MESSAGE FROM THE EXECUTIVE DIRECTOR

The past year has brought the beginnings of growth to the Hawaii economy and fresh new developments for UHERO. We have undertaken important new research, we have added two new faculty members to the UHERO team, and we have presented a new award-winning public face to the community.

This summer we were lucky enough to welcome Dr. Peter Fuleky and Dr. Inna Cintina to the UHERO team. Dr. Fuleky holds a Ph.D in Economics from the University of Washington, and was most recently a Postdoctoral Fellow with UHERO. He brings expertise in simulation-based estimation, indirect inference, and mixed frequency time series analysis to UHERO. Dr. Fuleky is a joint hire with the Department of Economics, where he will teach graduate and undergraduate forecasting and econometrics courses. Dr. Cintina received her Ph.D in Economics from Clemson University in May of 2011, and brings a diversity research interests to UHERO, including labor economics, health economics, economics of education, and public policy. These young additions to the UHERO family will round out a diversity of possibilities for new research related to Hawaii’s economy.

UHERO is constantly improving and expanding website features to make www.uhero.hawaii.edu an excellent resource for its users and visitors, and is proud to announce that the website received the Association for University Business and Economic Research’s (AUBER) 2011 Website Award. The AUBER Website Award honors the center whose website effectively and efficiently communicates with its constituents in terms of design, content, organization and more. Recent additions to the website include a new chart gallery, the UHERO Blog, with the latest analysis of the Hawaii’s economy and the addition of the UHERO forum on Facebook. An important feature of the website is the UHERO Data Portal, a free online resource that provides access to the most up to date information on a wide array of economic and social indicators for the State and County economies. The Data Portal is made possible through the generous support of sponsors, including lead support from the Bank of Hawaii. This support is a key factor in UHERO’s ability to maintain the high quality level of research and service that it does. Content from weekly UHERO appearances on KITV, and forecast report summaries available for public viewing can be accessed on the site as well.

In the 2011 fiscal year, we made new strides in economic research that will inform policymaking in Hawaii in coming years. This research builds on our core strengths in the analysis of economic, environmental, and human resource issues, while extending our activities in exciting new directions. One example is research conducted by our Energy and Greenhouse Gas Solutions (EGGS) team, led by Dr. Denise Konan, which looks at the determinants of Hawaii’s greenhouse gas emissions and potential policy responses. Project Environment continues environmental studies on sustainable tourism in Hawaii, characterizing the natural resource management sector in Hawaii, the impacts of invasive species such as Ohia rust, costs and benefits of rodent eradication, sustainable management of Hawaii’s groundwater aquifers and forests, and economic determinants of introductions of invasive species around the world. New topics under the Forecast Project include research on mixed-frequency models of visitor spending and the role that airfare movements play in determining the number of visitor to the state. The common theme across all UHERO research is policy relevance—what can we learn about our state and our world that can support better policy decision making?

Overall, during FY2011 nine UHERO faculty or fellows served as PIs on over 20 funded projects resulting in approximately $1.6 million in funding. These funds supported four staff members, and they also supported UHERO’s central educational mission. UHERO provided financial support and opportunities for eleven graduate assistants, and we were able to support three undergraduate interns, who received real world research experience.

The UHERO Forecast Project, headed by Dr. Byron Gangnes, continued to play a crucial role over the past year providing detailed forecasts that help businesses, policy makers and the public make plans in an uncertain economic environment. UHERO researchers provided hundreds of hours of commentary to the press and presentations to civic groups and policymakers. Led by
Dr. Sumner La Croix, we continued our weekly “UHERO Report,” segments on KITV news, providing accessible explanation and analysis of emerging economic issues that we hope will build broader understanding throughout the local community.

We feel privileged to be able to play the role we do in Hawaii, and we feel blessed to enjoy the support of the University of Hawaii and our generous Sponsors too numerous to mention (but see the list on page 4.) We look forward to your continuing support over the coming year.

With Aloha,

Dr. Carl S. Bonham, Executive Director
UHERO THANKS THE FOLLOWING SPONSORS:

**KAWEKI‘U - THE TOPMOST SUMMIT**

The Bank of Hawaii

**KILOHANA - A LOOKOUT, HIGH POINT**

Hawai‘i Electric Light Company, Ltd.
Hawaiian Electric Company, Inc.
Maui Electric Company, Ltd.
County of Kaua‘i Office of Economic Development
Kamehameha Schools
Matson Navigation Company

**KUAHIWI - A HIGH HILL, MOUNTAIN**

American Savings Bank
Central Pacific Bank
Hau‘oli Mau Loa
Hawaii Foreign-Trade Zone
Kaiser Permanente Hawai‘i
Natural Energy Laboratory of Hawaii Authority
The Nature Conservancy, Hawai‘i Program
The Pacific Resource Partnership
Servco Pacific, Inc.

