F2MD

Franco-Moroccan Mathematics Days

International Mathematics Day
Mathematics for everyone and everywhere

Faculty of Sciences - Tetouan, Abdelmalek Essaadi University

March 13-16, 2023

Parallel Sessions on Topics:

Nonlinear Analysis and Applications
Numerical Analysis, Modeling and Optimization
Algebra, Functional Analysis and Applications
Statistics, Probability and Operational Research
Innovation and Didactics of Mathematics

Honor Committee

Bouchta El Moumni, President of Abdelmalek Essaadi University
Christophe Fouqueré, President of Sorbonne Paris Nord University
Jamila El Alami, Head of CNRST
Abdellatif Moukrim, Dean of Faculty of Sciences-Tetouan
Bruno Manil, Head of Galilée institute

Training and Workshops on

Scientific Mediation of Mathematics

Keynote Speakers

Aziz Alaoui	Le Havre Normandy University, France
Khalil Ezzinbi	Cadi Ayyad University, Morocco
El Amin Kaidi	Almeria University, Spain
Olivier Lafitte	Montreal University, Canada
Bastien Mallein	Sorbonne Paris Nord University, France
Mostafa Mbekhta	Lille University, France
Christian Mercat	Claude Bernard Lyon 1 University, France
Benoît Rittaud	Sorbonne Paris Nord University, France
Mohammed Seaid	Durham university, England
Laurent Vivier	Paris Diderot University, France

Paying Tribute to

Prs. Layachi Imlahi, Abdelmalek Bouanane and Abdelilah Gmira

Chairs

Arij Bouzelmate, FS-UAE
Benoît Rittaud, USPN

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KEYNOTE SPEAKERS

Aziz Alaoui	Le Havre Normandy University, France
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PAYING TRIBUTE TO

Prs. Layachi Imlahi, Abdelmalek Bouanane and Abdelilah Gmira

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Franco-Moroccan Mathematics Days

1st edition
on the occasion of the
International Mathematics Day
Under the theme
Mathematics for everyone and everywhere
Abdelmalek Essaadi University- Faculty of Sciences of Tétouan
March 13-16, 2023

Greater global awareness of mathematical sciences and a strengthening of their teaching, as well as popularization, are vital to address many challenges of tomorrow and to improve the quality of life in both developed and developing countries. That is why, in 2019, UNESCO made the 14th March of each year the "International Day of Mathematics", also known as the "pi-day", π being one of the world's most widely-known mathematical constants, whose value is close to 3.14.

In this context, the Abdelmalek Essaadi University and the Faculty of Sciences of Tetouan, in cooperation with the Sorbonne Paris Nord University and the International Association AlPaGe, organize the first edition of the French-Moroccan Mathematics Days. During these days will be held a variety of scientific activities involving training, workshops, and international conferences on scientific mediation, applied mathematics, innovation and didactics of mathematics. The last day will be a cultural wealth of north Morocco discovery.

The event will be an opportunity to build bridges between mathematical communities, reinforce existing international cooperation's and initiate new ones, hence contributing to the outreach of all involved parties.

LOCAL ORGANIZING COMMITTEE

Name	Affiliation	Name	Affiliation
Soumaya Afilal	FS-UAE	Ismail Jamiai	FS-UAE
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Boubker Azeroual	ENSATE-UAE	Soufiane Mezroui	ENSAT-UAE
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Zine-El-Abidine Guennoun	FS-UM5	Abderrahim Zertiti	FS-UAE
Aziz Hadi	FS-UAE	Fouad Zitan	FS-UAE
Abdelilah Hakim	FST-UCA	Mohamed Zohry	FS-UAE

F2MD
Franco-Moroccan Mathematics Days

Formation à la Vulgarisation des Mathématiques

à l'occasion de la journée Internationale des Mathématiques

Faculté des Sciences-Tétouan, Université Abdemalek Essaadi
Lundi 13 Mars 2023

La vulgarisation des mathématiques est une composante importante de toute stratégie de développement des sciences et des techniques. Donner à voir le sens, la beauté et l'utilité des mathématiques permet d'attirer les jeunes talents vers les carrières scientifiques et technologiques, et permet à tous (et en particulier aux décideurs et aux faiseurs d'opinion) de mieux cerner les enjeux autour de domaines appelés à jouer un rôle de plus en plus moteur dans nos sociétés.

