Daily Schedule for DySyX'2025

Day 1: May 22, 2025. Morning		
Time	**DETAILED SCHEDULE**	
8:00-9:00	Registration : **Amphi Rouge**	
9:00-9:45	Opening Ceremony : **(Amphi Rouge)** Mot du Doyen FSK : **Prof. Mohamed Ebn Touhami** Mot du Co-Responsable PHC (LMAH) : **Prof. Arnaud Ducrot**	
9:45-10:15	Coffee Break & Photo Op	
10:15 – 11:15	Plenary I **(Amphi Rouge)** Keynote Speaker: **Prof. M. A. Aziz Alaoui** Title: Exposé de vulgarisation, Mathématiques et Art : Tétratypologie de Poincaré	Chair: Prof. Ezzinbi Khalil
11:20 – 12:00	Plenary II **(Amphi Rouge)** Keynote Speaker: **Prof. Quentin Griette** Title: Asymptotic behavior of an epidemic model with infinitely many variants	Chair: Prof. Ezzinbi Khalil

Special Sessions : A

Room : Informatique	**Special Session : A1. Chair : M. EL Fatini/B. Berrhazi**	Speaker
12:00 – 12:15	On stochastic Gilpin Ayala population model with Markovian switching	Youssef El Khalfi
12:15 – 12:30	Stochastic Optimal Control Problems with Jump Diffusion and Application.	Driss Bouggar
12:30 – 12:45	RBDSDEs Driven by Teugels Martingales Associated to a Lévy Process with Discontinuous Barrier	Badr-Eddine Berrhazi
12 :45-13 :00	A Mathematical Model for the Impacts of Vaccination and Quarantine on the Dynamics of COVID-19 Pandemic: Deterministic and Stochastic Analysis	Marya Sadki
Room :M7	**Special Session : A2. Chair : Aziz Alaoui**	Speaker
12:00 – 12:15	Small Amplitude Periodic Solutions in a Virotherapy Model with Time Delay	Fatiha Najm
12:15 – 12:30	Impact of Water Infiltration on the Emergence of Banded Vegetation in Semi-Arid Hillside Regions	Souhail Roman
12:30 – 12:45	Hopf bifurcation in heamatopoeitic cells and normal forms	Oubaiss Idder
12 :45-13 :00	A Dynamical model for the epidemiological interaction between COVID-19 and Tuberculosis	Ibtissam Benamara

Room :M8	Special Session : A3. Chair : L. Boukrim	Speaker
12:00 – 12:15	Lipschitz conditions for the Fourier Laguerre-Bessel transform	Larbi Rakhimi
12:15 – 12:30	Numerical solutions of a reaction diffusion equation using time splitting methods and application to population dynamics	Salaheddine Maaqoul
12:30 – 12:45	TPFA finite volume scheme for the two-dimensional viscous Burgers' equation	Zaroual Bazirha
12 :45-13 :00	A meshfree approach using locally supported radial basis functions for 3D advection-diffusion and 2D shallow water equations with Neumann boundaries	Lanceni Keita
Room :M9	**Special Session : A4. Chair : M. Kaicer**	**Speaker**
12:00 – 12:15	On a Nonlocal Fractional Elliptic System under Robin Boundary Conditions	Houria El-Yahyaoui
12:15 – 12:30	Conformable Spatiotemporal PDEs: Existence of Chaos and Hypercyclicity	Manal Menchih
12:30 – 12:45	Leray-Schauder Type Solutions for a Nonlocal Problem in the New s(·, ·) - Fractional Musielak-Sobolev Space Ws(x,y)LΦx,y (Ω)	Driss Baghba
12 :45-13 :00	Analogues of the Donoho-Stark Uncertainty Principle for Quaternion Fourier Transform	Abdellah El Hyat
Room :Math	**Special Session : A5. Chair : R. Echarghaoui**	**Speaker**
12:00 – 12:15	New multiplicity results for critical p-Laplacian problems	Abdeslam Elyahyai
12:15 – 12:30	Ground state solution for a critical Schrodinger equation involving the fractional p-Laplacian operator	Zakaria Zaimi
12:30 – 12:45	An Elliptic Equation Involving Critical Hardy-Sobolev Exponents and Concave Nonlinearities	Mohssine El Mansour
12 :45-13 :00	p-Laplacian Problem with Multiple Hardy-Sobolev Critical Exponents in R^N	Khalid Bouabid

Day 1: May 22, 2025. Afternoon		
Time	**DETAILED SCHEDULE**	
15:00 – 15:40	Plenary III **(Amphi Rouge)** Keynote Speaker: **Prof. Ezzinbi Khalil** Title: Center manifold and stability in critical cases for some partial functional differential equations	Chair: Prof. Aziz Alaoui
15:40 – 16:10	Break	