Kulia I Ka Nu‘u (literally “Strive for the summit”) is the value of achievement, those who pursue personal excellence. This was the motto of Hawai‘i’s Queen Kapi‘olani. Sponsors help UHERO to continually reach for excellence as the premier organization dedicated to economic research relevant to Hawai‘i and the Asia Pacific region.

The UHERO Forecast Project is a community-sponsored research program of the University of Hawai‘i at Mānoa. The Forecast Project provides the Hawai‘i community with analysis on economic, demographic, and business trends in the State and the Asia-Pacific region.

All sponsors receive the full schedule of UHERO reports, as well as other benefits that vary with the level of financial commitment.

For sponsorship information, browse to http://www.uhero.hawaii.edu.
UHERO’S MISSION

UHERO’s mission is to inform public- and private-sector economic decision-making through quantitative and analytical research with a particular focus on the economies of Hawai’i and the Asia-Pacific region. UHERO provides a forum for interaction between scholars, public policy makers and business leaders on economic policy choices and facilitates the collaborative efforts of UH economists with other scholars. UHERO research associates support this mission by conducting substantive research which is widely disseminated to the public.

THE UHERO TEAM

UHERO faculty includes Carl Bonham, Kimberly Burnett, Peter Fuleky, and Inna Cintina. UHERO staff includes Shih-Ling Chang, Craig Coleman, Ben Trevino, and Christopher Wada.

UHERO Research Fellows are the Principal Investigators and Co-PIs on extramurally funded research projects administratively supported by UHERO. Research Fellows participate in UHERO governance and share administrative costs and benefits. Current Research Fellows include Makena Coffman, Byron Gangnes, Denise Konan, Sumner LaCroix, Sang-Hyop Lee, John Lynham, and James Roumasset.

UHERO Affiliate Researchers are engaged in research or service that supports UHERO’s mission. Current Affiliate Researchers include Paul Bernstein, Tim Halliday, Hui He, James Mak, Ilan Noy, Katerina Sherstyuk, and Nori Tarui.

UHERO graduate research assistants include Lauren Armstrong, Chris DeVencia, Aaron Mann, Olga Moulton, Iman Nasserí, Babak Saadat, Atsushi Shibata, Kanae Tokunaga, Sherilyn Wee, Cynthia Ying, and Qianxue Zhao.

UHERO undergraduate research interns are James Jones, Jonathan Fung, and Candace Skinner.
The Forecast Project

Current awards: $161,404

Under the direction of Dr. Byron Gangnes, UHERO's Forecast Project undertakes research and analysis on the operation of the Hawaii economy and key policy challenges. The Forecast Project provides the Hawaii community with information and forecasts of economic, demographic, and business trends in the State and the Asia-Pacific region. The Forecast Project reporting schedule includes quarterly forecast updates for the Hawaii economy, an annual forecast report for the county economies, a semi-annual construction report, and an annual global outlook report. The UHERO Data Portal provides public access to an extensive collection of relevant economic statistics.

Over the years, UHERO research associates have completed a wide range of studies assessing economic performance and policy issues for Hawaii. These have included methodological inquiries into issues such as appropriate forecasting techniques for tourism and methods for evaluating the impact of tax and expenditure programs. UHERO has also studied the potential impact of external economic shocks, such as the 9/11 terror attacks. Forecast Project research recognizes the unique features of the local economy including the key role of tourism, Hawaii's links with developing Asia, and the role of the state's dynamic construction and service sectors.

Significant funded research during FY2011 included (names of Principal Investigators are given in parentheses):

- Economic Forecasting for State of Hawaii and its four counties, Hawaiian Electric Company, Inc. (Bonham/Gangnes),* 2011 marks the thirteenth year of UHERO's relationship with Hawaiian Electric Company. Since 1998, we have provided long-run economic forecasts used as inputs into long run planning and sales forecasts for Oahu, Maui, and Hawaii islands.

