

University of M'sila

Faculty of Mathematics and Informatics Laboratory of Functional Analysis and Geometryof Spaces





National Conference on Mathematical Analysis- M'sila, Algeria December 4, 2024

Conference Program

8h00 – 9h00: Registration

9h00 – 9h 20: Opening Ceremony

(Business Incubator of M'sila University- حاضنة الأعمال الشمالي جامعة المسيلة جامعة المسيلة

| Time | Plenary Session: |
|---------------|---|
| | Chairman: Pr Madani Moussai |
| 9h20 – 10 h10 | Speaker : A Variety of Transmission Problems for Waves Talk : Aissa Benseghir |
| | Univ: University of Sétif 1 |
| 10h 20- 10h40 | BreakCoffee |

Rooms' Program

| Time | Room 1: Function spaces and its applications Chairman: Pr M.Moussai and E. Dahia |
|-----------------|--|
| | |
| 10h 40 – 11h 00 | Speaker: Abderrahmane Layati |
| | Talk : Positive solutions for Schrodinger operators with critical Hardy-Sobolev exponents. |
| | Univ: University of Tlemcen |
| 11h00 – 11h 20 | Speaker: Djamel Zerrouki |
| | Talk: Improved quadratic convex underestimator forunivariate nonconvex functions |
| | Univ: University of Tizi-Ouzou |
| 11h20–11h 40 | Speaker:Zineb Bellabes |
| | Talk: Fractional p-Kirchhoff Equation in the Fractional p-Laplacian Framework Univ: University of Relizane |
| 11h 40– 12h 00 | Speaker: Brahimi Tahar |
| | Talk: More on Ideal Rothberger Spaces. |
| | Univ: Ecole Normale Supérieure de Laghouat |
| 12h00 – 12h 20 | Speaker: Fatima Ezahra Bentata |
| | Talk: A Variational Approach for a Hyperbolic p-Kirchhoff-Type Problem |
| | Univ:University of Tebessa |
| 13h00 | Lunch |
| 14h10 – 14h 30 | Speaker: Zoheir Chebel |
| | Talk: Banach contraction principle with two mappings. |
| | Univ:University Center of Barika |

| 14h30 – 14h 50 | Speaker: Tsamda Hocine, |
|-----------------|---|
| | Talk:Global existence, uniqueness and asymptotic behavior for a quasilinear haptotactic |
| | model Univ: National School of Advanced Technologies (NSAT Algiers) |
| 14h50 – 15h 10 | Break coffee |
| | Poster session |
| 15h10 – 15h 30 | Speaker: Zouheyr Zeghad Talk: A note on the boundedness of multilinear commutators of singular integral operators |
| | onvariable Herz-type spaces Univ: ENS-Bousaada |
| 15h30 – 15h 50 | Speaker: Hamza Brahim Boulares |
| | Talk: Remarks on atomic decomposition for variable Herz-type Hardy space and their |
| | applications |
| | Univ:University of M'sila |
| Time | Room2: Operator theory |
| Time | Chairman: Pr L.Mezrag and D.Achour |
| 10h 40 – 11h 00 | Speake: Mustapha Maadani |
| | Talk: On A-unitary in semi Hilbertian space |
| 111.00 111.00 | Univ: University of Chlef |
| 11h00 – 11h 20 | Speaker: Raouda Chettouh Talk: The Rectangle Containing the Numerical Range of a Bounded |
| | Linear Operator |
| | Univ:University of Tebessa |
| 11h20– 11h 40 | Speaker: Ayyoub Fellag Ariouat |
| | Talk: On k-quasi-m -hyponormal operators on Hilbert spaces |
| 11h 40– 12h 00 | Univ: University of Chlef Speaker: Souhaib Djaballah |
| 111140-121100 | Talk: On the class of n-quasi-m-symmetric operator |
| | Univ: University of El-Oued |
| 12h00 – 12h 20 | Speaker: Tahar Mezeddek Mohamed |
| 121100 121120 | Talk: Exponential of Triangular Toeplitz matrix |
| | Univ: University of Mustapha Stambouli of Mascara. |
| 13h00 | Lunch |
| 14h10 – 14h 30 | Speaker:Bochra Zeghad |
| | Talk: Solving pseudomonotone and Lipschitz continuous equilibrium problems in real |
| | Hilbert spaces University Sétif 1 |
| 14h30 – 14h 50 | Univ:University Sétif 1 Speaker:Smati Abdellatif |
| 141130 - 141130 | Talk: n-Normal and Hyponormal Operators: Conditions for Normality and Compactness. |
| | Univ:ENS-Bousaada |
| 14h50 – 15h 10 | Poster session Coffee Break |
| 15h10 – 15h 30 | |
| | Speaker: Abir Yakoub |
| | Talk: On the Solutions of Sylvester Operator Equations in Integral Form |
| | Univ: University of Batna 2 |
| 15h30 – 15h 50 | Speaker: Souheyb Dehimi |
| | Talk: On the commutativity of symmetric operators |
| | Univ: University Mohamed El Bachir El Ibrahimi of Bordj Bou Arreridj |
| 15h50 – 16h 10 | Speaker: Hassan Zine |
| | Talk: The continuity of linear relations on asymmetric normed spaces |
| | Univ: M'sila University |