Special Sessions : B

Room : Informatique	**Special Session : B1. Chair : M. EL Fatini/B. Berrhazi**	Speaker
16:15– 16:30	Stochastic Epidemic Models with Saturated Incidence and Logistic Population Growth	Aiman Mdaghri
16:30 – 16:45	Study of a Stochastic SEIR Epidemic Model with Lévy Jumps and a saturated incidence rate	Nafia Aghoutane
16:45 – 17:00	Stochastic Dynamics of a Heroin Use Model with Relapse and General Nonlinear Incidence Rate	Khadija Bencheikh
17:00-17:15	Moment method estimation for stochastic differential equations with random effects based on continuous observations	Mohammed Er-Rachidi
17:15-17:30	Navigating Zero Returns: A Comprehensive Comparative Analysis of Log-GARCH and Stochastic Volatility Models in Financial Econometrics	Chegdal Sara
17:30-15:45	Effects of Tumor-Associated Macrophages on the Tumor-Immune System under Stochastic Perturbations	Khaoula Errami
15 :45- 18 :00	Modélisation mathématique de la dynamique du cancer en réponse à l'immunothérapie et à la virothérapie : Approches déterministes et stochastiques	Elkaf Mariem
18 :00-18 :15	The Extinction and Persistence in mean for stochastic SIRH epidemic model with relapse, healing and vaccination using L´evy noise perturbation	Mohamed Mouad Abdeslami
18 :15-18 :30	Parameter estimation of a stochastic SVIS epidemic model	Belgraoui Youssef
Room :M7	**Special Session : B2. Chair : A. El Gourari**	Speaker
16:15– 16:30	Investigation of the Performance of a Flow Energy Harvester Incorporating Time Delay Effects	Zakaria Ghouli
16:30 – 16:45	Intelligence artificielle et neuroéducation : vers des plateformes d'apprentissage adaptatif basées sur la modélisation cognitive et la prédiction d'erreurs	Yalid Amal
16:45 – 17:00	Exploring the Allee Effect in a Within-Host Bacterial Infection Model	Ibrahim Nali
17:00-17:15	Bifurcation Analysis of an Age-Structured HIV Model Incorporating viral loss, Latent Infection and Logistic Growth	Hanane Hmarrass
17:15-17:30	Stress phenomena with optimal control: Mathematical model and simulation	Khouldi Yassine
17:30-15:45	Stability analysis of an extended age stratified SEIRS model with case in intensive unit care	Hamidou A Diallo

15 :45- 18 :00	Global dynamics of a within-host viral model with immune response and two delays	Fatima Boudchich
18 :00-18 :15	Analysis of Optimal Control Strategies for Multidrug-Resistant Tuberculosis	Laouina Aziza
18 :15-18 :30	An efficient algorithm for the inverse of a block tridiagonal matrix	Talibi Boutaina
Room :M8	**Special Session : B3. Chair : A. Kacha**	Speaker
16:15– 16:30	On the Spectral Decomposition for Partial Functional Differential Equations	Abdallah Afoukal
16:30 – 16:45	Quantitative study for some partial differential inclusions with memory	Jaouad El Matloub
16:45 – 17:00	\psi-Caputo Fractional Derivative in Coupled Nonlinear Impulsive Hybrid Differential Systems with Mixed Perturbations	Fatima-Ezzahra Bourhim
17:00-17:15	A stability result for a nonlinear Neumann boundary value problem : probabilistic approach	Soufiane Mouchtabih
17:15-17:30	Global Well-Posedness For The Critical 2d Dissipative Quasi-Geostrophic Equation	Fatima Ouidirne
17:30-15:45	Transcendence of some p adic continued fractions	Sara Ahallal
15 :45- 18 :00	Viability for a class of partial differential equations with non dense-domain	Yassin Staili
18 :00-18 :15	Multiple positive solutions for mixed local and nonlocal elliptic p-Laplace equations with logarithmic and singular nonlinearities	Mustapha Idrissi
18 :15-18 :30	On the fractional Musielak Sobolev spaces with variable s(.,.)-Order : Results and Applications	Mohammed Srati
18 :30-18 :45	Comparison Principales With Applications To Linear And Nonlinear Power Fractional Differential Equations	Id-Said Zakaria
Room :M9	**Special Session : B4. Chair : Y. Omari**	Speaker
16:15– 16:30	Deep learning and optimal control methods for fractional epidemiological model	Hassan Aghdaoui
16:30 – 16:45	Optimal control strategies for a fractional leprosy model with environmental bacterial load	Sara Bouda
16:45 – 17:00	Unveiling memory-driven dynamics: Fractional calculus and microswimmer trajectories in 1D shear flow	Ghizlane Diki
17:00-17:15	Fractional-order modeling of parasite-produced marine diseases with memory effect	L'kima Safae
17:15-17:30	Fractional PDE Modeling of an Epidemiological System: Optimal Control and Spatial Distribution	Achraf Zinihi
17:30-15:45	Novel Insights Into Cassava Mosaic Disease Using Caputo Fractional Derivative: Modeling And Analysis	Nezha Kamali
15 :45- 18 :00	Stability and Persistence in a two-Strain epidemic model with nonlinear transmission on heterogeneous networks	Hakim Habri
18 :00-18 :15	Implications of continuous immunity waning in a heterogeneous population	Mohamed El Khalifi

