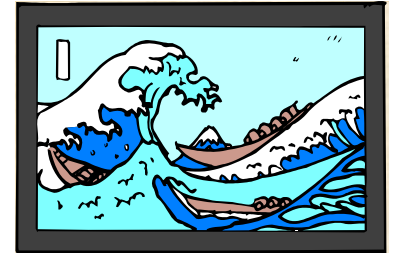


講演会のお知らせ

波と防波の数理解析 (Mathematical Analysis of Wave and Breakwater)

日時: 平成23年6月30日(木) 10:00~12:00
Lecture 1: 10:00~11:00, Lecture 2: 11:00~12:00

場所: 環境工学部棟 104 教室



講師: **Lecture 1; Dr. L. Hari Wiryanto, Associate Professor**
Lecture 2; Dr. Sri Redjeki Pudjaprasetya, Associate Professor

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Bandung, Indonesia

演題: **Lecture 1; Waves over a porous breakwater**
Lecture 2; Reduction of waves in an emerged porous breakwater

対象: 環境工学部, 環境学研究科, 自然科学研究科所属学生及び教員

講演要旨:

Lecture 1; Waves in their propagation carries energy that can be dangerous for human life and our environment. Buildings or cliff along coastal are needed to protect from hitting of waves. On the other hand, waves are also interesting for entertainment and tourist attraction. Therefore, study on wave propagation takes much attention by many researchers, to know the wave characteristics. One of the wave phenomena is when the wave propagates over porous seabed such as a submerged breakwater which contains pores. The mathematical model of the phenomena is similar to shallow water equations, with an extra term indicating that the wave amplitude reduces with respect to the space. I would like to present the model and the experiment. Qualitatively, they are in agreement.

Lecture 2; In this talk we will show how wave will reduces inside an emerged porous breakwater. We will use a Boussinesq equation derived for gravity waves in a three-layer porous media. We implement the predictor-corrector numerical method to solve the Boussinesq three-layer equation. We will simulate reduction of incident monochromatic wave amplitude that enters a porous media, also the splitting of an initial solitary wave after passing a porous media.