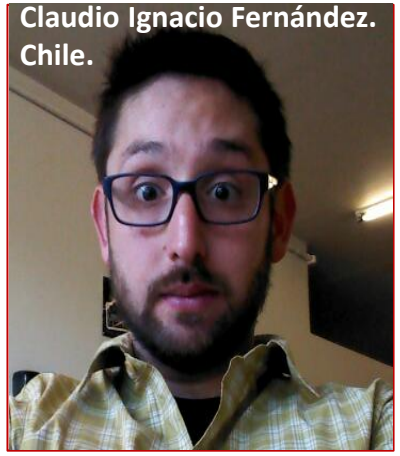
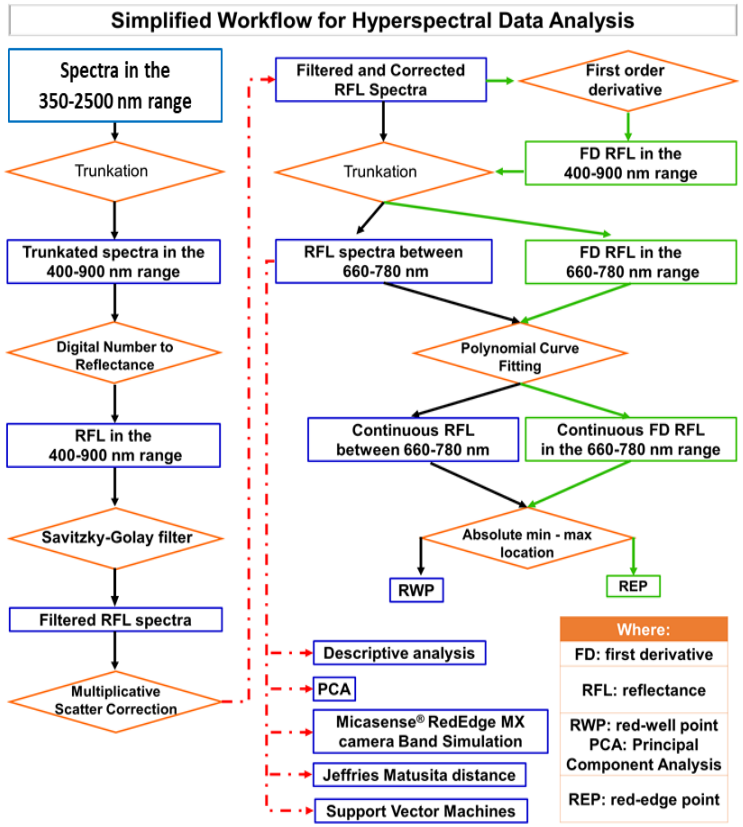


Potato Late Blight Detection Using Hyperspectral Data

Issue: Potato late blight is the worst disease affecting potato crops and can destroy foliage and tubers. Previous research has not provided details on spectral changes induced by the disease after the moment of inoculation or related vegetation indices for early disease detection.



Main findings

Our research provided the first peer-reviewed work published detailing spectral changes induced by potato late blight including best bands and vegetation indices to detect the disease. Results are available in:

Potato late blight Disease Detection the at Leaf and Canopy Levels Using Hyperspectral Data. Claudio I. Fernández, Brigitte Leblon, Ata Haddadi, Jinfei Wang & Keri Wang. *Canadian Journal of Remote Sensing,* **2020***.*

We also published the first peer-reviewed work modelling changes induced by potato late blight in the red-edge region parameters (RWP and REP) increasing classification accuracy at plant level. Details in:

Potato late blight Disease Detection the at Leaf and Canopy Levels Based in the Red and Red-Edge Spectral Regions. Claudio I. Fernández, Brigitte Leblon, Ata Haddadi, Keri Wang & Jinfei Wang. *Remote Sensing,* **2020***.*

Conclusions/recommendations

Our results were obtained from point measurements acquired in a walk-in chamber that as a controlled environment. Further work is needed to test the methodology on UAV imagery in real field conditions.

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