Program (left column)

9h45–10h30 : Invited keynote

Prof. A. RHANDI : From dynamical systems to stochastic and partial differential equations.

Chair prof. H. RIAHI

10h30–11h00 : Coffee Break

Session 8 : (chair prof. My H. Lalaoui Rhali)

- **11h00–11h20 : Abdallah Afoukal,** Bohr–Neugebauer type result for a class of nondensely nonautonomous linear partial functional differential equations.
- **11h20–11h40 : Meryem EL Attaouye,** New principle reduction for partial functional differential equation with the lack of compactness.
- **11h40–12h00 : Akram Chahid Bagy,** The heavy ball method regularized by Tikhonov term. Simultaneous convergence of values and trajectories.

Session 9 : (chair prof. I. Ouassou)

- **12h00–12h20 : Sana Ajagjall,** Nonlinear degenerate parabolic quasi–variational inequalities.
- **12h20–12h40 : Mohamed Khazou,** Darbo's fixed point under weak topology features with application to a functional integral equation.
- **12h40–13h00 : Adil El Ghabi,** Random fixed point theorems with application to random differential equations in Banach spaces.

13h00–15h00 : Lunch

15h00–15h45 : Invited keynote

Prof. H. TOURE : Existence and Controllability Results in the α–norm and Kneser Property for Nonlinear Differential Equations in Banach Space.

Chair prof. K. Ezzinbi

Session 10 : (chair prof. Ikmakhen)

- **15h45– 16h05 : Laila Loudiki,** Diameter, upper traceable numbers and radio k–labelings of circulant graphs.
- **16h05 – 16h25 : Zakaria Taki,** The Omega–spectrum of polynomial functions.
- **16h25 – 16h45 : Alaa eddine Bensad,** A General Construction of Spherical Barycentric Coordinates and Applications.
- **16h45– 17h05 : Othmane Dani,** Special Affine Connections on Symmetric Spaces.

17h05–17h30 : Coffee Break

17h30–18h00 : Closing Ceremony

ABOUT

Cadi Ayyad University mathematics center, recently certified by the **CNRST** and bringing together all the university's **mathematics and computer science** research structures, is organizing its inaugural days on **September 21-22 and 23, 2022.** The aim is to make the center known nationally and bring together all its members and doctoral students around distinguished guest speakers. The days will also be an opportunity for Cadi Ayyad University's Ph.D. students in mathematics to present their works.

CHAIR Mohamed El Alaoui Talibi FSSM Marrakesh

SCIENTIFIC COMMITTEE

Mohamed Boucetta	FST Marrakesh
M'Hammed El Kahoui	FSSM Marrakesh
El Hassan Essaky	FPS Safi
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Driss Meskine	EST Essaouira
Idir Ouassou	ENSAM Marrakesh
Youssef Ouknine	FSSM Marrakesh

ORGANIZING COMMITTEE

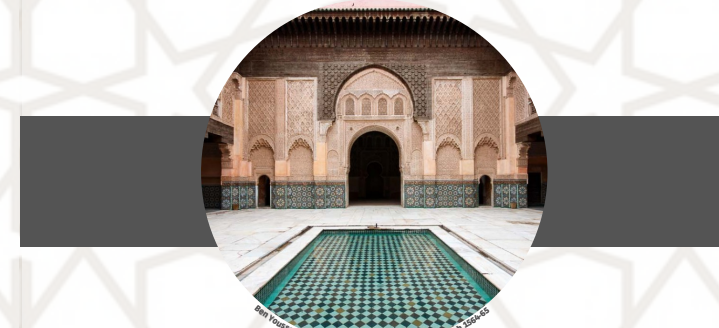|	
Mahmoud Baroun	FSSM Marrakesh
Said Boulite	ENSAM Marrakesh
Said Gounane	EST Essaouira
Fahd Karami	EST Essaouira

VENUE

http://mathcent.uca.ma/?page_id=893

CADI AYYAD MATHEMATICS CENTER

Inaugural Days

21-23 September 2022, Marrakesh

Ben Youssef Medrasa the oldest university in Marrakesh 1564–65

INVITED SPEAKERS

• Mohamed Tahar Kadaoui Abbassi	Sidi Mohamed Ben Abdellah University of Fez, Morocco
• Omar El Fallah	Mohamed V University of Rabat, Morocco
• Nourddine Igbida	University of Limoges, France
• Zoubida Mghazli	Ibn Tofail University of Kenitra, Marocco
• Nadia Raissi	Mohamed V University of Rabat, Morocco
• Abdelaziz Rhandi	University of Salerno, Italy
• Hamidou Touré	Permanent Secretary of National Academy of Sciences of Burkina Faso
• Vitaly Volpert	University of Lyon I, France
• Enrique Zuazua	Friedrich–Alexander–Universität Erlangen–Nürnberg (FAU), Germany

PROGRAM OF THE INAUGURAL DAYS

21 September 2022

8h30–9h00 : Welcome Participants

9h00–9h30 : Open Ceremony

9h30–10h15 : Invited keynote

Prof. O. EL FALLAH : Critical decay of singular values of Hankel operators on Bergman spaces.

