ARE Slam, May 2019

Agricultural and Resource Economics
University of California, Davis

ARE Main Conference Room, May 17th, 3pm

1. **Jesus**, *Estimating climate change damages in data scarce and non-competitive settings: an application to Mexico*
   The Ricardian model, in which market land values are modeled as a function of climate, has been applied extensively in the context of emerging economies where its core assumption, the existence of a perfectly competitive market for land, is not met. I use a shadow measure of land valuation that internalizes the non-competitive setting of farmers in Mexico and conclude that the use of market land values leads to an underestimation of the damages of climate change to agricultural productivity.

2. **Ashley**, *Diluting the value of organic? Measuring the impact of certified-transitional products on organic prices and conversion rates*
   I estimate how transitional organic certification and labeling affect organic prices and conversion rates. This is of interest because the USDA recently cancelled its proposed transitional certification program amid concerns from organic industry groups that transitional labels would dilute the value of organic labels. I find that such labels successfully increase organic conversion rates while only negligibly decreasing organic prices.

3. **Pierce**, *Catch shares are not a sufficient condition for eliminating the race to fish*
   Individual fishing quotas secure fisher's rights to a portion of a total allowable catch. Once implemented, we see the reduction of over-capitalization and the lengthening of fishing seasons predicted by theory. However, a fishery forced to recognize a vulnerable bycatch species with a very small total allowable catch pressures fishers to harvest their target species quota before a fishery closure, and not at their leisure.

4. **Cameron**, *Fishers fish for dollars not fish*
   When should you catch a fish? Fishers land the same quantity of fish when prices are low as when they are high because catch share programs do not use prices to inform catch limits. I use biological, price, cost, and discount rate data to consider a bio-economic model to inform catch limits.

5. **Bret**, *Solar panel valuation*
   When consumers decide whether to purchase a rooftop solar array, they weigh the various benefits of an installation to its cost. The benefits of rooftop solar can be generally broken down to the value of future energy savings and social signaling. I aim to better characterize consumer's relative valuations of these benefits by assessing rooftop solar capitalization in home prices. By using data about home prices, solar installation, and potential for solar generation I will be able to quantify the effects of these different attributes of capitalization.

6. **Pierce**, *Efficient bycatch management*
   Efficient management of a bycatch species requires us to know its shadow value, which is hard to measure. With commercially exploited stocks, this is simply the value of future commercial exploitation. My solution is to identify the bycatch landing fee that balances the potential rents of a commercial fishery with the survival goal of a vulnerable bycatch species. This fee is precisely the new shadow value I seek.

7. **Charlotte**, *WIC policy changes and food retailer outcomes*
   10% of US grocery spending comes from food assistance benefits. However, effects of food assistance policy on retailers are understudied. I use variation in policy implementation to examine the net effect of policy changes on retailer outcomes, and how these effects differ across retailer types. I find that authorized retailers, particularly larger retailers, are better off after the policy.

8. **Hanlin**, *Organic vs. conventional pesticides*
   Pesticides used in organic agriculture can be toxic and have negative environmental impact just like pesticides used in conventional agriculture. This study compares the impact of organic and conventional pesticides usage incorporating the yield difference. Organic acreage and pesticide usage in California are identified using the Pesticides Use Report. The pesticides impacts are measured by the Environmental Impact Quotient (EIQ).