

# 9TH AMNEDP LABORATORY WORKSHOP SCHEDULE

## ABDELKADER KHELLADI CONFERENCE ROOM, FACULTY OF MATHEMATICS, USTHB

| September 20, 2025 |                                                                                                |                                                                                                                           | September 21, 2025 |                                                                                                                                                                                  |                                                                                                                                                                      |                                                                                       |
|--------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 08h30-09h00        | Registration                                                                                   |                                                                                                                           | 08h30-09h20        | Session Chair: M. S. Moulay                                                                                                                                                      |                                                                                                                                                                      |                                                                                       |
| 09h00-9h15         | Opening Session                                                                                |                                                                                                                           |                    | K. Lemrabet (Plenary Lecture 3)<br>Sharing a coin with three sides                                                                                                               |                                                                                                                                                                      |                                                                                       |
| 09h15-10h05        | Session Chair: K. Lemrabet                                                                     |                                                                                                                           | 09h20-10h10        | H. Khelladi (Plenary Lecture 4)<br>EDP de Burgers : L'acoustique non linéaire, analyse mathématique et discrétisation numérique : Application à l'imagerie acoustique harmonique |                                                                                                                                                                      |                                                                                       |
|                    | D. E. Teniou (Plenary Lecture 1)<br>Gauss : Le prince des mathématiciens                       |                                                                                                                           |                    | 10:10-10h30                                                                                                                                                                      | Coffee Break                                                                                                                                                         |                                                                                       |
| 10h05-10h40        | Tribute                                                                                        |                                                                                                                           | 10h30-11h20        | Session Chair: R. Boudjerada                                                                                                                                                     |                                                                                                                                                                      |                                                                                       |
| 10h40-11h00        | Coffee Break                                                                                   |                                                                                                                           |                    | A. Ainouz (Plenary Lecture 5)<br>Poroelasticity Theory : A Brief Historical and Mathematical Overview                                                                            |                                                                                                                                                                      |                                                                                       |
| 11h00-11:50        | Session Chair: O. Zair                                                                         |                                                                                                                           |                    | 11h20-11h45                                                                                                                                                                      | A. Benraouda                                                                                                                                                         | A Regularization method and optimal control for an elastic frictional contact problem |
|                    | L. Rahmani (Plenary Lecture 2)<br>Thin layers in structural mechanics: an asymptotic framework |                                                                                                                           |                    | 11h45-12h10                                                                                                                                                                      | Z. Sebbagh                                                                                                                                                           | Uniform Stabilization of flexible Beam with Boundary Control                          |
| 11h50-12h15        | A. Kacimi                                                                                      | The Role of Baroclinic and Barotropic Instabilities in the Formation of Monsoon Tropical Depressions                      | 12h10-13h30        | Lunch                                                                                                                                                                            |                                                                                                                                                                      |                                                                                       |
| 12h15-12h40        | S. Azoug                                                                                       | Numerical analysis of a semi-implicit fractional fem-scheme for a new model of fluid flow with fractional time-derivative | 13h30-13h55        | Session Chair: T. Aliziane                                                                                                                                                       |                                                                                                                                                                      |                                                                                       |
| 12h40-14h00        | Lunch                                                                                          |                                                                                                                           |                    | M. Ait Yahia                                                                                                                                                                     | Un résultat général d'homogénéisation d'un problème spectral en élasticité linéarisée dans un milieu perforé                                                         |                                                                                       |
| 14h00-14h25        | Session Chair: N. Foukroun                                                                     |                                                                                                                           | 13h55-14h20        | F. Skender                                                                                                                                                                       | Des approches numériques pour la résolution des équations aux dérivées partielles (EDP)                                                                              |                                                                                       |
|                    | M. Chebab                                                                                      | A new insight in the study of quasi-linear hyperbolic equation with logarithmic nonlinearity                              | 14h20-14h45        | M. Bougherara                                                                                                                                                                    | Energy decay of solutions for a wave equation with a constant weak delay and a weak internal feedback                                                                |                                                                                       |
| 14h25-14h50        | R. Boureghida                                                                                  | Uniform Stabilization of the Cauchy–Ventcel Problem with Variable Coefficients                                            | 14h45-15h05        | Coffee Break                                                                                                                                                                     |                                                                                                                                                                      |                                                                                       |
| 14h50-15h15        | I. Kettaf                                                                                      | Existence results for a class of kirchhoff–type equations on the real half–line with sublinear nonlinearity               | 15h05-15h30        | Session Chair: M. Ait Yahia                                                                                                                                                      |                                                                                                                                                                      |                                                                                       |
| 15h15-15h35        | Coffee Break                                                                                   |                                                                                                                           |                    | S. Chentout                                                                                                                                                                      | Eigenvalue criteria for existence and nonexistence of positive solutions for $\alpha$ -order ( $2 < \alpha < 3$ ) fractional differential equations on the half-line |                                                                                       |
| 15h35-16h00        | Session Chair: K. Boutarène                                                                    |                                                                                                                           | 15h30-15h55        | W. Oukil                                                                                                                                                                         | When Periodicity Fails to Guarantee the Existence of Rotation                                                                                                        |                                                                                       |
|                    | Z. Draham                                                                                      | A convergence result for history-dependent quasivariational inequalities                                                  | Closing Remarks    |                                                                                                                                                                                  |                                                                                                                                                                      |                                                                                       |
| 16h00-16h25        | A. Krouchi                                                                                     | The Necessity of the LDG Approach for High-Order PDEs                                                                     |                    |                                                                                                                                                                                  |                                                                                                                                                                      |                                                                                       |
| 16h25-16h50        | D. Sadali                                                                                      | Insensitizing Control of a coupled parabolic-elliptic equations with mixed boundary conditions.                           |                    |                                                                                                                                                                                  |                                                                                                                                                                      |                                                                                       |