| Time | Room3: PDE1 |
|---------------------|--|
| | Chairman Pr. R. Yahi, A. Tallab, and A. Bouafia |
| | |
| $10h\ 40 - 11h\ 00$ | Speaker: Azouz Ferrag |
| | Talk: Stochastic Differential Equations |
| | Univ:(ENSET) Skikda |
| 11h00 - 11h 20 | Speaker: Bellamouchi Chahinez |
| | Talk: Positive solutions results for some nonlocal elliptic problem |
| | Univ: University of Chlef |
| 11h20–11h 40 | Speaker: Rouibah Khaoula |
| | Talk: Iterative collocation method for second order Volterra integro-differential equations |
| | Univ: University Center of Mila |
| 11h 40– 12h 00 | Speaker: Salim Ben Chikh |
| | Talk: Existence Solution of Boundary Value Problem with Four-Point Mixed |
| | Integro-Derivative Conditions University of Poving |
| 12h00 – 12h 20 | Univ: University of Bouira Speaker: Ladjroud Amal |
| 121100 121120 | Talk : Approximate Eigensolutions of the Schrödinger Equation for the Radial Generalized |
| | Cornell Plus Pöschl-Teller Potential |
| | Univ: Center Abdelhafid Boussouf, Mila |
| 13h00 | Lunch |
| 14h10 – 14h 30 | Speaker: Belaibb Mohamed Tahar |
| | Talk : A Boundary Value Problem with Nonlinear and History-Dependent Characteristic |
| | Univ: University of Sétif 1 |
| 14h30 – 14h 50 | Speaker: Makhfi Abdelali |
| | Talk: The Historical Study of Blasius and Falkner-Skan Equations. |
| | Univ: ENS Kouba, Algiers |
| 14h50 – 15h 10 | Poster Session |
| | Coffee Break |
| 15h10 – 15h 30 | Speaker: Amroune Bochra |
| | Talk: Modeling Two-Dimensional Free Surface Flow in a Cavity |
| | Univ: University of M'sila |
| 15h30 – 15h 50 | Speaker: Kaouther Bouchama |
| | Talk: Approximation of the Caputo-Hadamard Fractional Derivative and Caputo-Hadamard-Type |
| | Linear diffusion equations |
| | Univ: University of M'sila |
| | Room 4:PDE2 |
| Time | |
| | Chairman: Pr R.Mechter and T. Heraiz |
| 10h 40 – 11h 00 | Speaker: Houria Chellaoua |
| | Talk: Global existence and exponential stability of non autonomous semilinear wave equation with time-varying delay |
| | Univ : University of Ghardaia. |
| 11h00 – 11h 20 | Speaker: Abdelmoumene M'hamdi |
| | Talk: Existence results for some nonlocal singular elliptic problems |
| | Univ: ENS Kouba, Algiers |
| 11h20–11h 40 | Speaker: Bilel Madjour |
| | Talk: Stability results for a coupled system of viscoelastic wave equation with acoustic |
| | boundary conditions |
| | Univ : University of Sétif-1 |

