# Sanku Dattamudi, Ph.D.

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Google scholar profile: https://scholar.google.com/citations?user=7I3ymcMAAAAJ&hl=en
ResearchGate profile: https://www.researchgate.net/profile/Sanku-Dattamudi


## Education

2016 Ph.D. in Agronomy and Soil Science, Louisiana State University, (LSU) Louisiana, USA
2010 M.Sc. in Soil Microbiology, Punjab Agricultural University, (PAU) Punjab, India
2007 B.Sc. in Agriculture (Soil Science major), Visva Bharati University, (VB) West Bengal, India

## Thesis and Dissertation

Dissertation Dattamudi, S. Evaluation of ammonia, greenhouse gas emissions, and characterization of different particulate matter during sugarcane production in Southern Louisiana. 2016. Ph.D. Dissertation, Louisiana State University, 135 pp

Thesis Dattamudi, S. Survival of fecal coliform in wastewater irrigated soil and understanding watershed scale nitrogen transport. 2010. M.Sc. Thesis, Punjab Agricultural University, 78 pp

## Employment history

2023 – Present Assistant Professor, Department of Agriculture, Agribusiness, and Environmental Sciences, Texas A&M University – Kingsville (TAMUK), Kingsville, TX

2019 – 2022 Research Scientist, Department of Earth and Environment, Florida International University (FIU), Miami, FL

2018 – 2019 Postdoctoral Research Scientist, Department of Agronomy and Horticulture, University of Nebraska-Lincoln (UNL), Nebraska, NE

2016 – 2018 Postdoctoral Research Scholar, Southeast Environmental Research Center (SERC), Florida International University (FIU), Miami, FL

2010 – 2016 Graduate Research Assistant, School of Plant, Environmental, and Soil Sciences, Louisiana State University (LSU), Baton Rouge, LA

2009 – 2009 Visiting Research Scholar, Department of Agricultural and Biological Engineering (ABE), University of Illinois, Urbana-Champaign (UIUC), IL

## List of courses teaching/taught

**A. Texas A&M University – Kingsville (TAMUK), TX**

Fall semester 2024 (teaching)

1. Principles of Soil Science PLSS 3410 (MWF, 9:00 to 9:50 am) Lecture [# of students: 45]
M (1:00 to 2:50 pm); M (3:00 to 4:50 pm); W (1:00 to 2:50 pm) Lab

2. Soil Health and Productivity PLSS 4329* (MW, 11:00 to 11:50 am) lecture; F (1:00 to 2:50 pm) Lab [# of students: 12]
*Cross-listed (stacked) as PLSS 5390 – Advanced Soil Health and Productivity [# of students: 2]

Spring semester 2024
1. Principles of Soil Science PLSS 3410 (MWF, 9:00 to 9:50 am) Lecture [# of students: 45]
W (1:00 to 2:50 pm); W (3:00 to 4:50 pm); F (1:00 to 2:50 pm) Lab
2. Agroecology and Sustainable Soil Management PLSS 5395¶ (M, 6:00 to 8:50 pm) Lecture [# of students: 20]
¶Cross-listed (stacked) as PLSS 4390 – Agroecology (for Undergrads) [# of students: 3]

Fall semester 2023
1. Principles of Soil Science PLSS 3410 (MWF, 9:00 to 9:50 am) Lecture [# of students: 49]
W (1:00 to 2:50 pm); W (3:00 to 4:50 pm); F (1:00 to 2:50 pm) Lab
2. Soil Health and Productivity PLSS 4329* (MW, 11:00 to 11:50 am) lecture; F (1:00 to 2:50 pm) Lab [# of students: 10]
*Cross-listed (stacked) as PLSS 5390 – Advanced Soil Health and Productivity [# of students: 3]

Spring semester 2023
1. Principles of Soil Science PLSS 3410 (MWF, 9:00 to 9:50 am) Lecture [# of students: 39]
W (1:00 to 2:50 pm); W (3:00 to 4:50 pm); F (1:00 to 2:50 pm) Lab

