



AMS'23

The first National
Applied Mathematics Seminar
2023

May 14 - 15, 2023 Biskra - Algeria

The first National Applied Mathematics Seminar

May 14 - 15, 2023

SCIENTIFIC PROGRAM

Sunday, May 14, 2023

✚ 08h30-09h30 : Welcome Session and Opening Ceremony
(in Assassi Great Conferences Hall of the University).

Opening Speech

- ✚ Dr. Imad Eddine LAKHDARI, General Conference Chair
- ✚ Pr. Boubakeur LABED, Director of the LMA Laboratory
- ✚ Pr. Mokhtar Hafayed, Director of the LMAPO Laboratory
- ✚ Pr. Abdellah ATTAF, Dean of Faculty
- ✚ Pr. Mahmoud DEBABECHE, Rector of Biskra University

Plenary lectures

Chairman: Prof. Madani MOUSSAI

09h30 - 10h15 : Statistique des valeurs extrêmes incompletes
Keynote 1 Prof. Abdelhakim NECIR, Biskra University

10h15 - 10h45 : Coffee break + Poster Session 1

Chairman: Prof. Khaled MELKEMI

10h45 - 11h30 : Equation différentielles à coefficients
opérateurs et applications concrètes
Keynote 2 Prof. Ahmed MEDEGHRI, National Higher
School of Mathematics (NHSM)

Chairman: Prof. Zouhir MOKHTARI

11h30 - 12h15 : Study of Fractional Evolution Boundary Value
Problem with Nonlocal Conditions
Keynote 3 Prof. Ahcene MERAD, Oum El Bouaghi University

Session I: Statistics of Extremes (Sunday, May 14, 2023) In Conferences Hall, Bahlali Laboratory Center

Chairman: Prof. BRAHIMI Brahim

14h00 – 14h20 Kernel estimator for the tail index of a right-censored Pareto-type distribution. **SOLTANE L., Biskra University**

14h20 – 14h40 Bayesian estimation of extropy based on record statistics for Weibull distribution. **ZOUAOUI N-H., Biskra University**

14h40 – 15h00 Empirical Copula for Twice Censored Data. **TOUMI S., Biskra University**

Chairman: Prof. YAHIA Djabrane

15h00 – 15h20 Gaussian approximation to the heavy tail index t-Hill estimator for right-censored Pareto-type distribution. **Brahimi B., Biskra University**

15h20 – 15h40 A novel bias reduction method for kernel quantile function estimation at the boundary. **Sayah A., Biskra University**

15h40 – 16h00 Sciences des Données et Intelligence Artificielle. **TERRISSA L-S., Biskra University**

Chairman: Prof. CHERFAOUI Mouloud

16h00 – 16h20 Probabilistic properties of periodic generalized poisson integer-valued AR process. **SOUAKRI R., USTHB Alger**

16h20 – 16h40 Study of an unreliable M/M/1/N Queue with Various Effects. **AFROUN F., Tizi-Ouzou University**

16h40 – 17h00 Analysis of an M/M/1 queue with working vacation and interruption vacation and application in NOC network. **AHMEDI EZZOURGUI Z., USTHB Alger**

Chairman: Prof. BENATIA Fatah

17h00 – 17h20 A method for detecting pollution in dissipative systems with incomplete data. **ELHAMZA B., Tebessa University**

17h20 – 17h40 Comparison between ARIMA, fractional ARIMA and neural network model. Forecasting Ethereum Capital Market. **SEBA D., Bejaia University**

17h40 – 18h00 Energy decay in a nonlinear wave equation with finite memory. **YOUKANA A., Bejaia University**

Session II: Stochastic Analysis (Sunday, May 14, 2023) In Mehda-Conferences Hall, Sciences Faculty

Chairman: Prof. GHERBEL Boulakhras

14h00 – 14h20 Weighted exact weak laws. **BERNOU I., Tlemcen University**

14h20 – 14h40 The Best and The Worst Equilibrium and The Price of Anarchy. **Khanchouche F., Setif University**