- UHERO Data Portal (Bonham).* The UHERO Data Portal is a free online resource that provides access to a wide array of economic and social indicators for the State and County economies. During the past fiscal year, UHERO researchers and staff worked very hard on a complete redesign of the UHERO data portal. The redesigned site includes more attractive, easier to use graphs and tables, more data, and an overall new look and feel. This work is now supported by a generous contribution from The Bank of Hawaii. The Bank's three-year $120,000 commitment will allow for continued improvement in functionality and coverage of the UHERO/Bank of Hawaii online data portal.

- Metropolitan Area Home Price Forecasting for more than 300 metro areas in US (quarterly), LPS Applied Analytics Valuation Solutions (Bonham).* UHERO continues to provide metropolitan home prices forecasts to LPS for use by their clients and as inputs into their valuation and scoring for structured mortgage products.

- Kauai County Online Data book project, plus economic forecasts, County of Kauai Office of Economic Development (Gangnes/Bonham).*

- Estimating Visitor Demand, SeaGrant (Bonham)* This research is prompted by the record high oil prices during the summer of 2008. This surge in fuel prices and the corre-
sponding rise in airfares is often cited as an explanation for the decline in visitor arrivals to Hawaii during 2008. Yet the academic tourism literature has little to say about the actual impact of changing airfares on travel demand. This is partly due to the lack of reliable data on airfares. Using newly available airfare data from the U.S. Department of Transportation, Bureau of Transportation Statistics (BTS). We calculate average air fares paid from each state in the nation to Hawaii using the DB1BMarket table from BTS. We combining the airfare data with other data relevant for modeling tourism demand to Hawaii by state, and apply state of the art panel methods to estimate air fare price elasticities for Hawaii travel demand.

Sustainable Coastal Tourism, SeaGrant (Konan)*

Tourism has a tremendous impact on the people of Hawai‘i and its environment. Visitor expenditures in 2007 comprised $14 billion or 22 percent of Hawai‘i’s economy and employed 176,200 people in the state. This intimate relationship between Hawai‘i’s economy and tourism depends on a healthy and sustainable coastal ecosystem. Indeed it is the diverse and unique ecosystems of the Hawaiian Islands that inspire so many visitors to our region. As such, improving the quality of our environment, restoring habitats and ecosystems, and reducing the energy and water needed to support tourism will result in positive impacts on Hawai‘i’s economy. Toward this goal we seek to collaborate with the tourism industry to promote sustainability of our natural resources, promotion of healthy coastal ecosystems, and respect for our indigenous people and the unique multicultural fabric of our society.

* Continuation of award from FY2010.
PROJECT ENVIRONMENT

Current awards: $402,101, of which $69,748 was newly funded in FY2011

Project Environment applies formal economic analysis to the study of key environmental challenges, including energy use and global warming, pollution control, water allocation and pricing, and policy design for the control of invasive species. Specific applications have included the simultaneous management of groundwater and watershed conservation, the economic benefits of environmental resource conservation, the design of policies for control of Miconia calvescens and the Brown Treesnake, and methods for measuring sustainable development. Supporting this applied research has been foundational analysis that has developed principles of environmental resource management and sustainability science with broad application.

Led by Dr. Kimberly Burnett, this research group undertakes research that articulates interactions between Hawaii’s natural environment and the state economy. This year the project began several initiatives to begin to address this goal. Themes for FY2010 included sustainability science, invasive species management, clean energy, fisheries, and nutrient management.

Significant funded research during FY2011 included (names of Principle Investigators are given in parentheses):

**Indicators for Sustainable Coastal Tourism in Hawaii, SeaGrant (Burnett)**

This project will develop a baseline set of indicators for measuring the sustainability of coastal tourism in Hawai‘i. This is a joint project with faculty from the School of Travel Industry Management, the School of Ocean and Earth Science and Technology, and the School of Hawaiian Knowledge. We will develop a set of economic, social, biological, and cultural indicators that can be used to help the tourism industry, government, the business community, and residents assess how sustainable this important industry is in our state. While many of these indicators may already exist, some (especially on the cultural side) may not be currently monitored. We believe that developing a solid baseline to begin evaluating the sustainability of coastal tourism in Hawai‘i will be crucial to directing future research endeavors towards the most critical research gaps and questions. Eventually we believe that this set of indicators could be used to develop a “Tourism Dashboard,” highlighting how these indicators change and move together against different economic, social, biological, and cultural backgrounds. Such Dashboards have been developed in other destinations and can be useful for guiding policy and decision making at all levels.

