ELIA SCUDIERO, Ph.D.
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Environmental Sciences Department

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Education

PhD, Crop Science: Environmental Agronomy, University of Padua, Italy (2013)

MSc, Environmental Sciences and Technology, University of Padua, Italy (2009)
University of Copenhagen, Denmark (Erasmus Fellow)

BSc, Environmental Sciences and Technology, University of Padua, Italy (2006)

Current Position

Associate Research Agronomist University of California Riverside, Environmental Sciences Department & USDA-ARS, US Salinity Laboratory, Agricultural Water Efficiency and Salinity Research Unit (*Jan 2018 – Present*)

Digital Agronomy Laboratory: (https://sites.google.com/site/scudieroe/**).** RESEARCH AREAS: *i*) Agricultural & environmental geophysics: proximal and remote sensing of plant and soil; *ii*) Precision agriculture; *iii*) Geographic Information Science; iv) Remote sensing of soil salinity

Interim Director of The University of California, Riverside Center for Agriculture, Food, and the Environment (Feb 2024 – Present)

Project Director for the "Artificial Intelligence for Sustainable Water, Nutrient, Salinity, And Pest Management in The Western U.S." Funded by the US Department of Agriculture. $10 Mil (Sept 2020 – Present)

Selected Awards & Honors

- Best Poster Presentation at the 14th European Conference on Precision Agriculture (2023)
- Best Poster Awards for Scudiero's Students (Three 3rd places in 2023; One 1st place in 2023)
- Wiley Top Cited Article 2020-2021 for https://doi.org/10.1002/saj2.20153 (2021)
- 2020 Young Scholar Award for the Soil & Water Conservation Division of the SSSA (2020)
- Best 2019 Associate Editor Award for *Irrigation Science* (2020)
- NIFA-AFRI New Investigator Award. FASE Grant recipient (2019)
- Editor's mention for noteworthy journal article. *Geoderma Regional* (i.e., *Editor's Choice*) (2015)
- International Travel Grant for Graduate Students. Funded by the DAFNAE Department of the University of Padua, Italy (2012)
- Erasmus Student Fellow. Funded by the European Union (2007 – 2008)

Ten Most Recent Publications

(* Corresponding author; † Student/Postdoc/Scientist's work under my [co-]supervision)

TECHNICAL PEER-REVIEWED INTERNATIONAL JOURNALS

1. Mohamed Galal Eltarabily*, Abdelmoneim Zakaria Mohamed, Sultan Begna, Dong Wang, Daniel H. Putnam, **Elia Scudiero**, Khaled M. Bali: "Simulated Soil Water Distribution Patterns and Water Use of Alfalfa Under Different Subsurface Drip Irrigation Depths". *Agricultural Water Management*. 2024: 108693. (SPECIAL ISSUE)
2. **Elia Scudiero***, Dennis L. Corwin, Paul T. Markley, Alireza Pourreza, Tait Rounsaville, Theodor Bughici, and Todd H. Skaggs: "A System for Concurrent On-the-go Soil Apparent Electrical Conductivity and Gamma-Ray Sensing in Micro-irrigated Orchards". *Soil & Tillage Research*. 2024. 235: 1058993
3. Ramesh Dhungel*, Ray G. Anderson, Andrew N. French, Todd H. Skaggs, Mazin Saber, Charles A. Sanchez, **Elia Scudiero**: "Early season irrigation detection and evapotranspiration modeling of winter vegetables based on Planet satellite using water and energy balance algorithm in lower Colorado basin". *Irrigation Science*. 2024. 42(1): 15–27
4. Ramesh Dhungel*, Ray G. Anderson, Andrew N. French, Todd H. Skaggs, Mazin Saber, Charles A. Sanchez, **Elia Scudiero**: "Remote sensing-based energy balance for lettuce in an arid environment: influence of management scenarios on irrigation and evapotranspiration modeling". *Irrigation Science*. 2023. 41, 197–214
5. Ramesh Dhungel*, Ray G. Anderson, Andrew N. French, Mazin Saber, Charles A. Sanchez, **Elia Scudiero**: "Assessing evapotranspiration in a winter vegetable crop with a two-source energy balance model". *Irrigation Science*. 2023. 41, 183–196
6. Abid Ali†, Roberta Martelli*, **Elia Scudiero**, Flavio Lupia, Gloria Falsone and Lorenzo Barbanti: "Soil and Climate Factors Drive Spatio-temporal Variability of Arable Crop Yields under Uniform Management in Northern Italy". *Archives of Agronomy and Soil Science*. 2023. 69 (1), 75-89
7. Theodor Bughici*†, Todd H. Skaggs, Dennis L. Corwin, **Elia Scudiero**: "Ensemble HYDRUS-2D modeling to improve apparent electrical conductivity sensing of soil salinity under drip irrigation". *Agricultural Water Management*. doi: 10.1016/j.agwat.2022.107813
8. Dennis L. Corwin*, Daniele Zaccaria, **Elia Scudiero**: "Modified ECa – ECe Protocols for Mapping Soil Salinity Under Micro-Irrigation". *Agricultural Water Management*. doi: 10.1016/j.agwat.2022.107640
9. Renata Teixeira de Almeida Minhoni*†, **Elia Scudiero**, Daniele Zaccaria, João Carlos Cury Saad: "Multitemporal satellite imagery analysis for soil organic carbon assessment in an agricultural farm in southeastern Brazil". *Science of the Total Environment*. 2021, 784: doi: 10.1016/j.scitotenv.2021.147216
10. Wesley A. Clary*, Lindsay Lowe Worthington, Louis Scuderi, Sean P.S. Gulick, **Elia Scudiero**: "Quantifying the relative influence of ice sheets, faults, and instability on channel and gully cross-profile shapes in the Gulf of Alaska". *Marine Geology*. 2021, 106416. doi: 10.1016/j.margeo.2020.106416

Academic Service

EDITORSHIP

- **Associate Editor** of *IRRIGATION SCIENCE* (ISSN 0342-7188) (*Sept 2018 – Present*)
- **Guest Editor** of *Agricultural Water Management* (ISSN: 1873-2283) for the Special Issue: "Soil and water management to prevent salinization under changing climate conditions" (Feb 2024 – Present)
- **Guest Editor** of *Sensors* (ISSN 1424-8220) for the Special Issue: "Application of Satellite and Proximal Sensors in Precision Agriculture" (*Jul 2017 – Feb 2018*)
- **Guest Associate Editor** of *Frontiers in Soil Science - Soil Pollution & Remediation* (*2022*)
- **Section Editor** of the section on "Salinity and sodicity assessment across scales" *Soil Science Society of America book* (*expected publication in 2023*): **"**Salinity and sodicity: a growing global challenge to food security, environmental quality, and soil resilience". Editors: DeSutter et al. (*Jan 2020 – Present*)