



UNOOSA-ESA-ISRO-NASA

Earth Observation Training for Agriculture

NASA ARSET contribution

in collaboration with
Agriculture and Agri -Food Canada

HEATHER MCNAIRN (AAFC)

LAURA DINGLE-ROBERTSON (AAFC)

ERIKA PODEST (NASA JPL)

ANA PRADOS(UMBC/NASA)

Applied Remote Sensing Training Program (ARSET)

<http://appliedsciences.nasa.gov/arset>

Cutting edge remote sensing education through online and in-person trainings (free). Offered in a variety of formats that fit learners' needs and cover a variety of satellites, sensors, and applications. Basic, intermediate, and advanced levels.

English and Spanish



[Website](#)

[YouTube](#)

[Twitter](#)

[To learn about future trainings](#)
[Sign up for the mailing list](#)

Air Quality



Disasters



Land and Fires



Water



Contact: Ana Prados
(aprados@umbc.edu)

Agricultural Crop Classification with Synthetic Aperture Radar and Optical Remote Sensing

- Live, 2.5-hour sessions
- Tuesdays and Thursdays on **October 5, 7, 12, 14, & 19**
- Morning session in English: 10:00 AM - 12:30 PM (EDT)
- Afternoon session in Spanish 13:00 - 15:30 PM (EDT)

Those who attend all 5 sessions and complete the homework will be awarded a certificate of attendance.

Register for free (English): <https://appliedsciences.nasa.gov/join-mission/training/english/arset-agricultural-crop-classification-synthetic-aperture-radar-and>

Register for free (Spanish): <https://appliedsciences.nasa.gov/join-mission/training/spanish/arset-clasificacion-de-cultivos-agricolas-con-radar-de-apertura>

Speakers

Heather McNairn: Research Scientist with the Science and Technology Branch (STB) of Agriculture and Agri-Food Canada (AAFC). She has more than 25 years of experience in developing methods to map and monitor agriculture, using multi-spectral, hyperspectral and Synthetic Aperture Radar (SAR) sensors.

Laura Dingle-Robertson: Physical Scientist with AAFC with 7 years of experience in SAR remote sensing research, data processing and analysis applied to agriculture. Dr. Dingle Robertson co-led the JECAM SAR InterComparison Experiment, an international agriculture monitoring endeavor incorporating SAR data

Erika Podest: Scientist with the Carbon Cycle and Ecosystems Group at NASA's Jet Propulsion Laboratory. Her research focuses on using microwave sensors for monitoring wetland ecosystems and the vegetation growing season in the northern high latitudes. She has been an instructor with NASA's Applied Remote Sensing Training (ARSET) program for the last five years, with a focus on SAR trainings.

Part 1: Synthetic Aperture Radar (SAR) Refresher

October 5, 2021

Instructors: Heather McNairn & Laura Dingle-Robertson (AAFC)

- SAR theory (phase, incidence angle, geometry polarization, etc.)
- Optimal sensor parameters for agricultural applications
- Soil and crop characteristics on SAR response
- Q&A

Part 3: Operational Crop Classification Roadmap using Optical and SAR Imagery

October 12, 2021

Instructors: Heather McNairn & Laura Dingle-Robertson (AAFC)

- Roadmap for producing an Annual Crop Inventory
- Selection of radar + optical data for crop mapping
- Overview of how Agriculture and Agri-Food Canada (AAFC) collects training data
- SAR imagery pre-processing using SNAP
- Q&A

Connect with us!

Dr. Ana. I. Prados: aprados@umbc.edu

@NASAARSET

<http://appliedsciences.nasa.gov/arset>

Newsletter (monthly): <https://lists.nasa.gov/mailman/listinfo/arset>