



## Department of Biological Sciences & BEJC Seminar Announcement

**Date:** Monday 12, Oct 2009  
**Time:** 10 am  
**Venue:** DBS Conference Room  
**Host:** Prof Chou Loke Ming and  
Ms. Tay Ywee Chieh

### Professor Kazuo Nadaoka

#### Introduction of a Project on Reef Connectivity in the South-East Asia and Western Pacific (SEA-WP) Regions

Reef connectivity based on source-sink relationship between distant coastal ecosystems is a key for enhancing resilience of coastal ecosystems by, e. g., properly setting and managing marine protected areas (MPAs). In the seminar, recent example of the studies by our group for clarifying reef connectivity will be presented with the introduction of the SEA-WP connectivity project (<http://www.wv.mei.titech.ac.jp/seawp/index.htm>), which combines genetic and ecological approaches to infer reef connectivity in the Coral Triangle and its surrounding regions. In the genetic approach population genetic analyses are conducted using both microsatellite and mtDNA markers, while in the ecological approach numerical simulations of larval dispersal are performed with a newly developed multi-nesting Indo-Pacific ocean circulation model and others.

Current Positions:

Professor at Graduate School of Information Science and Engineering, Tokyo Institute of Technology, Vice-President of Japanese Coral Reef Society (JCRS), and Chair of Coastal Engineering Committee in Japan Society of Civil Engineers (CEC/JSCE), etc.

### Mr. Tanuspong Pokavanich, Doctoral Candidate

#### Physical and water quality variability in Puerto Galera coastal water induced by its interaction with the outer sea

The Puerto Galera lagoon, located in the middle portion of the Verde Island Passage strait in the Philippines, is abounded with different types of coastal marine ecosystem including coral reefs, seagrass beds and mangrove forests. The presentation will demonstrate the effects of the massive sporadic intrusion of outer sea deep cool water into the lagoon to the overall water circulation and water quality of the lagoon. The analyses will base on the data set obtained from intensive field observations together with hydrodynamic and water quality simulations.

His currently pursuing his PhD in the Tokyo Institute of Technology, Japan, and his research areas are in coastal physical oceanography and coastal engineering.

### Assistant Professor Ariel C. Blanco

#### Evaluation of terrestrial loadings and their effects on a fringing reef in Ishigaki Island, Okinawa, Japan

Terrestrial loadings into a fringing reef through surface and subsurface pathways were comprehensively assessed. Watershed monitoring was carried out in Todoroki River to quantify sediment and nutrient discharges and reveal their dynamics. Watershed simulations were also performed to investigate the effect of land cover changes. In the nearshore portion of the reef, groundwater flux was estimated using radon mass balance. Nutrient-rich river and submarine groundwater discharge not only elevated Chl-a concentration but favored the dominance of cyanobacteria. Analysis of multi-date satellite images revealed that, in the long term, the reef has undergone degradation (e.g., decreased live coral cover accompanied with increased macroalgal abundance).

Current Position: Assistant Professor at the Department of Geodetic Engineering, College of Engineering, University of the Philippines, Diliman, Quezon City. His research interests are in the development and application of geospatial methods for environmental studies; terrestrial modeling.