



The Department of Science and Technology  
Metals Industry Research and Development Center  
and Mechatronics and Robotics Society of the Philippines

present this

# CERTIFICATE OF PARTICIPATION

to

**JONAS M. MACAPAGAL**

for attending the  
**Metals and Engineering Week 2025** webinar on

**Fractional Circuits: An Emerging Interdisciplinary Research Area**

held on June 16, 2025

**DR. ARVIN R. DE LA CRUZ**  
President, MRSP

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