18 :15-18 :30	Adaptive Clustering Through Fractional Probabilistic Self-Organizing Maps and Genetic Optimization	Safaa Safouan
Room :Math	**Special Session : B5. Chair : R. Echarghaoui**	Speaker
16:15– 16:30	Positive solutions to multi-critical elliptic problems	Rachid Echarghaoui
16:30 – 16:45	Infinitely many solutions for an elliptic equation in divergent form with critical Sobolev exponent and concave-convex nonlinearity	Masmodi Mohamed
16:45 – 17:00	A Study of Multiple Solutions for a Bi-Nonlocal Fractional Kirchhoff Equation Involving Variable Order	Mazan Hatim
17:00-17:15	Multiple Solutions to the Fractional (p, q)-Laplacian Equations involving the critical exponents	Sersif Rachid
17:15-17:30	The effect of topology on the number of positive solutions for upper critical Choquard equation	Mohamed Belhaj Kharmoudi
17:30-15:45	Multiple positive solutions for a critical fractional p-Laplacian system with concave nonlinearities	Moussa Khouakhi
15 :45- 18 :00	An analog of Hardy's theorem for the second Hankel-Clifford transform	Hasnaa Lahmadi
18 :00-18 :15	Analysis of a ψ-Hilfer Fractional Kirchhoff Equation in a New Fractional Orlicz Space	Ayoub Kasmi
18 :15-18 :30	A Strongly Coupled Sub-Laplacian System on the Heisenberg Group H1	Abdelouhab Hatimi

Day 2: May 23, 2025. Morning		
Time	**DETAILED SCHEDULE**	
09:00 – 09:40	Plenary IV **(Amphi Rouge)** Keynote Speaker: **Prof. Redouane Qesmi** Title: State-Dependent Delays: A Gateway to Complex Dynamics	Chair: Prof. Cyrille Bertelle
09:40 – 10:20	Plenary V **(Amphi Rouge)** Keynote Speaker: **Prof. Arnaud Ducrot** Title: Mathematical modelling and analysis of the adaptive dynamics in mosquito populations: Uniform persistence of malaria infection	Chair: Prof. Cyrille Bertelle
10:20-10:50	Break	

Special Sessions : C

Room : Informatique	**Special Session : C1. Chair : M. EL Fatini/B. Berrhazi**	Speaker
10:50 – 11:05	Extinction, Ergodicity, and Stationary Distribution of an SEI Epidemic Model with Stochastic Perturbation	Karimine Abdelatif
11:05 – 11:20	A study of a delayed stochastic SIR model with general incidence and logistic growth	Khaoula Taki
11:20 – 11:35	Stochastic epidemic model with relapse	Layla Basri
11 :35-11:50	Long time behaviour and quasi-density function for a stochastic epidemic model with relapse and reinfection	Meryem Benazzouz
11:50-12 :05	Epidemic Threshold and Mathematical Analysis of a Stochastic SIRS Model with Cure and General Incidence Rate in a Population with Varying Size	Lakhal Mohammed
12:05-12:20	Dynamical behaviors of a stochastic epidemic model with the Ornstein-Uhlenbeck process	Taki Regragui
12 :20-12 :35	Dynamical behavior and sensitivity analysis of a stochastic SIR epidemic model with vaccination	Mohammed Semlali
12 :35-12 :50	Finite-time stability analysis and control of stochastic SIR epidemic model: A study of COVID-19	Outaik Mohamed
Room: M7	**Special Session : C2. Chair : A. Ducrot**	Speaker
10:50 – 11:05	A mathematical study of combined treatments for breast cancer	Hassnaa Akil
11:05 – 11:20	Optimal Control of a Reaction-Diffusion Problem: SIR Epidemiological Model	Jamal Ballahi
11:20 – 11:35	A Mathematical Model for Epidemic Dynamics with Multiple Vaccines, Age-Structured Strategies, and Parameter Estimation	Abdellah Ouakka
11 :35-11:50	Optimal control strategies for drug abuse: A reaction-diffusion approach to managing the spread of drug use	Nassira Madani
11:50-12 :05	Dynamics of an SVIHR Model Incorporating Vaccination Age, General Nonlinear Incidence, Relapse, and Infection Due to Vaccine Failure	Soufiane Bouzalmat

