos: Link to join.
- Room 1E.01: Link to join.

Monday, July 8th - Morning

09:00 - 09:40	**REGISTRATION AND COLLECTION OF DOCUMENTATION**
09:40 - 10:00	**OPPENING OF THE CONGRESS** Salón de Actos ETSINF Building 1E Juan Carlos Cortés, Rafael J. Villanueva, Rubens Sampaio and Eduardo Souza de Cursi
	REGULAR SESION I Room: 1E.01 Charman: Juan Carlos Cortés
10:00 - 10:20	**Rubens Sampaio** **Pontifícia Universidade Católica do Rio de Janeiro, Brazil** Stochastic analysis of the influence of an uncertain unbalance in the dynamics of vertical axis washing machines Abstract
10:20 - 10:40	**Tomás Caraballo** **Universidad de Sevilla, Spain** Approximating the stochastic dynamics of a PDE model by using colored noise Abstract
10:40 - 11:00	**Laura Vilafuerte Altuzar** **University of Texas at Austin, USA** The role of the Laplace transform in solving linear fractional differential equations with random non-homogeneous parts Abstract
11:00 - 11:40	**COFFEE BREAK** **Cafetería La Vella**
	REGULAR SESION II Room: 1E.01 Chairman:*Rafael Villanueva Micó*
11:40 - 12:00	**Sergio Torregrosa** **Arts et Métiers Institute of Technology, France** Parametric Metamodeling Based on Optimal Transport Applied to Uncertainty Evaluation Abstract
12:00 - 12:20	**Silvia Carpitella** **California State University Northridge, USA** Uncertain evaluations in decision-making models for supply chain sustainability Abstract

12:20 - 12:40	**Roberta de Queiroz Lima** **Pontifícia Universidade Católica do Rio de Janeiro, Brazil** Analysis of the stochastic computational cost of a Monte-Carlo simulation Abstract
12:40 - 13:00	**Marcos Llamazares López** **Universitat Politècnica de València, España** Toward the randomization of second-order linear time-invariant models appearing in control systems Abstract
13:00 - 13:20	**Sorina Madalina Sferle** **Universitat Politècnica de València, España** Analysis of a parametrization of the randomized Blumberg model with applications to modeling tumor growth Abstract
13:20 - 13:40	**J. Alberto Conejero** **Universitat Politècnica de València, Spain** Anomalous diffused motion changes in single-particle tracking experiments Abstract
13:40 - 14:00	**Francisco Rodríguez** **University of Alicante, Spain** Transient and asymptotic distributions of vegetation under recurrent stochastic fires Abstract

Monday, July 8th - Afternoon

	REGULAR SESION III Room: 1E.01 Chairman *Gilberto González*
15:40 - 16:00	**Gilberto González Parra** **New Mexico Tech University, USA** Mathematical modeling of COVID-19 pandemic using stochastic differential equations Abstract
16:00 - 16:20	**Carlos Andreu-Vilarroig** **Universitat Politècnica de València, Spain** Analysis of the structural and practical identifiability of an antibiotic resistance model that depends on antibiotic consumption Abstract
16:20 - 16:40	**Lamia Hammadi** **National School of Applied Sciences, Chouaib Doukkali University, Morocco** Uncertainty Quanti cation for State Estimation in Transmission Dynamics of Infectious Diseases Abstract
16:40 - 17:00	**Rubén Vicente-Arévalo** **Universitat Politècnica de València, Spain** Anomalous diffusion vs. stock volatility through machine learning Abstract
17:00 - 17:20	**Yofre Hernan Garcia** **Universidad Autonoma de Chiapas, México** Stochastic perturbation of SIS model with bounded time-dependent parameters: formulation and numerical approximation Abstract
17:20 - 17:40	**Saúl Díaz-Infante** **CONAHCYT-Universidad de Sonora, México** A model for optimizing vaccine usage through a sequence of decisions to manage stock uncertainty. Abstract
17:40 - 18:00	**COFFEE BREAK** **Cafetería La Vella**

Tuesday, July 9th - Morning

	REGULAR SESION IV Room: 1E.01 Chairwoman: *Clara Burgos*
09:00 - 09:20	**Nikita Kopylov** **Universitat Politècnica de València, Spain** Fitting of the log-normal model for short-term prediction of stock prices Abstract
09:20 - 09:40	**Joaquin Francisco Valencia Sullca** **Universitat Politècnica de València, Spain** Probabilistic Analysis of Linear Differential Equations with Additive Delta-Correlated Process Abstract
09:40 - 10:00	**Cristina Luisovna Pérez** **Universitat Politècnica de València, Spain** Probabilistic study of a class of separable random differential equations Abstract
10:00 - 10:20	**José Carlos R. Alcantud** **Universidad de Salamanca, España** Extensions of exponential and hyperbolic discounting to fuzzy integrals by 2-additive fuzzy measures Abstract
10:20 - 10:40	**Ana Navarro Quiles** **Universitat de València, Spain** Random solution of a second-order homogeneous linear differential equation with complex coefficients Abstract
10:40 - 11:00	**Ioan-Lucian Popa** **"1 Decembrie 1918" University of Alba Iulia, Romania** On Tempered Exponential Dichotomy for Random One-Sided Systems Abstract
11:00 - 11:40	**COFFEE BREAK** **Cafetería La Vella**

REGULAR SESION V

Room: 1E.01
Chairwoman: *Ana Navarro*

11:40 - 12:00	**Clara Burgos Simón** **Instituto Universitario de Matemática Multidisciplinar. Universitat Politècnica de València, Spain** Computing a Numerical solution of the Random Fractional Laguerre-type Differential Equations: moments and density Abstract
12:00 - 12:20	**Hugo de la Cruz** **School of Applied Mathematics. FGV, Brazil** A simplified weak method for the response analysis of stochastic vibration systems with nonlinear adjustable stiffness Abstract
12:20 - 12:40	**Eduardo Souza de Cursi** **INSA Rouen Normandie, France** Infinite Dimensional Objects and UQ Abstract
12:40 - 14:00	**CLOSING OF THE CONGRESS** Salón de Actos ETSINF Building 1E
14:00 - 16:00	**LUNCH OF THE CONFERENCE** Cafetería La Vella

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