**B. Florida International University (FIU), Miami, FL**
A. Spring semester 2022, 2021, 2020
1. Soil and Ecosystems/Advanced Soil Resources Analysis (EVR 4592) – Teaching assistant
B. Fall semester 2019, 2020, 2021
Agroecology and Ecological Agriculture EVR 4272/AGR 6255 – Teaching assistant

**C. University of Nebraska Lincoln (UNL), Lincoln, NE**
Fall semester 2018
1. Applied Soil Physics (AGRO 879) – Teaching assistant
2. Soil Management (AGRO 269) – Teaching assistant

## Invited speaker/Guest lecture

- Guest speaker – Career in soil science at Visva Bharati University, India [July 2024]
- Guest speaker – Environmental Engineering Department at TAMUK [Feb 2024]
- Invited talk – Cover Crops and Soil Health at Soil Health Workshop by Kleberg-Kenedy SWCD [March 2024]
- Guest lecture – General Plant Science (PLSS 1407) at TAMUK [two classes, Spring 2023]
- Invited speaker – 'Introduction to Soil Chemistry' (CHM 1084) at FGCU: Spring 2022 [total number of students: 35 to 40]
- Scientific Reviewer of NAGT Activity Review Camp (20 reviews) for early career faculty, 2018

## Mentoring and advising students at TAMUK

**A. Graduate students – thesis/project (major advisor)**

| Name of the student | Thesis or project title | Anticipated graduation |
|---|---|---|
| 1. Erik Zamora | Effects of Land Management Practices and Cover Crop Mixtures on Soil Physiochemical Properties in a Long-Term Research Field | May, 2025 |
| 2. Satya Venkata Gopinaresh | Developing Soil Carbon Balance in a Long-Term Research Field (project) | May, 2025 |

**B. Graduate students – thesis/project (co-chair or committee member)**

| Name of the student | Thesis or project title | Anticipated graduation |
|---|---|---|
| 1. James Russell* | Surface water system dynamics: A case study in the Lower Rio Grande Valley, Texas | Graduated Dec, 2023 |
| 2. Amberly Zaragoza¶ | Evaluation of Cattle Paunch on Soil Properties and Forage Production in South Texas | May, 2025 |
| 3. Rahul Boppani¶ | Effect of peanut intercropping on the growth and development of pepper (project) | Graduated May, 2023 |

* *Committee member;* ¶ *Co-chair*

**C. Graduate students – course only**

| Name of the student | Anticipated graduation/graduated |
|---|---|
| 1. Ravi Krishna | May, 2023 |
| 2. Praveen Kamas | May, 2023 |
| 3. Sai Naveen | May, 2023 |
| 4. Abdul Razak Khan Patan | May, 2024 |
| 5. Sunanda K Andalamala | May, 2024 |
| 6. Rohit Kumar Reddy Kalluri | May, 2024 |
| 7. Salmohan Reddy Yeruva | May, 2024 |
| 8. Leticia Robles | May, 2024 |
| 9. Akhil Chowdary Talluri | August, 2024 |

**D. Undergraduate students – projects and internship**

| Name of the student | Project duration | Project type |
|---|---|---|
| 1. Juliana Leal | July – Sept, 2024 | USDA Southern SARE YES grant |
| 2. Belinda Arnero | Sept 2024 to May 2025 | NSF CREST |
| 3. Nadia Dworaczyk | May – August, 2024 | USDA NIFA |
| | Sept 2024 to May 2025 | USDA HSI grant |
| 4. Paul Kendell | Sept 2024 – Dec 2024 | USDA HSI grant |

## Bibliography of publications

Google Scholar citations: 263 (h-index 8; i10-index 7). ResearchGate Score: 191.8 (h-index 7) (as of Sept 2024)

* PhD graduate student closely worked with; ¶ MSc graduate student worked or working