Chair prof. E. H. ESSAKY

10h15–10h45 : Coffee Break

10h45–11h30 : Invited keynote

Prof. N. IGBIDA : Congestion pedestrian flow and constrained evolution PDEs.

Chair prof. D. Meskine

Session 1 : (chair prof. N. Alaa)

- **11h30–11h50 : Anouar Ben Loghfyry ,** A novel model based on time-fractional derivative for noise removal.
- **11h50–12h10 : Souad Mohaoui,** Low-rank modeling for multidimensional image recovrey.
- **12h10–12h30 : Omar Oubbih ,** Image decomposition and denoising by Kantorovich–Rubinstein discrete distance .
- **12h30–12h50 : Ahmed Nokrane,** Fourth-order nonlinear degenerate problem for image decomposition.

12h50–14h30 : Lunch

14h30–15h15 : Invited keynote

Prof. V. VOLPERT : Mathematical modelling of respiratory viral infections.

Chair prof. A. Hakim

Session 2 : (chair prof. O. Monga)

- **15h15–15h35 : Mohammed Elghandouri,** Global Attractor for a Parabolic Nonlinear PDEs Model Arising in Biological Dynamic in 3D Soil Structure.
- **15h35–15h55 : Mouad Klai,** Pore scale simulation of diffusion using graph neural networks : Application to microbial decomposition of organic matter in soil.

- **15h55–16h15 : Soufiane Boumasmoud,** Polynomial stability for some partial functional differential equation with distributed delay.
- **16h15–16h35 : Jaouad ElMatloub,** Mild solution in the α–norm for some partial integrodifferential equations involving a nonlocal condition.

16h35–17h05 : Coffee Break

Session 3 : (chair prof. M. Baroun)

- **17h05–17h25 : Maryam Lasri,** Stability and dichotomy of linear partial differential equations of neutral type.
- **17h25–17h45 : Ghita El Guermai,** Boundary null controlability for dynamical parabolic equations.
- **17h45–18h05 : Mariem Jakhoukh,** Internal null controllability for 1–D heat equation with dynamic boundary conditions.

22 September 2022

9h00–9h45 : Invited keynote

Prof. E. ZUAZUA : Control and Machine Learning.

Chair prof. L. Maniar

9h45–10h30 : Invited keynote

Prof. M. T. K. ABBASSI : Sur la géométrie Riemannienne du fibré tangent.

Chair Prof. M. Boucetta

10h30–11h00 : Coffee Break

Session 4 : (chair prof. F. Karami)

- **11h00–11h20 : Maryam Boubekraoui,** Extrapolation method for multilinear PageRank computations.
- **11h20–11h40 : El Ghabi Malika,** Nonlinear boundary periodic equation with arbitrary growth nonlinearity and data measure : Mathematical analysis and Numerical simulation by LBM method. .
- **11h40–12h00 : Ilyes Aberaouze,** Left invariant Riemannian metrics with harmonic curvature are Ricci–parallel in solvable Lie groups and Lie groups of dimension ≤ 6 .

Session 5 : (chair prof. A. Raouj)

- **12h00–12h20 : Hamza El Ouali,** Flat symplectic Lie algebras.

- **12h20–12h40 : Ferdaous Ait Addi ,** Solving tensor compressed sensing problem using the Einstein product.
- **12h40–13h00 : Omar Labihi,** Estimation de certaines sommes courtes.

13h00–14h30 : Lunch

14h30–15h15 : Invited keynote

Prof. Z. MGHAZLI : Modeling some biological phenomena via the porous media approach.

chair prof. M. El Alaoui Talibi

Session 6 : (chair prof. A. H. Ben Tbib)

- **15h15–15h35 : Nawfel Benatia,** Performance study of Bernstein–Bézier finite elements for the solution of elastic wave scattering problems in the frequency domain.
- **15h35–15h55 : Mohamed Alahiane,** On the conditional model in the high dimensional data analysis.
- **15h55–16h15 : Lahoucine Hobbad,** On improved shrinkage estimators for modified balanced loss functions.

16h15–16h45 : Coffee Break

Session 7 : (chair prof. M. Halloumi)

- **16h45–17h05 : Ilham Ouelddris,** Impulse controllability for degenerate singular parabolic equations.
- **17h05–17h25 : Abdellatif Elgrou,** Null controllability for stochastic parabolic equations with dynamic boundary conditions.
- **17h25–17h45 : Mountassir Sara,** Uniform boundary controllability of a semidiscrete 1–D coupled wave equation.

23 September 2022

9h00–9h45 : Invited keynote

Prof. N. RAISSI & M. Serhani : Modélisation mathématique du développement durable, accent sur la stabilité, la stabilisabilité, la viabilité des systèmes complexes en jeu.

Chair prof. Y. Ouknine