La formation « vulgarisation des mathématiques » s'adresse aux personnes disposant de compétences mathématiques si possible niveau master ou équivalent et désireuses de contribuer à leur diffusion dans le grand public marocain par le biais de divers canaux (textes, conférences, ateliers, forums, salons…). Elle sera une première pierre à un déploiement progressif d'un maillage territorial, d'abord régional puis, à terme, national, ainsi que du développement de coopérations internationales sur la vulgarisation des mathématiques.

Le public visé est notamment celui :

- **des enseignants de tous niveaux scolaires ou universitaires**, qui souhaitent intégrer de nouveaux matériaux pédagogiques à leurs enseignements et/ou contribuer à la diffusion des mathématiques au-delà de leur salle de classe;
- **des mathématiciens et utilisateurs professionnels des mathématiques** (chercheurs, doctorants, ingénieurs…) intéressés par la promotion de leur travail et de leur métier à un plus large public;
- **des journalistes** (télévision, radio, journaux, internet…) désireux de faire partager à leur public le plaisir d'un savoir mathématique à la fois accessible, intéressant et utile.

La présentation sera faite par l'association internationale AIPaGe, représentée par
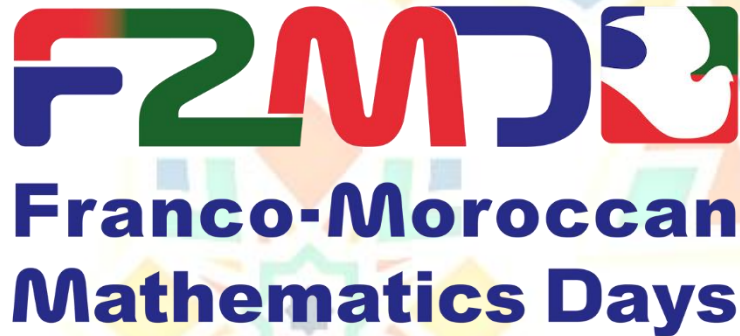
Benoît RITTAUD
USPN

Christian MERCAT
UCBL1

Une attestation de participation sera délivrée à la fin de la formation.

F2MDAYS'23 PROGRAM

Franco-Moroccan Mathematics Days

On the occasion of
International Mathematics Day
under the theme
Mathematics for everyone and everywhere
Faculty of Sciences - Tetouan, Abdelmalek Essaadi University
March 13-16, 2023

Monday, March 13, 2023

08:30 – 09 :30	**Registration and welcome**
09:30 – 11 :00	*Formation à la Vulgarisation des Mathématiques - I* *Benoît Rittaud*
11:00 – 11 :30	**Coffee Break**
11:30 – 13 :00	*Formation à la Vulgarisation des Mathématiques - II* *Christian Mercat*
13 :00 – 15 :00	**Lunch**
15 :00 – 16 :30	*Parallel Sessions :* **Room 1** *: Nonlinear Analysis and Applications* **Room 3** *: Algebra, Functional Analysis and Applications* **Room 2** *: Numerical Analysis, Modeling and Optimization* **Room 4** *: Statistics, Probability and Operational Research*
16 :30 – 17 :00	**Coffee Break**
17:00 – 18 :30	*Parallel Sessions :* **Room 1** *: Nonlinear Analysis and Applications* **Room 3** *: Algebra, Functional Analysis and Applications - Part I* **Room 2** *: Numerical Analysis, Modeling and Optimization* **Room 4** *: Algebra, Functional Analysis and Applications - Part II*
	End