14h40 – 15h00 Stochastic optimal control problem of McKean-Vlasov equations with Teugels martingales. **KAOUACHE R., Biskra University**

Chairman: Prof. KHELFALLAH Nabil

15h00 – 15h20 Bounds on the stability radius of a class of stochastic systems. **MAISSA K., Batna 2 University**

15h20 – 15h40 Infinite horizon optimal control of forward-backward stochastic Volterra equations. **YAKHLEF S., Biskra University**

15h40 – 16h00 Stability result of Lord Shulman thermoelastic system with memory. **BOUDELIOU M., Annaba University**

Chairman: Pr. CHALA Adel

16h00 – 16h20 Improved stochastic fractal search algorithm. **CHAREF KHODJA D., Biskra University**

16h20 – 16h40 Stochastic optimization estimation and experimental verification for parameter identification applied to induction motor drives. **Houli R., Biskra University**

16h40 – 17h00 Results on fractional stochastic differential equation. **HAMED I., Biskra University**

Chairman: CHIGHOUB Farid

17h00 – 17h20 Optimal control with regime switching. **TAMER L., Biskra University**

17h20 – 17h40 Extended HJB Equations for Solving Time-Inconsistent Problems in SDDEs. **BAHLALI D., Biskra University**

17h40 – 18h00 Risk-sensitive necessary optimality condition for a BSDE driven by fractional Brownian motion. **BOUAZIZ T., Biskra University**

**Session III: Numerical analysis and Operator theory
In ASSASSI Great Conferences Hall
(Sunday, May 14, 2023)**

Chairman: Dr. HOUAS Amrane

14h00 – 14h20 Further results on positive strongly p -summing multilinear operators. **DJERIBIA O., Laghouat University**

14h20 – 14h40 Differential equations of elliptic type with variable operators and homogeneous Robin boundary condition in L_p spaces. **HAOUA R., Mostaganem University**

14h40 – 15h00 New results on operational second-order differential equations of elliptic type with the integral boundary conditions in Hölder Spaces.
CHEGGAG M., Polytechnic School of Oran

Chairman: Prof. KHELIL Naceur

15h00 – 15h20 Numerical study for an integro-differential nonlinear volterra equation. **ROUIBAH K., Mila University**

15h20 – 15h40 On some properties of Cohen weakly p -nuclear multilinear operators. **BELAADA A., M'sila University**

15h40 – 16h00 On strictly Lipschitz p -nuclear operators
BELAALA M., M'sila Univesrsity

Chairman: Dr. BRAHIMI Mahmoud

16h00 – 16h20 New scheme for image compression.
HOUAS A., Biskra University

16h20 – 16h40 Numerical solution of linear Volterra integro-differential equations. **REMILI W., Bordj Bou Arreridj University**

16h40 – 17h00 Extended spectrum-preserving maps.
ZAIZ K., Eloued University

Chairman: Dr. REZKI Brahim

17h00 – 17h20 Numerical simulations for the fractional order generalized Van Der Pol systems.
LEJDEL ALI T., Eloued University

17h20 – 17h40 Numerical solution of fractional boundary value problem with Caputo-Fabrizio and its fractional integral.
MANSOURI S., Eloued University

17h40 – 18h00 Gradient Neural Network for Solving Linear Equations.
KHELIL H., M'sila Univesrsity

**Session IV: PDE and Fractional calculus
In Audio-visual Conferences Hall - Computer Department
(Sunday, May 14, 2023)**

Chairman: Dr. KACI Fatma

14h00 – 14h20 A stability results by Krasnoselskii's fixed point theorem for FDE with initial conditions on unbounded interval.
NAIMI A., Ouargla University

14h20 – 14h40 Existence and uniqueness of solutions for p -Laplacian boundary value problems of weighted impulsive FDE
CHABANE F., Ghardaia University

14h40 – 15h00 Blow-up of solutions to a coupled quasilinear viscoelastic wave system with nonlinear damping and source terms.
YAZID F., Laghouat University

Chairman: Prof. MENACEUR Tidjani

15h00 – 15h20 Existence results of weak solutions to a nonlinear fractional partial differential system. **Abada E. Skikda University**

