



Certificate of Presentation

This is to certify that

Prof. Mikio Sakai

has attended

**15th World Congress on Computational Mechanics &
8th Asian Pacific Congress on Computational Mechanics**

held during July 31 - August 5, 2022

and presented Paper No. 2152

**Advanced discrete element method towards a digital twin
based powder system**

as a Keynote

in Minisymposia 323

Multiscale modelling of packing and flow of granular materials

Seiichi Koshizuka, Congress Chair
Daigoro Isobe, Technical Program Chair
Kenjiro Terada, Secretary General