**Hawaii Green Growth Synthesis, The Nature Conservancy and Hau‘oli Mau Loa (Burnett)**

The purpose of this project is to provide an overview for decision-makers on the economics of three key sectors essential for Hawai‘i to transition to a green economy – clean energy, food security and ecosystem health, with a special emphasis on natural resources and ecosystem services in Hawai‘i.

This project will review and summarize available information on what is currently known about the economic importance of natural resources and ecosystem services in Hawai‘i. It will also describe the current economic status of the energy and agriculture sectors in Hawaii.

**Kauai Important Agriculture Land, Kauai County (Burnett)**

This is an initiative with the Department of Urban and Regional Planning (DURP) regarding the designation of “Important Agricultural Lands” on the island of Kauai. The identification and designation of Important Agricultural Lands (IAL) was first proposed at the 1978 Constitutional Convention and approved by voters in the same year. The State is required to conserve and protect agricultural lands,
promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands. In collaboration with DURP, UHERO will be providing recommendations to Kauai County regarding the placement of these designations and feedback regarding the policies designed to incentivize farmers to self-designate their lands as IAL.

**Estimating the Cost of Rodent Control in Hawaii, Environmental Planning Strategies (Burnett)**

The purpose of this project is to provide a better estimate of rodent control campaigns in the Hawaiian Islands. We will use local sources to estimate costs of sustained control efforts in Hawai‘i. The primary goal is to provide managers with tools to determine the most cost effective method of suppressing a population of rats for the protection of a given species at a given location. Because most conservation benefit associated with rodent control is derived from these sustained control campaigns, rather than the isolated eradications, knowing the cost of these long term campaigns is vital for maximizing benefit from rodent removal.

**Ecosystem Function: Natural, Anthropogenic, and Invasive Species Contributions to Biogeochemical Evolution of Groundwaters and Coastal Environments of West Hawaii, National Science Foundation (Burnett)**

In collaboration with colleagues from UHM Geology and Geophysics (Craig Glenn and Henrieta Dulaiova), Thomas Giambelluca (UHM Geography) and James Roumasset (UHM Economics), Burnett received funding from the National Science Foundation to study the interaction between groundwater, nutrients, and natural and anthropogenic sources on the Kona coast of Hawaii Island. Groundwater delivers significant quantities of nutrients, pollutants, heavy metals, and bacteria directly to the coastal environment. These “unseen” inputs can pose serious health risks to humans and upset coastal wetland and adjacent marine ecosystems that cascade throughout foodwebs and trigger such deleterious environmental effects as eutrophication, red tides, invasive and nuisance florals on land and sea, and coastal pollution. Influences may be anthropogenic or they may be “natural” in the case of invasive species capable of altering ecosystem processes to the detriment of other organisms. Through collaboration with scientists from Geography and Geology, this project investigates the economic benefits and costs of reducing nutrient load through management of the various anthropogenic and natural drivers.

**Evaluating Policy Options to Reduce the Risk of New Strains of Ohia Rust in Hawaii, United States Geological Survey (Burnett).**

Policies designed to protect the environment will inevitably influence the performance of the state’s economy. Hawaii’s geographic isolation and abundant endemic biodiversity makes the state especially prone to economic damages resulting from invasive pests and diseases. UHERO received funded from the US Geological Survey to examine the consequences of various policies designed to protect the state from the arrival of Ohia Rust, a strain of the Neotropical rust fungus Puccinia psidii that was discovered on native ohia in early 2005. The ohia plant, Metrosiderospolymorpha, comprises nearly 80% of the native Hawaiian forests and covers approximately 400,000 hectares on the Hawaiian Islands. It provides habitat to a wide range of Hawaiian fauna including a majority of its native bird species. In collaboration with Dr. Lloyd Loope of USGS, UHERO will assess the economic costs and benefits of a quarantine program versus the costs and benefits of a complete ban on affected plants, and compare these policies to continuing “business as usual,” with no restrictions on high risk plants.

**Assessing Hawaii’s Clean Energy Options, U.S. Department of Energy in collaboration with the Hawaii Natural Energy Institute (Coffman).**

This project aims to inform the state and national policy-making process in regards to clean energy for electricity.
Hawaii recently passed the most stringent Renewable Portfolio Standard for electricity in the country. This project builds a detailed model of Hawaii’s electric sector, projecting to the year 2030 under alternative oil price scenarios, that integrates the existing system with future renewable energy types including wind, solar, geothermal, and biofuels. The impacts are assessed based on their greenhouse gas emissions and contribution to the overall economy in the form of jobs, resident welfare, and gross state product.

