

## **CERTIFICATE**

## Michael Jordan

participated in the International Congress of Mathematicians – ICM2018, held at Riocentro Convention Center, Rio de Janeiro, RJ, Brazil, from August 1–9, 2018 and presented the following Plenary Lecture: "Dynamical, symplectic and stochastic perspectives on gradient-based optimization".

Rio de Janeiro, August 9, 2018

Marcelo Viana ICM2018 Chair