### A. Refereed journal articles (published)

1. **Sanku Dattamudi,** Prasanta K. Kalita, Saoli Chanda, A.S. Alquwaizany, and Bikkar Singh Sidhu. 2020. Agricultural nitrogen budget for long-term row crop production in a Midwest US watershed. *Agronomy* 10(11), 1622.
2. **Sanku Dattamudi,** Jim J. Wang, Syam K. Dodla, Ronald DeLaune, April Hiscox, Howard Viator, and Changyoon Jeong. 2020. Mass concentration and size distribution of particles released from harvesting and biomass burning of sugarcane. *Agricultural and Environmental Letters* 5(1). e20028.
3. **Sanku Dattamudi**, Syam K. Dodla, Jim Wang, Sonny Viator, and Ron DeLaune. 2019. Greenhouse Gas Emissions as Influenced by Nitrogen Fertilization and Harvest Residue Management in Sugarcane Production. *Agrosystems, Geosciences, & Environment*, 2 (1), 10 Pp
4. **Sanku Dattamudi,** Jim J. Wang, Syam K. Dodla, Allen. Arceneaux, and H P Viator. 2016. Effect of nitrogen fertilization and residue management practices on ammonia emissions from subtropical sugarcane production. *Atmospheric Environment* 139: 122-130.
5. **Sanku Dattamudi***, Geetika Banta, Bikkar S. Sidhu, Hargopal Singh, and Saoli. Chanda. 2018. Effect of treated sewage water on survival of microbial community and rice production in northwest India. *Acta Scientific Agriculture* 12(2):103-111.
6. **Sanku Dattamudi**, Saoli Chanda, and Leonard J. Scinto. 2021. Microbial respiration and enzyme activity downstream from a phosphorus source in the Everglades, Florida, USA. *Land* 10(7) 696.
7. Ariel Freidenreich*, **Sanku Dattamudi**, Yuncong Li, and Krishnaswamy Jayachandran. 2021. Soil respiration and carbon balance under cover crop in a no-till tropical fruit orchard. *Frontiers in Environmental Science* 9:1-8. DOI: 10.3389/fenvs.2021.766638
8. Ariel Freidenreich*, **Sanku Dattamudi**, Yuncong Li, and Krishnaswamy Jayachandran. 2022. Influence of leguminous cover crops on soil chemical and biological properties in a no-till tropical fruit orchard. *Land* 11(6) 932.
9. Ariel Freidenreich*, Saoli Chanda, **Sanku Dattamudi**, and Krishnaswamy Jayachandran. 2022. Effect of glyphosate and carbaryl applications on okra (*Abelmoschus esculentus*) biomass and arbuscular mycorrhizal fungi (AMF) root colonization in organic soil. *Horticulturae* 8(5), 415.
10. Shagufta Gaffar*, **Sanku Dattamudi**, Amin Rabiei Baboukani, Saoli Chanda, Jeffrey M. Novak, Donald W. Watts, Chunlei Wang, and Krishnaswamy Jayachandran. 2020. Physiochemical characterization of six different biochar feedstocks and their effects on sorption behavior of atrazine in organic rich soil. *Agronomy* 11(4) 716.
11. Claudia Lyl. Garcia¶, **Sanku Dattamudi**, Saoli Chanda, and Krishnaswamy Jayachandran. 2019. Effect of salinity stress and microbial inoculations on glomalin production and plant growth parameters of Snap Bean (*Phaseolus vulgaris*). *Agronomy*, 9(9), 545.
12. Ariel Freidenreich*, Brittany Harris, **Sanku Dattamudi*#**, Eric Betancourt, Mariana Santos Reis, and Krishnaswamy Jayachandran. 2020. Effects of prescribed fire on soil properties in a Pine Rockland ecosystem. *Agricultural and Environmental Letters* 5(1). e20026.
13. Maimona Saeed, Noshin Ilyas, Fatima Bibi, Krishnaswamy Jayachandran, **Sanku Dattamudi**, and Muthusamy Govarthanan. 2021. Biodegradation of PAHs by Bacillus marsiflavi, genome analysis

and its plant growth promoting potential. *Environmental Pollution*. 292, 118343. https://doi.org/10.1016/j.envpol.2021.118343

