

UNICAMP



SISDA

Sistemas Inteligentes de Suporte à Decisão na Agricultura



Faculdade de
Engenharia Agrícola

LUIZ HENRIQUE A. RODRIGUES

lique@unicamp.br

Cel: 19 99774-1462

EDUCATION

- B.S. Agricultural Engineering (Unicamp, 1984)
- M.Sc. Electrical Engineering – Operations Research (Unicamp, 1989)
- PhD Agricultural Engineering – Decision Support Systems (Cranfield Univ. England, UK, 1995)
- Associate Professor – Data Science (Unicamp, 2006)

PROFESSIONAL HISTORY

Administrative Experience

- Faculty at the School of Agricultural Engineering (FEAGRI) since 1986
- Director of Undergraduate Course (1997-2001)
- Head of the Department of Agricultural Planning (2001-2005)
- Director of Post Graduate Course (2013-2017)

PROFESSIONAL HISTORY

Teaching

- Project Management
- Operations Research applied to agriculture
- Data Science applied to agriculture: Machine Learning and Data Mining
- Computer Vision applied to agriculture: Deep Learning and Transfer Learning

PROFESSIONAL HISTORY

Research

- Group Leader of the SISDA Research Group
(Intelligent Decision Support Systems in Agriculture)

<https://www.feagri.unicamp.br/sisda>

RESEARCH PROJECTS

Machine Learning and Data Mining

- Coffee Crop – Embrapa and Private Cooperative (Coffee Farms)
 - Coffee Rust Prediction (2010-2014)
- Sugarcane Industry (2012-2016) – FAPESP and Private Company
 - Crop Yield and Sugar Prediction
- Soil Properties
 - Soil Water Retention Prediction (2014-2018)
- Horticulture (2019-2022)
 - Unicamp/Brazil/FAPESP and Talca Univesity/Chile/CONICYT
 - Production Planning Based on Local Demand and Losses Forecasting

RESEARCH PROJECTS

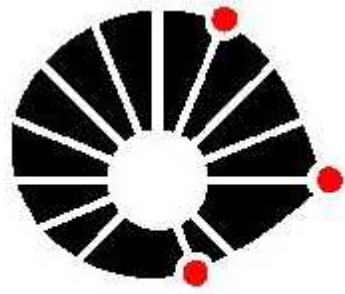
Computer Vision

- Tomato Production on Greenhouse FAPESP (2017-2021)
 - Tomato Bunch Detection on Greenhouse Images (2019-2021) – M.Sc.
 - Tomato Crop Growth Monitoring with Non-Destructive Method on Greenhouse Images (2019-2021) – M.Sc.
 - Data Assimilation for Integration of Data Obtained by WSN and Dynamic Crop Growth Model (TOMGRO/DSSAT) (2017-2021) – PhD.
 - Low cost equipments
 - Arduino and Raspberry
 - RGB/NIR Cameras and Temperature/Humidity/Radiation sensors

RESEARCH PROJECTS

Additional Information

- Member of the BigDSSAgro Network – (2016-2019) - CYTED
 - Coordinator: Dr. Lluís Miguel Plá Aragonés (Universitat de Lleida, Spain)
- BIOS – Brazilian Institute of Data Science
 - Project Submitted to FAPESP for creation of a Applied Research Center in Unicamp (Result expected to be available in Jan/2021)
 - Three tracks: Methods, Health and Agriculture
 - Several Institutes of Unicamp, Other Research Institutes and Universities
 - Private companies
 - Current budget: US\$ 5 M



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Thank you for your attention

Time for questions

Luiz Henrique A. Rodrigues