





## CSE 2 IV CONFERENCE ON COMPUTER SCIENCE, ELECTRONICS AND INDUSTRIAL ENGINEERING THIS CERTIFICATE IS PROUDLY AWARDED

TO: JUAN GÁRATE

Paper title: METAHEURISTICS OF THE ARTIFICIAL BEE COLONY USED FOR OPTIMIZING A PID DAHLIN ON AN ARM PLATFORM

for your excellent oral presentation at the conference and your significant contribution to the success of the "IV Conference on Computer Science, Electronics and Industrial Engineering (CSEI2022)" which held virtually in Ambato, Ecuador, from November 7th to November 11th, 2022.

Ing. Carlos Núñez Mg. Chair of the Conference MSc. Elsa Pilar Urrutia Urrutia President of Organizing Committee







