



جامعة العلوم التطبيقية  
APPLIED SCIENCE UNIVERSITY



## Presenter Certificate

*This certificate is awarded to*

Md Shahabub Alam

*for presenting a paper titled*

Physics-Guided Deep Learning for Heat Pump Stress Detection: A  
Comprehensive Analysis on When2Heat Dataset

*at the 2025 International Conference on Decision Aid Sciences and Applications (DASA), held on  
December 01–02, 2025, at the Applied Science University in the Kingdom of Bahrain.*



Prof. Hatem Masri  
Conference Steering Committee