14. Havalend E. Steinmuller, Susana L. Stoffella, Rosario Vidales, Michael S. Ross, **Sanku Dattamudi**, and Leonard J. Scinto. 2021. Characterizing hydrologic effects on soil physicochemical variation within tree islands and marshes in the coastal Florida Everglades. *Soil Science Society of America Journal*, 85(4), 1269-1280. https://doi.org/10.1002/saj2.20270
15. Joseph E. Rodrigues, Syam K. Dodla, Jim J. Wang, Guillermo Scaglia, and **Sanku Dattamudi**. 2021. Effects of Biochars and N-Stabilizers on Greenhouse Gas Emissions from a Pasture Field. *Journal of Environmental Management*. 306, 114423. https://doi.org/10.1016/j.jenvman.2021.114423
16. Jim J. Wang, Syam K. Dodla, Sonny Viator, Manoch Kongchum, Stephen Harrison, **Sanku D. Mudi**, Shuai Liu, and Zhou Tian. 2013. Agricultural field management practices and greenhouse gas emissions from Louisiana soils. *Louisiana Agriculture*, Spring edition, 9 pp.
17. Bharat Sharma Acharya, Syam Dodla, Jim J Wang, Kiran Pavuluri, Murali Darapuneni, **Sanku Dattamudi,** Bijesh Maharajan, and Gehendra Kharel. Biochar impacts on soil water dynamics – knowns, unknowns, and research directions. 2023. Submitted to *Biochar*, 6(1), 34.
18. Saoli Chanda, **Sanku Dattamudi**, Krishnaswamy Jayachandran, Leonard J Scinto, and Mahadev Bhat. 2023. Application of cyanobacteria as biofertilizer for okra production with a focus on environmental and ecological sustainability. Submitted to *Environments*, 11(3), 45.

## B. Refereed journal articles (under review/in preparation)

19. James Russell, **Sanku Dattamudi**, Ambrose O. Anoruo, Tushar Sinha, Shad D. Nelson and Benjamin L. Turner. Surface water system dynamics: a case study in the Lower Rio Grande Valley, Texas, USA. Submitted to *Water Resources Management* (under review).
20. Erik Zamora¶, Satya Gopinaresh and **Sanku Dattamudi.** Effect of cover crops to reduce soil salinity in arid and semi-arid climates: A review. Target journal: *Frontiers in Environmental Science*
21. Satya Gopinaresh¶, S Ramasamy, Erik Zamora and **Sanku Dattamudi.** Effect of silicon application on physiological parameeters and nutrient uptake in rice. Target journal: *Agronomy*
22. **Sanku Dattamudi,** Jim J. Wang, Syam K. Dodla, A. Arceneaux and R DeLaune. 2022. Physiochemical characterization of smoke and particles released during sugarcane harvesting in Louisiana. Target journal: *Journal of Hazardous Materials*
23. **Sanku Dattamudi,** Saoli Chanda, Krishnaswamy Jayachandran. Efficacy of cyanobacteria biofertilizer for sustainable tomato production and soil health improvement. Target journal: *Frontiers in Environmental Science*
24. **Sanku Dattamudi** and Saoli Chanda, and Krishnaswamy Jayachandran. Warm season perennial grasses and carbon accumulation in the soil: a review. Target journal: *GCB Bioenegry*

## C. Technical bulletin/project report

25. **Sanku Dattamudi**, Saoli Chanda, Krishnaswamy Jayachandran, Mahadev Bhat, and Leonard Scinto. 2022. Application of cyanobacteria as biofertilizer for okra production in Florida. Annual report. Submitted to USDA Southern SARE. 52 pp.
26. John S. Kominoski, Evelyn Gaiser, Leonard Scinto, Joel Trexler, Saoli Chanda, Sean Charles, **Sanku Dattamudi**, Diana Johnson, Michael Kline, Shishir Sarker, Franco Tobias, Mary Zeller. Assessing Near-Field and Landscape Scale Ecological Effects of the Modified Water Deliveries and

Comprehensive Everglades Restoration Plan Projects in Northeast Shark River Slough (NESS), Everglades National Park. *Technical Report*, Task agreement # P14AC01639, 78 pp

27. Mike Ross, Jack Meeder, Leonard J. Scinto, Jay Sah, Susana Stoffella, Himadri Biswas, Sean Charles and **Sanku Dattamudi**. 2018. Ecosystem dynamics in the White Zone: history, drivers, and restoration implications. *Annual report*, Task agreement # P15AC01625, Submitted to SFNRS (Everglades and Dry Tortugas National Parks), 72 pp
28. Leonard J. Scinto, Evelyn Gaiser, Daniel Gann, Jennifer Richards, Joel Trexler, and **Sanku Dattamudi**. 2017. Assessing near-field and landscape scale ecological effects of the modified water deliveries and comprehensive Everglade's restoration plan projects in Northeast Shark River Slough, everglades National Park. *Technical Report*, Task agreement # P16AC00032, Everglades National Park. 75 pp

