



## University of M'sila

Faculty of Mathematics and Computer Sciences  
Laboratory of Functional Analysis and Geometry of Spaces

9th M'Sila Conference on Mathematical Analysis,  
M'sila, **November 12-13, 2025**



### Certificate of Appreciation

This is to certify that

**Hellal Abdelaziz, University of M'sila**

Served as a president of the **Organizing Committee** for the  
9th M'Sila Conference on Mathematical Analysis,  
M'sila, **November 12-13, 2025** at M'sila.

We extend our sincere thanks for their valuable contributions and expertise



Dean of Faculty



Head of Laboratory



دريهم الزواوي



Conference Chair

طالب عبد الحليم

# 9th M'Sila Conference on Mathematical Analysis

M'sila, November 12–13, 2025

**In Honor of Professor Lahcène Mezrag**

**On the Occasion of his 70<sup>th</sup> Birthday**

## Objective

The goal of the 9th MCMA Conference is to bring together young and expert mathematicians working in the field of Functional Analysis and its applications. This includes linear and nonlinear analysis, PDEs, ODEs, Banach spaces, and operator theory. The conference is held in honor of Professor **Lahcène Mezrag's** 70<sup>th</sup> Birthday.

## Topics

- The Geometry of Banach and Metric Spaces
- Linear and Nonlinear Analysis
- Functional Analysis of PDEs and ODEs

## With the honorable patronage of:

- Prof. A. Boudellaa, Director of the University of M'sila
- Prof. B. Nouiri, Dean of the Faculty of MI
- Prof. D. Drihem, Head of LFAGS



## Conference Chairman

Dr. Abdelhamid Tallab, University of M'sila

## President of scientific committee

Prof. Dahmane Achour, University of M'sila

## President of organizing committee

Dr. Hellal Abdelaziz, University of M'sila

**Registration Fees:** PhD Students: 1500 DA /Researchers: 4000 DA

**Submission:** Interested participants are invited to send an abstract (maximum 3 pages) to:

[mcma-lfags@univ-msila.dz](mailto:mcma-lfags@univ-msila.dz)

**Deadline:** October 31, 2025



### Organizing Committee

B. Bougherara University of M'sila  
F. Mekdour, University of M'sila  
R. Yah, University of M'sila  
K. Hamidi, University of M'sila  
A. Mazouz, University of M'sila  
H. Zine, University of M'sila  
S. Abdelkadir, University of M'sila

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S. Drabla, University of Sétif 1  
A. Sengouga, University of M'sila

N. Benhamidouch, University of M'sila  
D. Mihoubi, University of M'sila  
F. Boulahia, University of Bejaia  
K. Melkmi, University of Batna 2  
A. Boudaoud, University of M'sila  
F. Bedouhene, University of Tizi-Ouzou

### Invited

A. Mokrane, ENS Kouba  
A. Saad Allah, ENS Kouba  
M. Hazi, ENS Kouba  
A. Yousfate, University of Sidi Bel Abbès  
C. Bouzar, Oran University 1  
B. Mezerdi, University of Biskra

Z. Aissaoui, University of Guelma  
M. Morsli, University of Tizi Ouezou  
C. Mihoubi, University of M'sila  
A. Aibeche, University of Sétif 1  
H. Belbachir, University of USTHB  
L. Abbaoui, University of Sétif 1



9th M'sila Conference on Mathematical Analysis, *M'sila, Algeria*

*November 12-13, 2025*

# Conference Program First Day

Wednesday, November 12, 2025

## الفترة الصباحية

(قاعة المحاضرات ابن الهيثم - القطب الشمالي - جامعة المسيلة - Ibn Al-Haytham Hall)

8h30– 9h00	Registration
9h00 – 9h30	Opening Ceremony
9h30 – 10h00	عرض فيديو خاص بالأستاذ مزراق لحسن
10h00-10h30	كلمة الأستاذ مزراق لحسن
10h30-11h00	Break coffee

### Plenary Session:

	<b>Chairman: Prof. Madani Moussai</b>
11h00 – 11 h50	<b>Speaker :</b> Prof. Keddour Lemrabet <b>Talk :</b> A present with many sides for a new retiree <b>Univ :</b> FoHC, M.B.U.B, Bumerdes
	<b>Chairman: Prof. Abdelmadjid Boudaoud</b>
12h00 – 12h40	<b>Speaker :</b> Prof. Fazia Bedouhene <b>Talk :</b> Stabilité et commande des systèmes à retard: quand plusieurs modes réels coexistent ? <b>Univ :</b> U.M.M of Tizi-Ouzou
12h40-14h15	Lunch

