**CEIDS学術交流セミナー**

環境イノベーションデザインセンターでは持続可能社会の構築に貢献すべく、社会ビジョンと研究シーズをつなぐメゾ領域研究を進めています。今回はハワイ大学の樽井先生をお招きし、実験経済学のアプローチに基づく省エネ行動の分析や世代間資源配分問題について講演いただきます。

【日時】2013年2月19日14：00～17：30

【講演者】樽井礼・ハワイ大学経済学部准教授

【プログラム】講演は日本語で行われます。

講演①14：00～15：30

Why does real-time information reduce energy consumption?

休憩

講演②16：00～17：30

Other-regarding behavior under collective action

【場所】産学連携本部A棟１Fセミナー室

【アクセス】<http://www.osaka-u.ac.jp/ja/access/suita.html>

リンク先キャンパスマップの37番の建物。

【連絡先】　上須（うわす）uwasu@ceids.osaka-u.ac.jp　06-6879-4150

【講演要旨】

講演①　**Why does real-time information reduce energy consumption?**

Smart meters provide electricity consumers with real-time information about their electricity usage and prices. Existing studies estimate how much energy conservation is achieved when such real-time feedbacks are available. However, they do not explain why smart meters reduce energy consumption. We explore the mechanisms through which real-time information affects behavior by conducting a randomized-control trial with households. The experiment investigates whether learning about energy use via real-time feedback is sufficient to sustain energy conservation, or whether having a constant reminder of energy use is necessary for energy conservation.

We randomly assigned 65 households to a control group and two treatment groups, and collected daily electricity consumption data from each household throughout the experiment. The experiment consists of three periods (0,1,2), totaling three months. While no households received real-time feedbacks in period 0, the members of the two treatment groups received real-time information via in-home displays about energy consumption in period 1. In-home displays were then removed from the “Learning” treatment group at the end of period 1 while the other (“Saliency”) treatment group continued to have in-home displays for the duration of period 2. We find a statistically significant treatment effect on those with in-home displays. We also find that learning plays a more prominent role than saliency in enhancing energy conservation. We discuss policy implications on effective energy conservation programs, e.g. those that enhance consumers’ learning about energy use versus those that improves the saliency of energy use.

講演②　**Other-regarding behavior under collective action**

Many real-world collective-action settings include dynamic externalities, in that in that the actions taken by a group of decision-makers affect collective-action environment for their followers. Examples include climate change mitigation, species preservation, and collective decisions on public education. If people care about the dynamic externality they impose on others, such other-regarding preferences may help to resolve collective action problems. In this paper we use two-stage Prisoners' Dilemma and Coordination games with dynamic externalities to study other-regarding behavior under collective action. Our laboratory experiments reveal that concerns for the followers' welfare do have an effect on the actions of the predecessors, but not in all cases. The predecessors tend to forego own payoffs to avoid imposing negative externalities on the followers, but not to generate positive externalities for the followers. This provides evidence that in some cases the subjects are driven by self-serving equity concerns more than by the social welfare maximization concerns. Further, the evidence of concern for the follower welfare disappears once payoff asymmetry between the predecessors is introduced, or if strategic uncertainly about the costs and benefits of the follower-regarding action is substantial. Finally, we observe that the predecessor actions have a large effect on the follower behavior.