## D. Nonrefereed journal articles (Extension articles/News/Media reports)

29. Saoli Chanda, Sri Madhabushi, **Sanku Dattamudi** and Krishnaswamy Jayachandran. Mentoring the next generation of scientists. *USDA Southern SARE Mentoring news, August, 2023*. https://southern.sare.org/news/mentoring-the-next-generation-of-scientists/
30. **Sanku Dattamudi,** Saoli Chanda, Krishnaswamy Jayachandran, Mahadev Bhat and Leonard Scinto. Exploring algal bloom as biofertilizer in vegetable production. *USDA Southern SARE news, August, 2023.* https://southern.sare.org/news/exploring-algal-blooms-as-biofertilizer-in-vegetable-production/
31. **Dattamudi et al.** What kind of particles are released from harvesting and burning sugarcane? *CSA News. October, 2020*. Access online: *https://acsess.onlinelibrary.wiley.com/doi/epdf/10.1002/csan.20299*
32. Ariel Freidenreich, Brittany Harris, **Sanku Dattamudi**, and Krishnaswamy Jayachandran. A little fire did a lot of good for microbes in FIU's Nature Preserve. *FIU News. September, 2020.*
33. **Sanku Dattamudi,** Jim Wang, and Syam Dodla. Sugarcane production practices influence greenhouse gas emissions. *CSA News. October, 2019*
34. Claudia Garcia, **Sanku Dattamudi,** Saoli Chanda, and Krishnaswamy Jayachandran. Oh, snap: Bacteria, fungus combo can help crops fight salty conditions. *FIU News. December, 2019.*
35. Ariel Freidenreich, **Sanku Dattamudi**, Yuncong Li, and Krishnaswamy Jayachandran. Star fruit could be the new "STAR" of Florida Agriculture. *SSSA News. December, 2019.*

## E. Refereed abstracts and proceedings

1. **Sanku Dattamudi**, Saoli Chanda and Krishnaswamy Jayachandran. Comparative analysis of various organic nutrient sources for okra production. 2024, Atlanta, GA, USA.
2. Erik Zamora, **Sanku Dattamudi**, G Schuster, and JL Foster Malone. Effect of cover crop mixtures on soil health and agricultural sustainability in South Texas. 2024, Atlanta, GA
3. VSVG Naresh, Sankar Ramasamy and **Sanku Dattamudi**. Effect of silicon application on physiological parameters and nutrient uptake in rice (*Oryza sativa* L.). 2024, Atlanta, GA
4. **Sanku Dattamudi**, Saoli Chanda, Krishnaswamy Jayachandran, Mahadev Bhat, and Leonard J. Scinto. Efficacy of cyanobacteria biofertilizer for sustainable tomato production. 2023, St. Louis, MO, USA.
5. Erik Zamora, **Sanku Dattamudi**, and JL Foster Malone. Effect of Land Management and Cover Crop Mixtures on Soil Physicochemical Properties in a Long-Term Research Field. 2023, St. Louis, MO, USA