Administering Catch Share Program, NOAA (Lynham)*

We created a unique database that describes the method used to allocate shares in nearly every major catch share fishery in the world. This database should hopefully prove to be a useful reference tool for policymakers who are interested in the types of methods that have been used to assign catch shares. The main approaches used to allocate catch shares include: (i) auctions, (ii) equal allocation (iii) historical catch records and (iv) vessel- or gear-based rules. The entire database will be made publicly available. Based on our estimates, at least 81% of the major catch share fisheries in the world allocated shares on the basis of historical catch, 6% used equal shares, 2% used auctions, another 2% used vessel-based rules and the allocation method currently remains unknown for 9% of the fisheries in the database.

Exploring Socio-economic and Ecological Dimensions of Catch Shares, UCSB (Lynham)*

This project addressed important questions relating to catch share fisheries management. Costello et al. (2008) provided evidence that switching to a catch share system halts the globally observed trend towards complete collapse. This paper was criticized for failing to take account of the effect of introducing a Total Allowable Catch at the same time as catch shares are introduced. This project attempted to address this criticism. The results will be published in the Annual Review of Resource Economics.

$381,554 Submitted proposal pending/unfunded projects in FY 2011:

Adapting Water and Watershed Management to Climate Change in a Hydrological Basin, National Science Foundation (Burnett)

The proposed research would develop and apply an operational methodology for the optimal integrated water management of a well-defined hydrological basin, the Ko‘olau Mountain Watershed area. The transdisciplinary model combines several fields of study including climatology, statistics, forest hydrology, hydrogeology, ecology, operations research, and economic optimization, all organized to deliver long range management recommendations for groundwater extraction from multiple sources, development of water recycling and desalination, and investment in watershed conservation. Each stage of the integrated model, from the climate model to the watershed model to the groundwater model, is designed to deliver the information required to make welfare-maximizing management decisions regarding watershed conservation, groundwater extraction from multiple scenarios, development and reuse of treated water, and desalination.

* Continuation of award from FY2010.
Energy and Greenhouse Gas Solutions (EGGS)

Current Awards: $390,147.21 newly funded in FY 2011

Dr. Denise Konan heads UHERO’s Energy and Greenhouse Gas Solutions (EGGS) project. The project’s mission is to analyze and tailor energy and climate change policy by assessing technology options and the associated environmental and economic impacts. The core goals of the project are to: i) Engage in rigorous analysis and establish a global research reputation; ii) Develop and maintain data and models on Hawai’i energy, economy, and resulting greenhouse gas (GHG) emissions; iii) Develop solution-based education and outreach programs on energy and GHG solutions for a variety of levels - legislators, business community, K-12, and higher education; and iv) Showcase Hawai’i solutions that demonstrate a sustainable alternative for others.

The EGGS project’s primary funding have come from the UH Manoa Office of Facilities and Grounds, the American Recovery and Reinvestment Act of 2009 through the State of Hawai’i Department of Business, Economic Development, and Tourism, the Renewable Energy and Island Sustainability program, and the UH Sea Grant College Program.

Significant funded research during FY2011 included (Dr. Konan is Principal Investigator for these projects):

- **Understanding And Communicating The Environmental Impacts Of Seawater Air Conditioning In Waikiki (Konan)** Provide a scholarly, independent, and multidisciplinary evaluation of district-wide cooling via SWAC in Waikiki as compared with business as usual (BAU) with the aim of implementing sustainable energy and water practices that are economically sound, socially acceptable and that conserve and enhance the natural environment.

- **Model Economic Impacts of Alternative GHG Reduction Strategies (Konan)** Modify UHERO GEM EGGS model to parameterize economic and emissions coefficients for electricity, utility gas, ground transportation, air transportation, maritime transportation, agriculture, and other key economic sectors of interest. The model will be capable of estimating the change in economic activity associated with alternative greenhouse gas emissions reductions strategies.

  - **Marginal Abatement Costs to meet Act 234 (Konan)** Once renewable energy extensions of UHERO GEM are complete, model scenarios will be able to provide estimates of mission price required under a pure emissions tax or cap and trade program so that it complies with the GHG emission targets of Act 234.

  - **Life cycle analysis of GHG emissions from bio-fuel electricity production (Konan)** Biofuels with total life cycle emissions; Imported bio-fuels for electricity, transport etc.

