

## Graduate School of Science and Engineering, Yamaguchi University 2-16-1 Tokiwadai, Ube 755-8611, Japan: TEL +81-080-4558-9833

5<sup>th</sup> September 2014

Dr. János Lógó, Editor-in-Chief Editorial office *Periodica Polytechnica Civil Engineering* 

Dear Dr. János Lógó:

Please find enclosed a manuscript entitled: "Numerical investigation on the crushing stress of granular materials in triaxial compression test" which I am submitting for exclusive consideration of publication as an article in your esteemed journal, *Periodica Polytechnica Civil Engineering*. We affirm that this manuscript is our original work. We affirm that the submitted manuscript is not under consideration elsewhere for publication and will not be submitted elsewhere while under consideration by *Periodica Polytechnica Civil Engineering*.

This study presents a parametric study on the reference crushing stress to investigate its effect on the prediction capacity of the constitutive model. Predicted results demonstrate that the peak stress ratio increases and contractive behavior becomes less obvious with larger reference crushing stress. Reference crushing stress increases for the same kind of granular material with wider distributed grain size and larger relative density. A linear relation between the reference crushing stress and single particle strength has been obtained from the numerical and experimental results. The reference crushing stress can be recognized as one effective index to evaluate the strength of granular material in triaxial compression tests.

Knowledgeable referees for this paper might include:

- Tinghua Yi, Professor, School of Civil Engineering, Dalian University of Technology, Dalian, China (<u>yth@dlut.edu.cn</u>)
- Fawu Wang, Professor, Department of Geoscience, Shimane university, Shimane, Japan (wangfw@riko.shimane-u.ac.jp)
- Takayuki Shuku, Assistant Professor, Department of Urban Environment Development, Okayama university, Okayama, Japan shuku@cc.okayama-u.ac.jp)
- Qing Yang, Professor, School of Civil Engineering, Dalian University of Technology, Dalian, China (<u>qyang@dlut.edu.cn</u>)

Thank you for your consideration of our work! Please address all correspondence concerning this manuscript to me at Yamaguchi University, Japan and feel free to correspond with me via e-mail (<u>yangwuuu0226@hotmail.com</u>).

(Corresponding author) Yang Wu, Department of Civil Engineering, Yamaguchi University, Tokiwadai 2-16-1, Ube 7558611, Japan Tel: +81-80-4558-9833; E-mail: <u>yangwuuu0226@hotmail.com</u>

> Yours sincerely, Dr. Yang Wu