Parallel Sessions I

Session 1: Nonlinear Analysis and Applications Room : 1		Chairs
15 :00 – 15 :15	A quantitative and qualitative study for some partial differential inclusions in α-norm. *Jaouad El Matloub and Khalil Ezzinbi*	Arij Bouzelmate Khalil Ezzinbi Olivier Lafitte
15:15 – 15:30	An efficient algorithm based on particle swarm optimization for solving the Cauchy problem for Helmholtz equation. *Jamal Daoudi and Chakir Tajani*	
15:30 – 15:45	On the positive solutions of a nonlinear elliptic equation with a gradient term. *Mohamed El Hathout and Arij Bouzelmate*	
15:45 – 16:00	Exponential stabilization for a class of time delay bilinear systems of neutral type. *Atmane El Houch*	
16:00 – 16:15	On the study of some nonlinear and noncoercive elliptic problem with Neumann boundary condition. *Mohamed Badr Benboubker, Hassane Hjiaj and Hayat Benkhalou*	
16:15 – 16:30	Weighted Fractional Ostrowski,Trapezoid,and Grüss type inequalities on time scales. *Mohamed El Amri and Mohamed Lahrouz*	
Session 2 : Numerical Analysis, Modeling and Optimization Room : 2		Chairs
15 :00 – 15 :15	Generation of 2-d unstructured mesh using a novel algorithm for node placement. *Mohamed Mrini, Amal Bergam and Anouar El Harrak*	Amal Bergam Youness El Yazidi Naji Yebari
15:15 – 15:30	Modeling of Tumor Growth and Drug Resistance in Gastrointestinal Stromal Tumor Metastases to the Liver. *El Hammani Mohammed, Douiri Sidi Mohamed and El Harraki Imad*	
15:30 – 15:45	A new approach to improve optimizer performance through algorithms diversification for image reconstruction in diffuse optical tomography. *Nada Chakhim, Mohamed Louzar and Mohammed Alaoui*	
15:45 – 16:00	Feedback optimal control of a Multi-Objective problem modeling the wastewater treatment. *Hicham Hakimi and Mustapha Serhani*	
16:00 – 16:15	Infinitely many solutions for a class of fractional equations via variant fountain theorems. *Abdelilah Azghay, Mohammed Massar and Abderrahim El Mhouti*	
16:15 – 16:30	Numerical approximations for fractional equations in $\mathbb{R}$ via the new method of fixed point. *Radouane Azennar, Sophia Bentahar and Driss Mentagui*	
Session 3 : Algebra, Functional Analysis and Applications Room : 3		Chairs
15 :00 – 15 :15	The duality problem for the class of order weakly demicompact operators and some properties on order weakly* demicompact operators. *El Aloui Abdennabi, Bouras Khalid*	El Amin Kaidi Mohamed Louzari Benoît Rittaud
15:15 – 15:30	N-tuple sum analogues for Ramanujan-type congruences. *Mohamed El Bachraoui*	
15:30 – 15:45	On Pseudo-Hermitian Quadratic Nilpotent Lie Algebras. *Mustapha Bachaou, Ignacio Bajo and Mohamed Louzari*	
15:45 – 16:00	A Common fixed point results for multi-valued mappings in Hausdorff fuzzy b−metric spaces. *Noreddine Makran*	
16:00 – 16:15	On rings with Property (a.c) and their extensions. *Latifa Malki and Mohamed Louzari*	
16:15 – 16:30	Propriétés spectrale d'une classe des opérateurs de Toeplitz dans l'espace de Hardy. *Adel Babbah*	
Session 4 : Statistics, Probability and Operational Research Room : 4		Chairs
15 :00 – 15 :15	Stabilization analysis of a mosquito-borne disease mathematical model with discontinuous vaccination and treatment feedback strategies. *Oussama Lazaar and Mustapha Serhani*	Mohamed El Merouani Bastien Mallein Samir Tallay
15:15 – 15:30	Investigation of Ant Colony with Levy Flight Techniques for Stochastic Combinatorial Optimization Problems. *Fadoua El Asri, Chakir Tajani and Hanane Fakhouri*	
15:30 – 15:45	Management of Moroccan Fisheries with Variable Market Price. *Ismail El Hakki, Rachid Mchich, Amal Bergam and Najib Charouki*	
15:45 – 16:00	Mathematical analysis and numerical simulation of the Ebola epidemic disease in the sense of conformable derivative. *Abdellah Ouakka, Abdelhai Elazzouzi and Zakia Hammouch*	
16:00 – 16:15	Strong Nash implementation in finite and infinite fair allocation problems. *Ahmed Doghmi, Mohamed Bouchta and Abderahmane Ziad*	