# الفترة المسائية:

قاعة المكتبة بكلية الرياضيات والإعلام الآلي –القطب الشمالي- جامعة المسيلة

14h30-15h30	Les mathématique et les enjeux actuels	Chairman: Prof. Achour Dahmane	طاولة مستديرة
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## Rooms' Program

Time	Room1: Al-Khwarizmi Chairman : Prof. K. Hamidi and E . Dahia
15h 30 – 15h 50	<b>Speaker:</b> Najah Redjel <b>Talk:</b> Fixed points of asymptotically nonexpansive mappings with center 0 and applications <b>Univ:</b> Souk Ahras
15h50 – 16h 10	<b>Speaker:</b> Sahraoui Asma <b>Talk:</b> Qes solution of the Schrodinger equation involving a modified double ring potential combined with a sextic potential <b>Univ:</b> Mila
16h10– 16h 30	<b>Speaker:</b> Aissa Benseghir <b>Talk:</b> Existence and uniqueness for a one-dimensional transmission problem with thermal coupling and delayed velocity feedback <b>Univ:</b> Sétif1
16h 30– 16h 50	<b>Speaker:</b> Haroun Lamrad <b>Talk:</b> Existence and non-existence of a solution for a fractional equation with critical singularities. <b>Univ:</b> Tlemcen
16h50-17h10	Break coffee Poster session
17h10 –17h30	<b>Speaker:</b> Said Bensliman <b>Talk:</b> Asymmetric and kth-order slant asymmetric Toeplitz operators <b>Univ:</b> Laghouat
17h30 – 17h 50	<b>Speaker:</b> علي بوفروم <b>Talk:</b> تحديد سمت القبلة عبر قوانين الهندسة الكروية: دراسة تحليلية تاريخية <b>Univ:</b> المدرسة الوطنية العليا للاسلامية-الجزائر
17h50 – 18h 10	<b>Speaker:</b> Naceur Chegloufa <b>Talk:</b> Existence and uniqueness of S-asymptotically Bloch-type periodic solutions for neutral $\psi$ -Hilfer fractional delay equations <b>Univ:</b> Blida
Time	Room2: Al-Biruni Chairman: Pr D. Drihem and B. Bougherara
15h 30 – 15h 50	<b>Speaker:</b> Guettai Ghania <b>Talk:</b> On the generalized laguerre transform <b>Univ:</b> Medea
15h50 – 16h 10	<b>Speaker:</b> Mohammed Ghaith Mahcene <b>Talk:</b> Large-interval fredholm's integral equations: a counter-intuitive relaxed approach <b>Univ:</b> Guelma
16h10– 16h 30	<b>Speake:</b> Raghdhi Mourad <b>Talk:</b> Dense range linear and semilinear operators <b>Univ:</b> Guelma
16h 30– 16h 50	<b>Speaker:</b> Rezig Affaf <b>Talk:</b> Viscoelastic Timoshenko Beam analysis with memory damping. <b>Univ:</b> Bouira
16h50-17h10	Poster session Coffee Break
	<b>Speaker:</b> Amrane Houas

17h10 – 17h30	<b>Talk:</b> A new parametric kernel for faster primal-dual interior-point methods <b>Univ:</b> Batna 2
17h30 – 17h 50	<b>Speaker:</b> Fateh Merah <b>Talk:</b> Least squares estimation for reflected continuous-time bilinear processes <b>Univ:</b> Batna 2
17h50 – 18h 10	<b>Speaker:</b> Samah Nezzar <b>Talk:</b> On the robustness of descriptor systems <b>Univ:</b> Batna 2

