

*Citrus Industry Magazine- UF/IFAS SWFREC Citrus Mechanical Harvesting Program  
“What’s Shakin” column*

**October 2013**

As part of the IFAS Citrus Initiative Annual Research Project for the 2012-13 harvesting season, Dr. Reza Ehsani and his students at IFAS/CREC worked on redesigning the fruit removal system to reduce structural damage to the tree canopy by the existing mechanical harvesting machines. First, a statistical model that can predict the location of the fruit and main branches on a typical citrus tree canopy was developed. Next, the fruit removal system on the harvester was redesigned to maximize fruit removal while minimizing damage to the main branches. The redesigned system includes using tines with different types of materials at different locations along the shaking system. The simulation study showed that the redesigned system can reach its objectives. To learn more about this project and others being done by Dr. Ehsani, please visit our website at <http://citrusmh.ifas.ufl.edu>.