

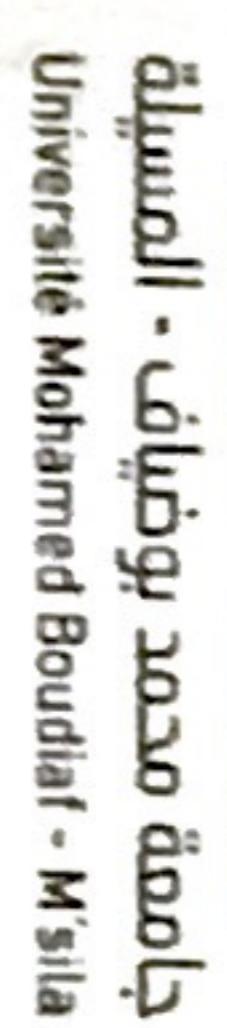
People's Democratic Republic of Algeria

Ministry of Higher Education and Scientific Research



University of Mohamed Boudiaf - M'sila

Faculty of Mathematics and Computer Sciences



*The Fourth National Conference on "Mathematics, Biology and Medicine"*

*Edition 2025 – Modeling of Epidemic Propagation Phenomena*

*(NCMBM'2025) December 9, 2025, M'sila (Algeria).*

## CERTIFICATE OF PARTICIPATION

*The organizing committee of the Fourth National Conference on "Mathematics, Biology and Medicine" certifies that:*

**Bilal LOUNNAS**

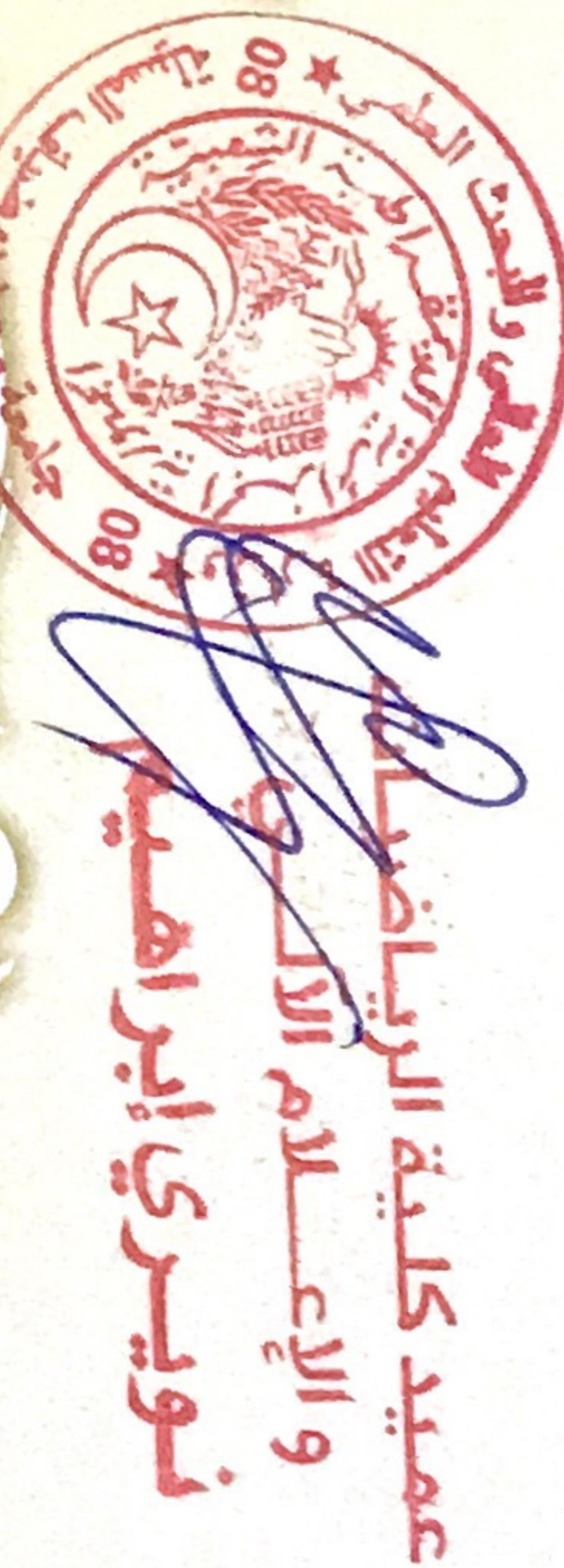
*Presented a COMMUNICATION entitled:*

*Dimensionality Reduction in Medical Data: A PCA-Based Approach for Disease Prediction.*

Dean of Faculty

Chairman of the 4th NCMBM'2025

عمرية ياسين



عميد كلية الرياضيات  
و الإعلام الاعلامي

فؤاد إبراهيم



Chairman of the 4th NCMBM'2025