## Poster session:

- **Ahlem Nemer**, Volterra-Fredholm integral equations with logarithmic kernels, **University of Batna2**.
- **Yahiaoui Ahlem**, On the solutions of non-local Kirchhoff-type equation with fractional laplacian in variable exponent spaces, **University of Tissemsilt**.
- **Kehali Salima**, Global mild solutions and long-time behavior of nonlinear parabolic equations, **University of M'sila**.
- **Aoufi Khayra**, Composition ideal of Lipschitz mappings, **University of M'sila**.
- **Meriem Chabekh**, Thermoelastic Shear beam model with suspenders: existence, stability, and numerical analysis, **University of Sétif 1**.
- **Araour Meriem**, Existence and uniqueness results for logarithmic fuzzy integro-differential equation, **University of Batna 2**.
- **Mokhtar Khassani**, Study of a diffusion model for population dynamics with dispersal incorporating individual behavior at boundaries, **University of Mostaganem**.
- **Oussama Khaldi**, Finite-time blow-up for a pseudo-parabolic equation with variable source, **University of Laghouat**.
- **Wahiba Delloum**, Exact solution for two-dimensional free-surface flow around a house-shaped obstacle, **University of M'sila**.
- **Mohamed Bouguerroumi**, The asymptotic stabilization for the full von Kármán beam, **University of Bouira**.
- **Khaled Hamidi**, On factorable p-nuclear Bloch maps, **University of M'sila**.
- **Mohammed Bouguerra**, Closure of the space  $C_c^1$  in Riemann-Liouville fractional Sobolev Space, **University of M'sila**.

9th M'sila Conference on Mathematical Analysis, *M'sila, Algeria*  
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# Conference Program Second Day

Thursday, November 13, 2025

(قاعة المكتبة بكلية الرياضيات والاعلام الالي - القطب الشمالي - جامعة المسيلة - Library Hall)

Time	PlenarySession:
	<b>Chairman: Prof. Douadi Mihoubi</b>
9h00 – 9 h40	<b>Speaker :</b> Prof. Brahim Mezerdi <b>Talk :</b> Un pont entre la physique, la biologie et la finance <b>Univ :</b> University of Biskra
	<b>Chairman: Prof. Abdelmouhcene Sengouga</b>
9h40 – 10h20	<b>Speaker :</b> Prof. Abdelaziz Choutri <b>Talk :</b> Mathematics and Technology <b>Univ :</b> ENS Kouba
10h20-10h50	<b>Break coffee</b>

## Rooms' Program

Time	Room1: Al-Khwarizmi Chairman : Prof. H. Toufik and H. Abdelaziz
10h 50 – 11h 10	<b>Speaker:</b> Aldjia Maatoug <b>Talk:</b> Boundedness of the Hilbert transform on localized Lizorkin-Triebel spaces <b>Univ:</b> Laghouat
11h10 – 11h 30	<b>Speaker:</b> Gherdaoui Abdelaziz <b>Talk:</b> Hardy - Steklov-type operators for quasi-monotone functions in weighted variable exponent Lebesgue spaces <b>Univ:</b> Tiaret
11h30– 11h 50	<b>Speaker:</b> Abderrahmane Ouardani <b>Talk:</b> Hardy-type inequalities for quasi-monotone function in weighted Lebesgue spaces <b>Univ:</b> Tiaret
11h 50– 12h 10	<b>Speaker:</b> Hocine Ayadi <b>Talk:</b> Nonlinear degenerate anisotropic elliptic equations <b>Univ:</b> Medea