  - **Hawai’i Energy and Greenhouse Gas Solutions – 2009 (Konan)** The Hawai’i Energy and Greenhouse Gas Solutions (EGGS) project is undertaking a comprehensive analysis of Hawai’i’s energy infrastructure, economy, and emissions associated with human activity. This project compiles ‘bottom up’ data on firm-level and household fuel use, technology, and other activities and reconciled these data with macroeconomic energy and emissions data. Under development is a dynamic computable general equilibrium model of Hawai’i’s economy, energy infrastructure, and greenhouse gas emissions. Early analysis shows that tourism activities comprise a significant component of Hawai’i’s carbon footprint. Special analysis of Waikiki and the visitor infrastructure (hotels, restaurants, transportation) will be a focus of the EGGS study. This is a signature project of the emerging Sea Grant Center of Excellence on sustainable coastal tourism. This project is supported by a collaboration between Sea Grant and UHERO.
HNL GHG Inventory Support (Konan) KYA Design Group (KYA) has been retained by State of Hawai’i Department of Transportation (DOT) to develop a sustainability report for the Honolulu Airport (HNL). One component of this report is an account greenhouse gas emissions (GHG) from airport operations. UHERO EGGS is supporting KYA’s GHG accounting and reporting process by providing two services:

- Guidance on, and review of the data collection process and necessary conversions; and
- Editing of written report, HNL GHG Inventory, that will be included as a section in the complete HNL Sustainability Report.

Additionally, to the extent possible, KYA and UHERO EGGS will work to engage undergraduate students at the University of Hawai’i at Manoa in the GHG accounting process with the intent to develop local expertise in emissions inventory work.

Energy, Economics, and Greenhouse Gas Emissions Database (Konan) This project seeks to develop an energy, economics and greenhouse gas emissions database (EGGED) for the state of Hawai’i. We are currently working with various stakeholders including Hawai’i Energy Policy Forum (HEPF), the Hawai’i Energy Efficiency Program, and the Department of Business, Economic Development and Tourism (DBEDT) in order to develop a database that enables the energy data to be compatible and applicable to economic data. Once collected and organized, the database will aide various analyses on energy consumption providing insight to the state regarding Hawai’i Clean Energy Initiative goals and plans.

* Continuation of award from FY2010.
$617,286 Submitted pending/unfunded projects for FY 2011.

- Cliometrics Society Conference Grant 2008 –2011, National Science Foundation (LaCroix)
- Cliometrics Society Conference Grant 2011 –2014, National Science Foundation (LaCroix)
- Economic Recovery from Coastal Disasters: Hilo (1960) and Iniki (1992), Sea Grant (Noy) Pending


Tourism Economics, forthcoming.


**BOOKS AND EDITED VOLUMES**


Roumasset J., K. Burnett, and A.M. Balisacan (eds.) 2010. Sustainability Science for Watershed Landscapes. Singapore: Institute of Southeast Asian Studies; Los Banos, Philippines: Southeast Asian Regional Center for Graduate Study and Research in...

**ARTICLES IN EDITED VOLUMES**


LaCroix, S. 2010. “The Economy,” in Jon Osorio and Craig...
Howes (eds.) The Value of Hawaii, Honolulu: University of Hawaii Press.


**CONFERENCE PRESENTATIONS**


Coffman, M. Western Regional Science Association Annual Conference 2010: “Assessing Local Refinery Profitability and Rising World Oil Prices.”


Konan, D. Sea Grant Week, 15-22 October 2010, New Orleans

Konan, D. East Asian Economic Association, 2-3 October 2010, Seoul, Korea


Roumasset, J. “Confuser Cost,” World Congress of Environmental and Resource Economist (WCERE), June 28-July 2, 2010, Montreal, Canada (with Sittidaj Pongkijvorasin).


INVITED LECTURES AND SIGNIFICANT MEDIA APPEARANCES


Bonham, C. HEI Strategic Planning Meeting, April 4, 2011.


Gangnes, B. “Hawai‘i’s Economy” Town Square, Hawaii Public Radio, September 8, 2011.


Gangnes, B. “The Global Financial Crisis and Recovery,” MPE/World Bank program, Yokohama National University, February
22-24, 2011.


**Gangnes, B.** “The Global Financial Crisis and Recovery,” HEC Montréal Department of International Business, MA program course, Fall 2010.