Orchard Characterization and its importance in Crop Management

Abstract: Robots in agriculture are used for primary tasks, such as harvesting, seeding or pruning; and for secondary tasks such as crop monitoring and herbicide management. In this presentation the latest results in crop monitoring and characterization achieved by Dr. Auat Cheein and his group will be shown. This includes case studies, sensors and computational techniques that they are using such as RGB-D, LiDAR, SLAM and control systems. Also, the talk will entail soil characterization and modeling for grove supervision and tracking using service units.

Speaker Bio: Fernando Auat Cheein received the Doctorate degree in 2009 and the Master of Science degree in 2005, both in San Juan, Argentina. Since 2013 he is a Professor with Federico Santa María Technical University (UTFSM), in Valparaíso, Chile, after doing his post doc research stay in agricultural robotics also in Argentina and Brazil. He is the founder of GRAI (Autonomous and Industrial Robotics Research Group), in the UTFSM, as well as a Principal Research (and member of the board) at the Advanced Center for Electrical and Electronic Engineering, in Valparaiso, Chile. His field of experience is SLAM, control systems, remote sensing and estimation theory applied to dynamical systems.