



Food and Agriculture
Organization of the
United Nations

GLOSOLAN
GLOBAL SOIL LABORATORY NETWORK

GLOSOLAN- work report in 2021-2022 Spec

*By Mx. Magdeline Vlasimsky, GLOSOLAN-
Spec Coordinator, GSP/FAO*

6th Meeting of the
**Global Soil
Laboratory
Network**
(GLOSOLAN)

22-24 November 2022



The GLOSOLAN Initiative on Soil Spectroscopy (GLOSOLAN-Spec) was launched in April 2020 at the purpose of building the capacity of soil laboratories on the use of this technology by bringing together institutions and experts from all around the world on the topic

The Third Plenary Meeting on Soil Spectroscopy will take place on 30 November- 1 December 2022.

The agenda includes:

- definition of the GLOSOLAN-Spec work plan for the years 2022-2023*
- discussion and decision on switch to SoilSpecNet*

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GLOSOLAN-Spec achievements

GLOSOLAN 2nd Plenary meeting on spectroscopy | 2 - 4 November 2021



Soil spectroscopy webinars

- Five online webinars
- A total of 2791 registrations from 124 countries
- A total of 1434 participants joined live session
- Video recordings
- Questions and discussions



Towards operational large-scale soil spectral libraries

11 October 2022 | 14:30 CEST

SPEAKER: **Leonardo Ramirez-Lopez**
LANGUAGE: **English**

[Details of the event](#) | [Presentation \(available soon\)](#) | [Video recordings](#)

☐ **Soil sample preparation for MIR measurement. Is fine grinding necessary for accurate MIR predictions?**



07 September 2022 | 16:00 CEST

SPEAKER: **Dr Nuwan Wijewardane**
LANGUAGE: **English**

[Details of the event](#) | [Presentation](#) | [Video recordings](#)

☐ **The role of spectroscopy in promoting precision agriculture solutions**



24 March 2022 | 14:00-16:00 CET

SPEAKER: **Prof Abdul M. Mouazen**
LANGUAGE: **English**

[Details of the event](#) | [Presentation](#) | [Recordings](#)

☐ **Interpretation of mid infrared spectra of soil - Direct use of spectra to provide new insights**



16 June 2022 | 15:00-17:00 CEST

SPEAKER: **Dr Jean Robertson**
LANGUAGE: **English**

[Details of the event](#) | [Presentation](#) | [Video recordings](#)

☐ **Soil spectroscopy from the Danish perspective**



27 April 2022 | 14:00-16:00 CET

SPEAKERS: **Dr Maria Knadel, Dr Nicolai Bork**
Language: **English**

[Details of the event](#) | [Presentation Dr Knadel](#) | [Dr Bork](#) | [Recordings](#)

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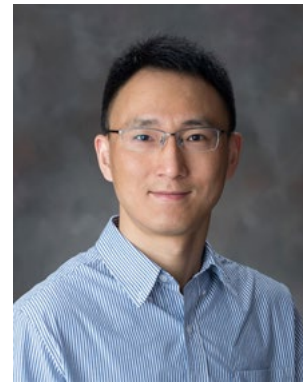


Soil spectroscopy training material

Project: Innovative Digital Tools for Soil Fertility Management in Uzbekistan

More than 650 downloads

Funding: World Bank in cooperation with the Korean Trust Fund for Green Growth (KGGTF)



Yufeng Ge

University of



Yi Peng

FAO/GS



Alexandre Wadoux

University of Sydney

Soil spectroscopy TRAINING MATERIAL

1 | A primer on soil analysis using visible and near-infrared (vis-NIR) and mid-infrared (MIR) spectroscopy

Reviewers: Prof. Budiman Minasny (University of Sydney)
Nebraska

Prof. José Alexandre M. Demattê (University of São Paulo)

Preface writing: Prof. Alex McBratney (University of Sydney)

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Soil spectroscopy training material



Zhou Shi
Zhejiang University



Songchao Chen
Zhejiang University



Maria Konyushkova
FAO/GSP



Available in Simplified Chinese, thanks to the work of Zhejiang University, and Russian.

French translation, thanks to the work of Alexandre Wadoux and Isabelle Verbeke available soon.

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Soil spectral modelling video courses

- Six sessions
- Soil spectral modelling in R
- R codes
- In the process of being finalized, published in coming weeks



Alexandre Wadoux
University of
Sydney

Publication

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DOI: 10.1111/ejss.13271

OPINION

Soil Science WILEY

Diffuse reflectance spectroscopy for estimating soil properties: A technology for the 21st century

Raphael A. Viscarra Rossel¹ | Thorsten Behrens² | Eyal Ben-Dor³ |
Sabine Chabrilat^{4,5} | José Alexandre Melo Demattê⁶ | Yufeng Ge⁷ |
Cecile Gomez^{8,9} | César Guerrero¹⁰ | Yi Peng¹¹ | Leonardo Ramirez-Lopez¹² |
Zhou Shi¹³ | Bo Stenberg¹⁴ | Richard Webster¹⁵ | Leigh Winowiecki¹⁶ |
Zefang Shen¹

- GLOSOLAN Spec. Steering Committee members wrote and published an article in the European Journal of Soil Science
- Raise awareness of potential of soil spectroscopy

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Challenges and issues

- Issues of publishing SOPs
- Issues of collaboration with IEEE
- Instruments (Issues of working with private sectors)
- Time-consuming nature of legal discussions on data ownership and soil spectral estimation platforms
- Lack of forum for discussion and support

Thank you

If interested in attending the GLOSOLAN Spec. Plenary Assembly on 30th of November and 1st of December, please use the link in the chat to register.