15h20 – 15h40 General decay estimates for a type III thermo-viscoelastic coupled system with infinite memory and boundary interaction feedback. **LIMAM A., Tamanghasset University**

15h40 – 16h00 Monotone Iterative Method for psi-Caputo FDE with Nonlinear Boundary Conditions. **BAITICHE Z., Constantine University**

Chairman: Dr. BELAGOUNE Abdelghani

16h00 – 16h20 General decay rate estimate for the energy of a viscoelastic wave equation with fractional delay.
AOUNALLAH R., Sidi Belabbes University

16h20 – 16h40 Caputo-Hadamard FDE with four-point boundary conditions.
GORINE H., Saida University

16h40 – 17h00 Stability and recovery rate of a modified human immunodeficiency virus dynamic model with recovery rate.
ABDESSELAM N., Laghouat University

Chairman: Prof. BERBICHE Mohamed

17h00 – 17h20 A new two dimensional piecewise smooth maps and its applications. **MENASRI A., HNSF Khenchela**

17h20 – 17h40 Uses of Lyapunov polynomial functional to prove the global existence of reaction diffusion systems.
HAOUAM F., Tebessa University

17h40 – 18h00 Abstract FDE with Caputo-Fabrizio Derivative.
OULD MELHA K., University of Chlef

Monday, May 15, 2023

Session I: Statistics of Extremes In Conferences Hall, Bahlali Laboratory Center (Chairman: Prof. MERAGHNI Djamel)

- 08h30 – 08h50 :** Bias reduction in kernel tail index estimation for randomly truncated Pareto-type data.
MANCER S., Biskra University
- 08h50 – 09h10 :** Panel Data Models and Their Applications
KOUADRIA M., Annaba University
- 09h10 – 09h30 :** A new convex under estimator for univariate functions.
ZERROUKI D., Tizi-Ouzou University

Session II: Stochastic Analysis In Mehda-Conferences Hall, Sciences Faculty (Chairman: Dr. TAMER Lazhar)

- 08h30 – 08h50 :** Stochastic control systems driven by G-Brownian motion for the multi-dimensional situation.
DASSA M., Biskra University
- 08h50 – 09h10 :** Contrôle optimal G-stochastique.
GUESRAYA S., Biskra University
- 09h10 – 09h30 :** L^q ($q \geq 2$) Solutions of Quadratic Backward Stochastic Differential Equations. **DOUBBAKH S., Biskra University**

Session III: Numerical analysis and Operator theory In ASSASSI Great Conferences Hall (Chairman: Prof. SAADI Khelil)

- 08h30 – 08h50 :** Solution bounds of the discrete Lyapunov equation in Hilbert space.
ZAOUIA S., Batna 2 University
- 08h50 – 09h10 :** Global property of the weak solution for a nonlinear wave equation with boundary damping and internal source terms. **BOULMERKA I., Batna 2 University**
- 09h10 – 09h30 :** A new method projective for solution of a semidefinite primal-dual problem. **LAOUAR M., Batna 2 University**

Monday, May 15, 2023

Session IV: PDE and Fractional calculus In Audio-visual Conferences Hall - Computer Department (Chairman: Prof. BERBICHE Mohamed)

- 08h30 – 08h50 :** Designing Non-Stationary Biorthogonal Wavelets.
FOURAR Y., Batna University
- 08h50 – 09h10 :** Some results on the boundary stabilization of strings traveling at a constant speed.
SENGOUGA A., M'sila University
- 09h10 – 09h30 :** Some Nonlinear Anisotropic Parabolic Problems with Integrable Data. **HELLAL A., M'sila University**

Plenary lectures

Chairman: Prof. Abdelhakim NECIR

- 09h30 – 10h15 :** **Keynote 4**
Méthode du noyau pour l'estimation d'une densité : théorie et applications
Prof. Mouloud CHERFAOUI, Biskra University

10h15 - 10h45 : **Coffee break + Poster Session 2**

Chairman: Prof. Ahcene MERAD

- 10h45 – 11h30 :** **Keynote 5**
Aperçu sur la géométrie des espaces de Banach
Prof. Lahcène MEZRAG, M'sila University