12h 10– 12h 30	<b>Speaker:</b> Hicham Ait Mohammed <b>Talk:</b> New insights into the qualitative analysis of multi-point $\psi$ -Riemann-Liouville fractional boundary value problems (mp- $\psi$ -fbvp) <b>Univ:</b> Ouargla
13h00	<b>Lunch</b>
14h10 – 14h 30	<b>Speaker:</b> Farida Mekkaoui <b>Talk:</b> A study on quasinormal operators <b>Univ:</b> Batna 2
14h30 – 14h 50	<b>Speaker:</b> Ahlem Benmakhlouf <b>Talk:</b> On inequalities related to the Hilbert-Schmidt numerical radius <b>Univ:</b> Batna 2
14h50 – 15h 10	<b>Break coffee</b> <b>Poster session</b>
15h10 – 15h 30	<b>Speaker:</b> Benoumhani Moussa <b>Talk:</b> An Application of a Linear Functional to Some Combinatorial Sequences <b>Univ:</b> M'sila
15h30 – 15h 50	<b>Speaker:</b> Hanaa Belkacem <b>Talk:</b> Les espaces duaux et le principe de dualité : entre structure mathématique et interprétation épistémologique <b>Univ:</b> ENSSI
	<b>Closure session</b>
<b>Time</b>	<b>Room2:</b> Al-Biruni <b>Chairman:</b> Pr D. Mihoubi and A. Boudaoud
10h 50 – 11h 10	<b>Speaker:</b> Abdelhamid Rehouma <b>Talk:</b> Tchebychev polynomials of second kind on the ellipse and approximations. <b>Univ:</b> Eloued
11h10 – 11h 30	<b>Speaker:</b> Atika Aouri <b>Talk:</b> Local stationarity of spatially varying spatio-temporal garch models <b>Univ:</b> C.U Mila
11h30– 11h 50	<b>Speaker:</b> Hennous Chahinaz <b>Talk:</b> Numerical solution of pantograph-type integral equations via Taylor collocation <b>Univ:</b> Centre-univ-Mila
11h 50– 12h 10	<b>Speaker:</b> Khadidja Benzerroug <b>Talk:</b> Existence result of an elliptic problem with a singular term <b>Univ:</b> Ens-Kouba
12h 10– 12h 30	<b>Speaker:</b> Amel Bouhafna <b>Talk:</b> Extended spectrum of (p, q)-aluthge transformation <b>Univ:</b> Batna2
13h00	<b>Lunch</b>
14h10 – 14h 30	<b>Speaker:</b> Soufiane Benkouider <b>Talk:</b> Blow-up phenomenon for a semilinear pseudoparabolic equation involving variable source <b>Univ:</b> Laghouat
14h30 – 14h 50	<b>Speaker:</b> Selma Bouzit <b>Talk:</b> Meshless radial basis function methods for the Poisson equation on irregular domains <b>Univ:</b> BBA
14h50 – 15h 10	<b>Poster session</b> <b>Coffee Break</b>
15h10 – 15h 30	<b>Speaker:</b> Saci Atef <b>Talk:</b> Uniqueness in an inverse problem for the wave equation with a neumann-type boundary condition <b>Univ:</b> C.U. Barika
15h30 – 15h 50	<b>Speaker:</b> Boudersa Ferial <b>Talk:</b> Local well-posedness for the Hirota-Satsuma system in gevrey spaces <b>Univ:</b> University of M'sila

### Poster session:

- **Dechoucha Nouredine**, Anisotropic elliptic equations with degenerate coercivity in variable exponent, [University of M'sila](#).
- **Moufida Guechi**, Semi-analytical method for nonlinear fractional Volterra integro-differential equations, [University of Sétif 1](#).
- **Brahimi Mahdi Tahar**, On Lebesgue and Sobolev spaces with variable exponents, [University of M'sila](#).
- **Zineb Khalili**, Existence and stability result for Laminated Timoshenko beam with Thermo-diffusion effect and a time-varying delay term, [University of Laghouat](#).
- **Mohamedourabah Benmeddour**, Paramétrisation des surfaces algébriques par la méthode infinitésimale, [University of M'sila](#).
- **Dounia Bouchelil**, Exponential stability of a nonlinear coupled wave system, [University of Sétif 1](#).
- **Abdelkebir Layachi**, Functional and geometric aspects of seismic anomaly modeling using nonlinear analysis, [ENSGTS, Oran](#).
- **Khelifa Chadi**, A dynamic fractional differential hemivariational inequality for a contact problem [University of M'sila](#).
- **Bounabab Adel**, Positive polynomial extensions of  $(q; r)$ -dominated operators, [University of M'sila](#).
- **Abidi Khedidja**, Blow-up and energy estimates for a viscoelastic plate with Balakrishnan–Taylor damping and logarithmic source term, [University of Laghouat](#).
- **Ayoub kemari**, Stabilité de la méthode de linéarisation en analyse générale tricompartimentale, [University of Laghouat](#).
- **Hassan Zine**, Geometry of linear Spaces Equipped with Asymmetric Norms, [University of MM of Tizi Ouzou](#).
- **Sami Belhout**, A Study of some classes of two-Lipschitz Operator Ideals from Pointed Metric to Banach Spaces, [University of M'sila](#).
- **Benhamouda Oumkeltoum**, A stability result of a one-dimensional coupled system of wave equations with Fourier heat conduction, [University of USTHB](#).
- **Imane Djaidja**, general decay for a thermo-viscoelastic bresse system with localized nonlinearities, [University of M'sila](#).
- **BRAHIM BENAÏSSI**, Asymptotic behavior of solutions to the Caputo-Katugampola fractional semilinear diffusion equation, [University of M'sila](#).