Parallel Sessions II

	Session 1: Nonlinear Analysis and Applications Room : 1	Chairs
17:00 – 17:15	Solvability of strongly nonlinear elliptic problems in Musielak-Orlicz spaces. *Ouidad Azraibi, Badr El Haji and Mounir Mekkour*	**Boubker Azeroual** **Badr El Haji** **Hassan Hjiaj**
17:15 – 17:30	An existence result for two-dimensional parabolic integro-differential equations involving CEV model. *Jarmouni Brahim and Hassan Hjiaj*	
17:30 – 17:45	Existence and behavior of singular solutions of a nonlinear boundary value problem with the p-Laplacian operator. *Arij Bouzelmate and Hikmat El Baghouri*	
17:45 – 18:00	A novel quantum information based computational approximate solution of the Schrödinger partial differential equation. *Imane El Hadouti and Mohamed Addam*	
18:00 – 18:15	Entropy solutions for some nonlinear and noncoercive parabolic problems in the anisotropic Sobolev spaces. *Youssef Hajji and Hassane Hjiaj*	
18:15 – 18:30	Exponential and weak stabilization of distributed perturbed semilinear systems. **Abdelkader Daoui, Yassine Benslimane and Abdelbaki Attioui**	
	Session 2 : Numerical Analysis, Modeling and Optimization Room : 2	Chairs
17:00 – 17:15	Numerical methods for an inverse shape design problem with Robin boundary condition. *Youness El Yazidi*	**Btissam Dkhissi** **Bouchaib Ferrahi** **Ismail Jamiai**
17:15 – 17:30	A bilevel problem based on fractional-space derivative for image denoising. *Anouar Ben-Loghfyry and Abdelilah Hakim*	
17:30 – 17:45	An approach method with application of Covid data using variational spline functions. *Abdelouahed Kouibia, Rim Akhrif and Hossain Oulad Yakhlef*	
17:45 – 18:00	Ozone Concentration Forecasting Using LSTM Recurrent Neural Network in Tangier: A Comparative Analysis. *Nisrine Marrakchi, Amal Bergam, Hanane Fakhouri and Kenza Khomsi*	
18:00 – 18:15	Temporal Evolution of Tumor Growth: A Mathematical Modeling Approach-Simulation and identification of parameters. **Hamza Aguedjig, Sidi Mohammed Douiri, Imad El Harraki and Mohammed El Hammani**	
18:15 – 18:30	New Hybrid Finite Volume Scheme for Air Quality on Vertex-Centred Mesh. *Abdelaziz Chahed, Amal Bergam and Anouar El Harrak*	
	Session 3 : Algebra, Functional Analysis and Applications -- part I Room : 3	Chairs
17:00 – 17:15	Fixed Point Theorem And Application To Integral Equations. *Hamza El Bazi and Abdellatif Sadrati*	**Aziz Haddi** **Laurent Vivier** **Fouad Zitan**
17:15 – 17:30	Commutative Sub-algebras in Four-Dimensional Absolute Valued Algebras. **Abdelhadi Moutassim**	
17:30 – 17:45	On four-dimensional absolute valued algebras with left omnipresent unit. **Aziz Es.Sadiq, Mohamed Louzari and Abdelhadi Moutassim**	
17:45 – 18:00	Semi-compactness of Null almost L-weakly compact and Null almost M-weakly compact operators on Banach lattices. **Safae El Filali and Khalid Bouras**	
18:00 – 18:15	Using the Sherman-Morrison-Woodbury Inversion Formula to solve nearly penta-diagonal Toeplitz linear systems. **Fouad Aoulad Omar and Chakir Tajani**	
18:15 – 18:30	Speed Up The Convergence rate Via Tensor Extrapolation Methods. **Ridwane Tahiri**	
	Session 4 : Algebra, Functional Analysis and Applications -- part II Room : 4	
17:00 – 17:15	Simultaneous continuous functional calculs and applications. *Mazighi Mohamed and Abdellah El Kinani*	**Mohamed Benslimane** **Mohamed Ekdiha** **Adel Louly**
17:15 – 17:30	Jordan product and fixed points preservers. *Mhamed Elhodaibi and Soufiane Elouazzani*	
17:30 – 17:45	Explicit formulas of the addition law on the elliptic curve over a special nonlocal ring. *Abdelhamid Tadmori*	
17:45 – 18:00	On Galois Extensions of Graded Rings. *Mohammed Charkani and Abdewahed Acharky*	
18:00 – 18:15	Optimal Control of a General impulsive VS-EIAR Epidemics Models with Application to Covid-19. *Mohammed Elghandouri and Khalil Ezzinbi*	
18:15 – 18:30	A fixed point approach to stability for a Cauchy Jensen type functional equation in n Banach space. **Khaled Sayar**	

