

CURRICULUM VITAE

RAJNEESH SHARMA

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EDUCATION

Master of Science in Crop and Soil Science

Emphasis: Soil Science
Present (Tentative date: July 2021)
Current GPA: 3.95/4

University of Georgia, Athens, GA, USA

Thesis: Scaling of Soil Organic Carbon in Space and Time for the Southern Coastal Plains

Advisor: Dr. Matthew Levi

Relevant Coursework: Pedology, Statistics in R, Geospatial analysis in ArcMap, Soil chemistry, Soil fertility, Nutrient management, Plant biology, Remote sensing, Landscape ecology

Certificate in GIS

In progress (Tentative date: Spring 2021)

University of Georgia, Athens, GA, USA

From: Department of Geology and Geography

Bachelor of Science in Agriculture

Honors: Agronomy and Soil Science
May 2019
Overall GPA: 7.56/10

Punjab Agricultural University (PAU), Ludhiana, Punjab, India

Relevant Coursework: Soil chemistry, Soil Physics, Soil biology, Soil Classification, and Mapping, Nutrient management, Fertilizers and Manures, Forest ecology, Environmental studies

STANDARDIZED TEST SCORES

Graduate Student Examination (GRE)

5th Sept 2018

Total Score: 315/340
Quantitative: 168/170, Verbal: 147/170,
Analytical writing: 3/6

Test of English as a Foreign Language (TOEFL)

29th Sept 2018

Total Score: 103/120
Listening: 29/30, Reading: 25/30, Writing:
25/30, Speaking: 24/30

RESEARCH FOCUS

I am very intrigued by the spatial and temporal variation of soil properties. My goal is to use GIS and Remote sensing tools for a better understanding of factors affecting soil properties and using these tools to improve soil health.

PUBLICATIONS

D. Jackson, J. Lessl, C. Tyson, A. da Silva, **R. Sharma**, J. Mullican, D. Platero, and M. Levi. 2019. Mapping and correlating soil characteristics to onion pungency (Luiz Biscaia Ribeiro da Silva, 2019, Page 30-31) [Vidalia Onion Extension Research Report 2019](#)

MANUSCRIPTS IN PREPARATION

R. Sharma, D. Mishra and M. Levi. (In prep) Remote Sensing Estimation of Soil Organic Carbon in Wetlands- A Review of State-of-the-Art and Way Forward

R. Sharma and M. Levi. (In prep) Scaling of Soil Organic Carbon in Space and Time for the Southern Coastal Plains

WORK AND RESEARCH EXPERIENCE

Graduate Research Assistant

August 2019- Present

University of Georgia

Department of Crop and Soil Sciences

Miller Plant Science Bldg - 120 Carlton Street Athens, GA, 30602, United States

- Conducted research project for the master's thesis to scale soil organic carbon in space and time for the southern coastal plains
- Worked with various data sources like SSURGO soil database, Nation Soil characterization database (NCSS), Radiocarbon data assessment database (RACA) and some dissertations data
- Used various aqp packages in R
- Used random forest machine learning techniques for predicting soil properties using point data measurements
- Data collection from Data loggers (with another grad student)
- Field sampling and lab analysis (with other grads student)

Graduate Student

Spring 2020

University of Georgia

Agricultural and Environmental Services Laboratories

2300 College Station Rd, Athens, GA 30602, United States

- Developed digital soil maps for Vidalia onion field in southern Georgia

- Explored the possibility of including digital soil mapping products to be included as regular services offered by AESL
- Gave an oral presentation/workshop on introduction to ArcMap 10.7 to AESL staff
- Found that claypan depth was related to onion pungency

Undergrad Experience

Punjab Agricultural University

Department of Agronomy

Punjab Agricultural University, Ludhiana, Punjab 141004, India

Spring 2019

- Raised Mung beans (*Vigna radiata*) for seed production at field scale during “Practical Seed production (ELP 401)” with Dr. Jasdev Singh Deol, Professor (Agronomy) and Dr. Satpal Singh, Assistant Professor (Agronomy) at PAU.

Fall 2017-Spring 2018

- Raised Soybean (*Glycine Max*) and Wheat (*Triticum aestivum*) crops at field scale during “Practical crop production (Agron 301-302)” training with Dr Kulvir Singh Saini, Senior Agronomist

Undergrad Field Scout

June-July 2018

Department of Agriculture and Farmer Welfare

Agriculture Department Office Block Budhlada

Budhlada, Punjab 151502, India

- Monitoring of Cotton White fly (*Bemisia tabaci*) infestation in field
- Weekly monitoring of marked cotton plants for two months during peak white fly attack and uploading data on online application
- Distribution and establishing sticky traps for white flies as an alternate to pesticides for fields with low infestation
- Issuing soil health cards for the farmer’s field

ORAL AND POSTER PRESENTATIONS

Sharma, R. and M. Levi. 2020. *Spatio-temporal Scaling of Soil Organic Carbon*. 2020 UGA GIS Day Virtually Everywhere, Athens, GA (Story Map presentation). 17–19 Nov 2020.

Sharma, R., M. Levi, and A. Thompson 2020. *Scaling Carbon through Time and Space in the U.S. Southern Coastal Plain*. 2020 ASA-CSSA-SSSA International Annual Meeting, Phoenix, Az (Virtual, Oral and Poster). 9–13 Nov 2020.

Sharma, R. and M. Levi. 2020. *Scaling dynamic soil properties with the land resource hierarchy in the Southern Coastal Plain*. 2020 Southern Regional Cooperative Soil Survey Conference, Fayetteville, AR (Virtual, Oral and Poster). 19–21 May 2020.

AWARDS AND HONORS

- 1st Place at the 2020 GIS Day @UGA event held November 19, 2020
- 1st place poster competition, Soil Pedology Division for the Soil Science Society of America (SSSA) ASA-CSSA-SSSA 2020 virtual annual meeting
- Representative of the Pedology Division for the SSSA Society-wide oral presentation competition in ASA-CSSA-SSSA 2020 virtual annual meeting
- Recipient of University Merit Scholarship for the session 2015-16 for distinctive position in university entrance exam in BS at PAU, Ludhiana.

ACADEMIC AND PROFESSIONAL SERVICES

- Nominated by Soil Pedology Division SSSA for Graduate Student Representative 2020 in Board of Representative Soil Science Society of America
- Member of UGA GIS day 2020 Planning committee
- Member of Diversity, Equity and Inclusion (DEI) Working Group, Department of Crop and Soil Sciences, UGA

PROFESSIONAL MEMBERSHIP

- Soil Science Society of America (SSSA)

COMPUTER SKILLS

- Statistical packages: R
- GIS and Remote Sensing packages: ArcGIS, QGIS, ERDAS Imagine, ENVI, SNAP
- Database and reference management: Microsoft Access, Mendeley
- Video editing: iMovie, Quick Time Player
- Windows and MacOS operating systems

REFERENCES

Dr. Matthew Levi Assistant
Professor
Crop and Soil Sciences
University of Georgia Athens,
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<https://pedology.uga.edu/>

Dr. Aaron Thompson
Professor of Environmental Soil
Chemistry
Crop and Soil Sciences
University of Georgia
Athens, GA 30602
aaront@uga.edu
thompsonlab.uga.edu

Dr. Miguel L, Cabrera
Professor- Soil Science, GA
Power Professor in
Environmental Remediation &
Soil Chemistry
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mcabrera@uga.edu