12:05-12:20	Bridging Mathematical Epidemiology and Chemical Reaction Network Theory: A Novel Perspective	Rim Adenane
12 :20-12 :35	Optimal control for the complication of type 2 diabetes and obesity:the role of awarness and treatment	Yacine Benchekh
12 :35-12 :50	About the uniqueness of approximate numerical solutions of scalar conservation laws with a non Lipschitz flux function in an infinite space domain	Mohamed Karimou Gazibo
Room :M8	**Special Session : C3. Chaire : R. Qesmi**	Speaker
10:50 – 11:05	Calabi-Yau Dynamical System and Black Hole Physics	Bouhouch Abderrahim
11:05 – 11:20	Reflections on the relationship between chaos and randomness	Abderrahim Aslimani
11:20 – 11:35	V -sets and the property (V LD) in Banach spaces	Abderrahman Retbi
11 :35-11:50	Local integrability and Riesz measure of G(·)-superharmonic functions	Hicham Eddaoudi
11:50-12 :05	Log-volatility Models for Modelling Financial Return Series in the Presence of Zeros: a Comparative Study	Abdeljalil Settar
12:05-12:20	A Descriptive Overview of Rammed Earth	Ayoub Bilad
12 :20-12 :35	A Finite Element-Based Model for Predicting Springback in Rotary Draw Tube Bending of Metallic Alloys	Manal Touri
12 :35-12 :50	L'application de l'oxyde cuivreux Cu2O dans le domaine photovoltaïque Qui s'inscrit pleinement dans une démarche de développement durable	Saadiya Benatmane
Room: M9	**Special Session : C4. Chair : Q. Griette**	
10:50 – 11:05	Analysis of Mild Solutions for Fractional Differential Inclusion with Nonlocal Conditions Involving the \psi-Caputo Derivative	Mahacine Malouh
11:05 – 11:20	Parabolicity and Regularity in Volterra Integro-Differential Equations	Zahidi Khadija
11:20 – 11:35	Fractional Navier-Stokes Equations: Existence, Uniqueness, and Optimal Control	Mohammed El Alaoui
11 :35-11:50	Existence of solutions for some nonlocal elliptic problems	Farah Balaadich
11:50-12 :05	Strong and weak stabilization of inhomogeneous Semilinear systems by bilinear control in Banach Space	El Alami Abdessamd
12:05-12:20	Approximate controllability for impulsive neutral semilinear evolution equations with nonlocal conditions	Touria Karite
12 :20-12 :35	Existence and multiplicity of positive solutions for an elliptic system deriving from strongly coupled critical terms and concave nonlinearities	Mohamed Hatimi
12 :35-12 :50	Global Behavior, Extinction, and Persistence of Solutions to a Fast Diffusion p-Laplace Equation with Logarithmic Nonlinearity	Hajar Deai

Room: Math	Special Session : C5. Chair : N. Bounader	Speaker
10:50 – 11:05	2-K-frames in 2-Hilbert spaces	Tatouti Samira
11:05 – 11:20	Nonlinear approximation with frames	Rossafi Mohamed
11:20 – 11:35	Some properties of generalized frames	Abdellatif Lfounoune
11 :35-11:50	Some properties of woven b-frames	Elhoucine Ouahidi
11:50-12 :05	On controlled K-g-Fusion Frames within Hilbert C ∗-Modules	Sanae Touaiher
12:05-12:20	Wold-type Decomposition for doubly commuting n−tuples	Naainia Imane
12 :20-12 :35	Notes on o-minimal structures	Mourad Berraho
12 :35-12 :50	On the convergence of Fourier-Dunkl series on the interval [−1, 1]	Othman Tyr

Day 3: May 24, 2025. (Amphi Rouge)	
Time	**Formation Python par : Prof. Cyrille Bertelle**
09:00 – 10:40	Présentation synthétique dur Python, Numpy, SciPy et Matplotlib avec supports sous la forme de Jupyter Notebooks
10:40-11:00	Break
11:00 – 12:40	Etudier et simuler en Python des extensions des modèles épidémiologiques traitant des problèmes de confinement, vaccination, saturation des hôpitaux
12:40-14:20	Break
14:20 – 16:00	Présenter le déploiement des modèles épidémiologique sur réseaux et montrer une implémentation en Python
16:00-16:20	Break
16:20 – …..	Laissés aux participants pour manipuler le modèle en réseau en l'adaptant aux différentes extensions