Tuesday, March 14, 2023

08:30 – 09:30	**Registration**
09:30 – 10:30	**Opening Speech** • President of UAE • President of USPN • Dean of FS-Tetouan • Head of Galilée Institute • France embassy representant of scientific and university cooperation Conference Chairs : *Arij Bouzelmate and Benoît Rittaud*
10:30 – 11:00	**Coffee Break**
11:00 – 12:00	*Plenary Talk 1 : Benoît Rittaud* **Le Fabuleux destin de la racine carrée de 2** *Chair : Arij Bouzelmate*
12:00 – 13:00	*Plenary Talk 2 : Christian Mercat* **Modéliser ou trouver le bon langage** *Chair : Naji Yebari*
13:00 – 14:30	**Lunch**
15 :00 – 16:30	**Workshops on Scientific Mediation of Mathematics**
16 :30 – 17:00	**Coffee Break**
17:00 – 18:00	*Plenary Talk 8 : Bastien Mallein* *Dynamique des populations invasives et mouvement brownien branchant* *Chair : Christien Mercat*
18 :00 – 19:00	*Plenary Talk 4 : Aziz Alaoui* **Émergence de quelques Branches des Mathématiques : Systèmes Dynamiques et Théorie du Chaos** *Chair : Khalil Ezzinbi*
	End

Wednesday, March 15, 2023	
09:00 – 10:00	*Plenary Talk 5 : Olivier Lafitte* *Comprendre la fusion nucléaire dans les Tokamaks pour une énergie illimitée dans le futur: les points chauds dans les plasmas expliqués par les Mathématiques des équations différentielles ordinaires* ***Chair : Arij Bouzelmate***
10:00 – 11:00	*Plenary Talk 7 : Ezzinbi Khalil* **Periodic solutions in infinite dimensional dynamical systems: Past and Present** ***Chair : Aziz Alaoui***
11:00 – 11:30	**Coffee Break**
11:30 – 12:30	*Plenary Talk 6 : Mostafa Mbekhta* *Invitation to preserver problems* ***Chair : El Amin Kaidi***
12:30 – 13:30	*Plenary Talk 3 : El Amin Kaidi* **Endofinitude pour les modules et les espaces de Banach** ***Chair : Mostafa Mbekhta***
13: 30 – 15:00	**Lunch**
15 :00 – 16:00	*Plenary Talk 9 : Laurent Vivier* *Perspectives de localité et approximations locales en analyse* ***Chair : Benoît Rittaud***
16 :00 – 17:30	***Parallel Sessions I*** **Room 1** *: Nonlinear Analysis and Applications - Part I* **Room 3** *: Algebra, Functional Analysis and Applications* **Room 2** *: Numerical Analysis, Modeling and Optimization* **Room 4** *: Nonlinear Analysis and Applications - Part II*
17:30 – 18:00	**Coffee Break**
18 :00 – 19:30	***Parallel Sessions II*** **Room 1** *: Nonlinear Analysis and Applications - Part I* **Room 3** *: Algebra, Functional Analysis and Applications* **Room 2** *: Numerical Analysis, Modeling and Optimization* **Room 4** *: Nonlinear Analysis and Applications - Part II*
End	

