

International Conference on Sustainable Design, Engineering and Construction 2016 (Arizona, USA)

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DAITO, Yuma

博士課程三年

2016年5月18日から5月20日まで、Arizona State University (Tempe, Arizona, USA)にて開催されたICSDEC 2016 (International Conference on Sustainable Design, Engineering and Construction)に参加し、特定非営利活動法人道普請人 福林良則氏を第一著者とする下記の論文について共著者として学会に参加し発表および議論を行った。以下に、研究発表の質疑と議論の内容を記載する。

表1 研究発表題目

氏名	タイトル
大東 優馬	【Track 8 : Big data / Intelligence】 Locally available geotextile for maintaining unpaved roads in developing countries to enhance community resilience

* 質問頂いた内容

From Associate Prof. Pingbo Tang, Arizona State University, USA

Q: What kind of idea do you have about compare the CBR value of Do-nou technology with ?

A: We must compare with case of earth road in African countries as explanation material of superiority. And also, a soil material with and without soil bag have to be compared in CBR to prove the improvement.

Reply from questioner: Additionally, you should compare with other locally reinforcement method such as mixing oil or lime because you can get information easily.

From Associate Prof. V Paul C Charlesraj, Amity University, India

Q: This road construction method is so useful and amazing because low price and a lot of local area really need road rehabilitation by your proposition. And then, in the rainy season, Is this method able to apply?

A: Normally, it should avoid in the rainy day because inside material will be absorbed much water and base course also. But if we can control water, it is possible apply. From the social aspect, if the project is doing in the village, it is normally difficult to mobilize people due to their busy farming.

From PhD candidate student, Arizona State University

Q: Could you explain please about concrete methods that how to close the bag and what kind of binding material is used, what kinds of soil are applicable and how are materials subtended as applicable.

A: For the binding, we use usually a polyester thin sting but any kinds of string are applicable. And then, as setting the bags, it set bags as mouth portion slide under the bags because mouth portion is the weakest. About materials, except clay, it is applicable.

* 質問した内容

[Track 8 Big data / Intelligence 19, May, 13:20 -]

Presenter: Mr. Haider Mohamed

Title: The Effect of Exterior and Interior Roof Thermal Radiation on Buildings Cooling Energy

Q: about 30 % reduction of energy requirement is so interesting to solve the energy consumption problems from the limited and scant it. But this kind of application maybe has difficulty to distribute itself widely from budget so that how to move into implementation phase?

A: This kind of research must work with government and if the result is coming the stage of all preparation, we can start it. But this research is based on simulation so that we are going to hold survey on the site largely.

[Track 6 Construction 20, May, 14:00 -]

Presenter: Dr. Sheau-Ting Low

Title: The Communication Channels Package to Market Energy Conservation Behaviour: Evidence of Malaysian Office Buildings

Q: In the questioner, why did you choice the experts only without general citizen?

A: First our research target focuses office building so that experts were chosen and it is just a first trial so actually we are going to enlarge the targets.

* 感想

今回初めて先進国での国際会議への参加機会を頂いた。昨年 2015 年に MDGs (Millennium Development Goals)は完了し、新たに SDGs (Sustainable Development Goals)が宣言された。内容は途上国に限定せず、広く世界全体で Sustainable に進んでいくことが重要視されている。本会議においても Sustainable の観点から見た土木の研究会であり、4 回の基調講演では、そのうち 2 回が「建設分野において 4 割を占め、今後もさらに増大するエネルギー需要について、土木技術者としてこれを低減させる必要がある」とのことがかなり強調された。それぞれの発表においては、「建設現場に ICT を導入することで効率化を図り工期を短縮することによりエネルギー需要を低減させる」との内容や、「ICT においては具体的にこれまでに設計された図面をビッグデータとして扱い、2 次元図面を自動で 3 次元化させるツールの開発」などの内容が非常に多かった。

今回の国際会議を通して、さすがは先進国といったところで、研究内容も違う次元にあるように思った。一方で土のう工法については高い関心を頂戴し、途上国においては確かにこういった容易な技術により問題解決を図る必要があると認識を頂いた。今後も自信をもって、なんとか博士論文としてまとめあげるよう全力を尽くしたい。本機会を頂きありがとうございました。