Chairman: Prof. Ahmed MEDEGHRI

- 11h30 – 12h15 :** **Keynote 6**
Composition operators on Sobolev spaces, boundedness and continuity
Prof. Madani MOUSSAI, M'sila University

12h15 – 13h00 : **Seminar Concluding Ceremony**

Poster Session 1

Sunday, May 14, 2023

Stochastic Analysis:

1. KORICHI Fatiha, [Biskra University](#).
2. BOUKAF Samira, [Mila University](#).
3. BEN BRAHIM Hafida, [Biskra University](#).
4. LABED Saloua, [Biskra University](#).
5. DEROUCHE Farida, [Oum El-Bououaghi University](#).
6. MAKHLOUF Khouloud, [Biskra University](#).
7. RAHMANI Naceur, [Biskra University](#).

Statistics of Extremes:

8. ELBAY Roumaissa, [Biskra University](#).
9. KHEMISSI Zahia, [Biskra University](#).
10. BOUREDJI Hind, [Biskra University](#).
11. KOUIDER Mohamed Ridha, [Biskra University](#).

Numerical Analysis, Operator Theory, PDE and Fractional Calculus:

12. MEHAMDIA AbdElhamid, [Souk Ahras University](#).
13. DAIRA Ibtissem, [Souk Ahras University](#).
14. MALEK Abdelali, [Setif 1 University](#).
15. FERRADI Athmane, [M'sila University](#).
16. KENOUCHE Samir, [Biskra University](#).
17. CHETTOUH Besma, [Biskra University](#).
18. KHEZZANI Rimi, [Eloued University](#).
19. DJEMAI Samiha, [Setif 1 University](#).
20. BOUGHAMSA Wissem, [Skikda University](#).
21. KHERCHOUCHE Nacereddine, [Biskra University](#).
22. MEBARKI Khadidja, [Adrar University](#).
23. ZAAMOUNE Faiza, [Biskra University](#).
24. LEGOUIRAH Maria, [Biskra University](#).
25. HAMDY Soumia, [Biskra University](#).
26. MESSAOUDI Hassan, [Souk Ahras University](#).

Poster Session 2

Monday, May 15, 2023

Numerical analysis, Operator theory, PDE and Fractional calculus:

1. OUAAR Fatima, [Biskra University](#).
2. BENDAHMANE Raouia, [Biskra University](#).
3. MAKHELOUFI Hocine, [Mascara University](#).
4. SMAIL Sara, [Laghout University](#).
5. ABDENNEBI Issam, [Bordj Bou Arreridj University](#).
6. AL-NADHARI Abdulrahman, [Biskra University](#).
7. RABIA AFEF AMINA, [Annaba University](#).
8. LAADJAL Baya, [Biskra University](#).
9. DEROUCHE Djamila, [Khenchela University](#).
10. DJEMIAT Rabah, [M'sila University](#).
11. BENGUESMIA Amal, [Oum El Bouaghi University](#).
12. TEBBA Zakia, [Tebessa University](#).
13. CHITA Fouzia, [Khemis Miliana University](#).
14. AMMAR Malik, [Biskra University](#).
15. BENMESSAOUD Hibatterrahmane, [Laghout University](#).
16. ZEKRI Abdelkrim, [Constantine University](#).
17. GARTI Ines, [Biskra University](#).
18. ADOUANE Saida, [Biskra University](#).
19. BASTI Bilal, [Djelfa University](#).
20. ACHOUR Imane, [Biskra University](#).
21. NEMER Ahlem, [Biskra University](#).
22. DRAIFIA Ala Eddine, [Tebessa University](#).
23. SAKER Meriem, [Tebessa University](#).
24. LOUCIF Sami, [Tebessa University](#).
25. ZIDI Salim, [Tebessa University](#).
26. MERAH Yasmine, [Biskra University](#).

All posters are displayed in the space allocated in ASSASSI Great Conferences Hall of the University, between: 10h15 - 10h45.