Parallel Sessions I

	Session 1: Nonlinear Analysis and Applications - Part I Room : 1	Chairs
16:00 – 16:15	Unilateral problems having two lower order terms and measure data in Musielak-Orlicz spaces. *Nourdine El Amarty, Badr El Haji and Mostafa El Moumni*	Hassane Hjiaj Olivier Lafitte Mohamed Marzougue
16:15 – 16:30	Strongly nonlinear elliptic problem with -data in the setting of Musielak-spaces. *Rachid Bouzyani, Badr El Haji and Mostafa El Moumni*	
16:30 – 16:45	Weak periodic solution for strongly nonlinear parabolic problem. *Abdelghani Az-Edine and Mostafa El Moumni*	
16:45 – 17:00	Multiplicity of solutions for a bi-nonlocal elliptic problem involving the p(x)-Laplacian. **Omar Darhouche and Mostafa Allaoui**	
17:00 – 17:15	On the study of some noncoercive elliptic equations in anisotropic weighted Sobolev spaces. *Arij Bouzelmate, Hassane Hjiaj and Inssaf Raiss*	
17:15 – 17:30	On a p-fractional Kirchhoff-type equation with critical exponent. *Mohammed Massar and Abdelilah Azghay*	
	Session 2 : Numerical Analysis, Modeling and Optimization Room : 2	Chairs
16:00 – 16:15	Exploring the Applications of DC Programming in Support Vector Machine Learning. *Najoua Aafar, Ahmed El Hilali Alaoui and Bouchaib Ferrahi*	Aziz Alaoui Youness El Yazidi Chakir Tajani
16:15 – 16:30	Simple and fast convergent procedure to estimate recursive path analysis model. **Abderrahim Sahli, Zouhair El Hadri and Mohamed Hanafi**	
16:30 – 16:45	Fractional Output Stabilization of Distributed Bilinear Systems with a Time Delay. **Mustapha Benoudi and Rachid Larhrissi**	
16:45 – 17:00	On multivalued probabilistic ψ-contractions involving orbits in b-Menger spaces. **Youssef Achtoun, Ismail Tahiri and Mohamed Sefian Lamarti**	
17:00 – 17:15	A critical Steklov-type problem driven by a $p (x)$- Laplace operator. **Mostafa Allaoui and Omar Darhouche**	
17:15 – 17:30	Non vanishing and Sign changes of Modular Forms. *Bouchikhi Abdelmonaim and Mezroui Soufiane*	
	Session 3 : Algebra, Functional Analysis and Applications Room : 3	Chairs
16:00 – 16:15	On bounded operators of banach-jordan Systems. *Chafika Zarhouti*	Fadil Chabbabi Mostafa Mbekhta Benoît Rittaud
16:15 – 16:30	Some new results on derivations of Banach-Jordan system. *Hassan Marhnine*	
16:30 – 16:45	Network Visualization and Verbalization of Mathematical Problem Solving in Middle School Students: Modeling Problem Solving Networks. *Asmae Bahbah and Mohamed Erradi*	
16:45 – 17:00	Développement limité d'une fonction réelle à l'aide des matrices de Toeplitz. *Bouifden Rafik, Haddi Aziz*	
17:00 – 17:15	On t he Non-negative Integer Solutions to Diophantine Equations Fn − Fm = 7^a and Fn − Fm = 13^a. *Anouar Gaha and Soufiane Mezroui*	
17:15 – 17:30	Central reversible ring property via idempotent elements. *Yousra Allach and Mohamed Louzari*	
	Session 4 : Nonlinear Analysis and Applications - Part II Room : 4	
16:00 – 16:15	On the Periodic Solutions for a class of Partial Differential Equation with Delay. **Abdelhai El Azzouzi, Khalil Ezzinbi and Mohammed Kriche**	Khalil Ezzinbi Abdelaziz Moujahid Mohamed Ali Tagmouti
16:15 – 16:30	On the asymptotic behavior of radial solutions to quasilinear elliptic equations with a Hardy potential. *Mouhssin Bakhadda and Arij Bouzelmate*	
16:30 – 16:45	Unilateral problem associated to some noncoercive elliptic equation in anisotropic Sobolev spaces. Rajae Zerouali, Bouchaib Ferrahi and Hassane Hjiaj	
16:45 – 17:00	Study of some non-coercive quasilinear parabolic problem in anistropic Sobolev space. Aymane El Janathi, Said El Manouni and Hassane Hjiaj	
17:00 – 17:15	Existence result for some coupled nonlinear parabolic systems in Orlicz-Sobolev spaces. *Mohamed Bourahma, Hassane Hjiaj, Jabir Ouazzani Chahdi*	
17:15 – 17:30	Application of J.F.Colombeau theory *Abdelaziz Moujahid*	

Parallel Sessions II

	Session 1: Nonlinear Analysis and Applications - Part I Room : 1	Chairs
18:00 – 18:15	Renormalized solutions for some non-coercive parabolic equation in the anistropic Sobolev spaces. *Moussa Chrif, Hassane Hjiaj and Mohamed Sasy*	**Aziz Alaoui** **Badr El Haji** **Abderrahim Zertiti**
18:15 – 18:30	Exponential stabilization for a semi-linear systems with discrete multi-delays. **Cheddour Ayoub and El Azzouzi Abdelhai**	
18:30 – 18:45	Stability and bufircation of fluid drop subjected to a uniform electric field. *Youness Filali, Mustapha Er-Riani and Mustapha El Jarroudi*	
18:45 – 19:00	Some results on regional optimal control problem for fractional systems with time-varying delays in the state *Wadii Ghandor, Ahmed Aberki and Touria Karite*	
19:00 – 19:15	Existence and uniqueness of a mild solution for a class of the fractional evolution equation With nonlocal condition involving φ-Riemann Liouville fractional derivative. **Zakaria Mouhssine, Moujahid Abdelaziz and Bouzelmate Arij**	

