



People's Democratic Republic of Algeria  
Ministry of Higher Education and Scientific Research  
Echahid Hamma Lakhdar University – El Oued  
Faculty of Exact Sciences  
Mathematics Department



Laboratory of Operator Theory and PDE: Foundations and Applications

4<sup>th</sup> International Conference In Operator Theory, EDP and Applications

CITTO'22, December 7 - 8, 2022, El Oued, Algeria

## CERTIFICATE OF PARTICIPATION

The organizing committee of the 4<sup>th</sup> International Conference in Operator Theory, EDP and Applications CITTO'22 December 7 - 8, 2022, El Oued, Algeria, certifies that:

Saadi Abderachid

Presented an ORAL COMMUNICATION entitled:

Fractional Sobolev Space via Liouville operator



عبد سعيد  
كلية العلوم الدقيقة  
جامعة Echahid Hamma Lakhdar

Chairman of the CITTO'22  
Pr. Abdelouahab MANSOUR