| 111 40 121 00 | |
|--|--|
| | Speaker: Amara Kaddouri |
| | Talk :On the asymptotic convergence of a non-Newtonian fluid in a thin two-dimensional |
| | domain with nonlinear Tresca-type friction. |
| 121.00 121.20 | Univ : University of Sétif 1 |
| 12h00 – 12h 20 | Speaker: Ibtissem Benkemache |
| | Talk:Investigation of Atomic Solutions in Conformable Partial Differential Systems |
| 401.00 | Univ : University of Bordj Bou Arreridj |
| 13h00 | Lunch |
| 14h10 – 14h 30 | Speaker: Soufiane Benyoussef |
| | Talk: Jacobi operational matrix for solving fractional partial differential equations |
| | Univ: University of Bordj Bou Arreridj |
| 14h30 – 14h 50 | Speaker: Houd Khireddine |
| | Talk: Existence Results of a Dynamic Frictionless Contact Problem for Viscoelastic |
| | Materials with Long-Term Memory |
| | Univ : University of M'sila |
| 14h50 – 15h 10 | Coffee Break |
| | Poster Session |
| 15h10 – 15h 30 | Speaker: Mani Abdelouahab |
| | Talk: Delayed Volterra Operator and its Corresponding Equation. |
| | Univ : University of M'sila |
| 15h30 – 15h 50 | Speaker: Khelifa Chadi |
| | Talk: Analysis of Bilateral Contact Problem with Nonmonotone Friction and Damage |
| | Univ:University of M'sila |
| 15h50 – 16h 10 | Speaker: Farida Mekkaoui |
| | Talk :λ-aluthge transformation and applications |
| | |
| | Univ: University of Batna 2 |
| | Univ: University of Batna 2 |
| | |
| Time | Room 5 :Fractional Differential Equations |
| | Room 5 :Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua |
| | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, |
| | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non- |
| | Room 5 :Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. |
| | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non- |
| 10h 40 – 11h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila |
| | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya |
| 10h 40 – 11h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila |
| 10h 40 – 11h 00 11h00 – 11h 20 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya |
| 10h 40 – 11h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions |
| 10h 40 – 11h 00 11h00 – 11h 20 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed |
| 10h 40 – 11h 00 11h00 – 11h 20 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional |
| 10h 40 – 11h 00 11h00 – 11h 20 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla |
| 10h 40 – 11h 00 11h00 – 11h 20 | Room 5 :Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui Talk:Corrected Euler-Maclaurin Type Inequalities for Differentiable s-Convex Functions |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui Talk: Corrected Euler-Maclaurin Type Inequalities for Differentiable s-Convex Functions Univ: University, Guelma |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 11h 40– 12h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui Talk:Corrected Euler-Maclaurin Type Inequalities for Differentiable s-Convex Functions |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 | Room 5: Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui Talk: Corrected Euler-Maclaurin Type Inequalities for Differentiable s-Convex Functions Univ: University, Guelma |
| 10h 40 – 11h 00 11h00 – 11h 20 11h20– 11h 40 11h 40– 12h 00 11h 40– 12h 00 | Room 5 :Fractional Differential Equations Chairman: PrA.Memou- A. Senguogua Speaker: Memou Ameur, Talk: On solvability of an inverse problem of the space-time fractional parabolic equation with non-local and integral boundary conditions. Univ: University of M'sila Speaker: Malki Zakarya Talk: A problem of fractional differential inclusions Univ: University of Sidi Bel Abbes Speaker: Hicham Ait Mohammed Talk A Novel Investigation of Existence, Uniqueness and Stability Results for a Caputo Fractional Variable Order Initial Value Problem with Multi-Point Boundary Conditions (IVP) Univ: University Of Ouargla Speaker: Berhail Amel Talk: Stability for a Class of Nonlinear Langevin Equation with Three Different Fractional Orders Univ: University, Guelma Speaker: Saliha Djenaioui Talk:Corrected Euler-Maclaurin Type Inequalities for Differentiable s-Convex Functions Univ: University, Guelma Lunch |

| | Univ :National School of Advanced Technologies (ENSTA Algiers) |
|----------------|--|
| 14h30 – 14h 50 | Speaker: Araour Meriem Talk:On the Existence and Uniqueness of the Solution of the Intuitionistic Fuzzy Integro- Differential Equation Univ: University of Batna 2 |
| 14h50 – 15h 10 | <mark>Coffee Break</mark> Poster Session |
| 15h10 – 15h 30 | Speaker: Roufaida Ketfi Talk: Analysis of a dynamic contact problem without friction using fractional derivatives. University of Sétif 1 |
| 15h30 – 15h 50 | Speaker: Haroun Lamrad |
| | Talk: Contribution to the Study of a Class of Fractional Problems |
| | Univ : University of Tlemcen |

Poster session:

- 1- Khezzani Rimi, Contact problem involving fractional derivative,
 University of Eloued
- 2- Aicha Mohadi, Numerical Investigation of Non-Analytical Integrals in Gravitational Systems, University of M'sila
- 3- SAID MEKHDOUA, Ulam stability for nonlinear-Langevin fractional differential equations, University of Laghouat