	Session 2 : Numerical Analysis, Modeling and Optimization Room : 2	Chairs
18:00 – 18:15	Pricing American options with irregular Payoff via reflected BSDEs *Mohamed Marzougue*	**Bouchaib Ferrahi** **Ismail Jamiai** **Sefian Mohammed Lamarti**
18:15 – 18:30	Central finite volume methods for nonlocal traffic flow models with arrhenus-type look-ahead rules. **Said Belkadi and Mohamed Atounti**	
18:30 – 18:45	Combining Non-Classical Method and Finite Element Method for E-cient Numerical Solution of Time-Fractional Diffusion Equation. **Ahdia Achabbak, Naji Yebari and Mohammed seaid**	
18:45 – 19:00	Adjusting support in CSRBF function interpolation for BEMD decomposition. **Mohammed Arrazaki, Othman El Ouahabi and Hamza El Bazi**	
19:00 – 19:15	Improved statistical and machine learning methods for images database classification *Ismail Jamiai*	
19:15 – 19:30	Some numerical results of the Brinkman problem using generalised Taylor-Hood elements. **Lahcen El Ouadefli**	

	Session 3 : Algebra, Functional Analysis and Applications Room : 3	Chairs
18:00 – 18:15	Cantor-Bendixson derivatives of the spectrum. *Zakariae Aznay and Hassan Zariouh*	**Aouatif El Biari** **Zine-El-Abidine Guennoun** **Mohamed Louzari**
18:15 – 18:30	Some Identities of 3-Prime Near-Rings Involving Jordan Ideals and Left multipliers. *Abdelkarim Boua*	
18:30 – 18:45	Spectrally starred advertibly complete Ap-normed algebras. *Ouhmidou Abderrahim and El Kinani Abdellah*	
18:45 – 19:00	Subspace- hypercyclicty. *Ahmed Toukmati*	
19:00 – 19:15	AHP-Method and its applications: Review. *Youssef Karkour and Chakir Tajani*	

	Session 4 : Nonlinear Analysis and Applications – part II Room : 4	Chairs
18:00 – 18:15	Square root problem and Subnormal Aluthge transforms. *Hamza El Azhar, Abdelouahab Hanine, Kaissar Idrissi and El Hassan Zerouali*	**Mohamed Erradi** **Adel Louly** **Soufiane Mezroui**
18:15 – 18:30	Approximation in some spaces of analytic functions. *Hafid Bahajji-El Idrissi*	
18:30 – 18:45	The Aluthge and mean transform on certain class of bounded linear operators. *Fadil Chabbabi*	
18:45 – 19:00	Existence result of entropy solution for degenerate elliptic problem without monotonicity condition in Generalized Sobolev spaces. **Abdelkarim Derham, Badr El Haji and Hassane Hjiaj**	
19:00 – 19:15	Renormalized periodic solutions for a nonlinear parabolic equation involving p(x)-growth conditions with irregular data. **Abderrahim Charkaoui and Nour Eddine Alaa**	

F2MDAYS'23
CULTURAL PROGRAM

Gala Dinner
March 15th 2023

This is an opportunity to make speeches and pay tribute to all those who have contributed to strengthening cooperative relations between Moroccan and French universities in mathematics. As well as the discussion of the various partnership projects between the research teams of the universities of the two countries.

A Guided visit to Chefchaouen
March 16th 2023

1. We guide you through the side streets until you arrive at Uta Hammam Square, Great Mosque, and Kasabah. A few steps ahead is the Makhzen square with the Hotel Parador. From here an alley can be taken that leads northeast to Bab El Ansar and the source Ras El Maa one of the prettiest places in Chefchaouen. This precious walk takes us to the Rif Sebbanin, the laundry district, with the Seat of Sebbanin and its mosque of century XV, We continue the route until the center of the Medina again.

2. Also, we will take you to Akchour, a nice mountainous region near Chefchaouen. We will take the road from Chefchaouen to Akchour waterfalls via Al kalaa.

Participation fees for Gala Dinner and the guided visit

Gala Dinner: 200 dh.

Touristic visit:

*   For Professors: 600 dh,
*   For Students: 400 dh.

F2MD

Franco-Moroccan Mathematics Days

Franco-Moroccan Mathematics Days
Faculty of Sciences - Tetouan, Abdelmalek Essaadi University
March 13-16, 2023