6. Amberly Zaragoza, **Sanku Dattamudi**, B Parker, Benjamin L. Turner, Shad Nelson, and Greta Schuster. Evaluation of Soil Improvement Potential Via Application on Cattle Paunch in South Texas Dryland. 2023, St. Louis, MO, USA
7. **Sanku Dattamudi**, Saoli Chanda, and Krishnaswamy Jayachandran. Application of cyanobacteria as biofertilizer for producing okra and improving ecological sustainability in Florida, USA. 2023. Waikoloa Beach, HI, USA.
8. **Sanku Dattamudi**, Saoli Chanda, Krishnaswamy Jayachandran, Leonard J Scinto, and Mahadev Bhat. Application of cyanobacteria as biofertilizer to increase vegetable production and soil health improvement in South Florida. July 27, 2021, Webinar, National Algae Association (NAA) - Virtual
9. Ariel Freidenreich, **Sanku Dattamudi**, Yuncong Li, and Krishnaswamy Jayachandran. 2020. Influence of Tropical Leguminous Cover Crops on Soil Chemical and Biological Properties in a No-till Tropical Fruit Orchard, ASA-CSSA-SSSA, Virtual
10. John Kominoski, Evelyn Gaiser, Saoli Chanda, Sean Charles, Diana Johnson, **Sanku Dattamudi**, Shishir Sarker, Leonard Scinto, Franco Tobias, Joel Trexler, and Mary Zeller. How does freshwater restoration change marsh ecosystem biogeochemistry?: a northeast shark river slough case study, 2019, Coral Springs, FL, USA
11. **Sanku Dattamudi**, Leonard J Scinto, Saoli Chanda, and Diana Johnson. The effect of recent landscape modifications on ecological parameters of wetlands in Southern Florida, 2018, New Orleans, LA, USA
12. **Sanku Dattamudi**, Leonard J Scinto, Saoli Chanda, Diana Johnson and Carlos Pulido. Potential Effects of Hydrologic Loading on Nutrient Content, Microbial Activity, and Other Ecological Parameters in Northeast Shark River Slough (NESS) of Everglades National Park (ENP), 2017, Tampa Bay, FL, USA
13. Saoli Chanda, Leonard J Scinto, **Sanku Dattamudi**, and Diana Johnson. Spatial Distribution in Everglades Nutrient Budgets and Their Effects on Biogeochemical Processes, 2017, Tampa Bay, FL, USA
14. Carlos Pulido, Leonard J Scinto, **Sanku Dattamudi**, and Saoli Chanda. Effects of dry down and re-hydration on sediment phosphorus storage in Stormwater Treatment Area, ENP, 2017, Tampa Bay, FL, USA
15. Alex Crow, **Sanku Dattamudi**, Leonard J Scinto, Saoli Chanda, and Diana Johnson. Evaluation of microbial respiration and enzyme activity downstream in the North-East Shark River Slough, 2017, MMC, Florida International University, Miami, FL, USA
16. **Sanku Dattamudi**, Jim J. Wang, Syam K. Dodla, Howard Viator, Ronald DeLaune, and April Hiscox. Physio-chemical characterization of particles emitted from sugarcane harvesting operations in Louisiana, USA, 2016, Phoenix, AZ, USA
17. **Sanku Datta Mudi**, Jim J. Wang, and Syam Dodla. Micrometeorological analysis of diurnal ammonia emissions from subtropical sugarcane production, 2014, Long Beach, CA, USA
18. **Sanku Datta Mudi**, Jim J. Wang, Syam K. Dodla, and A. Arceneaux. Impact of different nitrogen fertilizers and residue management schemes on ammonia volatilization from sugarcane production in Louisiana, 2013, Tampa Bay, FL, USA
19. **Sanku Datta Mudi**, Jim J. Wang, Syam K. Dodla, N. Tafti, and Howard Viator. Effect of residue management and nitrogen fertilization on emissions of different greenhouse gases from subtropical sugarcane production, 2013, Tampa Bay, FL, USA
20. Shuai Liu, Jim J. Wang, Zhou Tian, Stephen A. Harrison, and **Sanku Datta Mudi**. Effect of different nitrogen fertilization on ammonia and greenhouse gas emissions from a sub-tropical wheat field, 2013, Tampa Bay, FL, USA

21. Zhou Tian, Jim J. Wang, Shuai Liu, Gerald O. Myers, Zengqiang Zhang, and **Sanku Datta Mudi**. Effect of application of coated urea and NBPT urease inhibitor on greenhouse gas emissions in cotton production, 2013, Tampa Bay, FL, USA
22. Syam Dodla, Jim Wang, Changyoon Jeong, **Sanku Datta Mudi**, Ronald DeLaune, Sonny Viator, April Hiscox, Ronald Sheffield, and Thomas Hymel. Effect of nitrogen fertilization, harvesting, residue management practices on greenhouse gas, ammonia, and particulate matter emissions in sugarcane production, 2011, San Antanio, TX, USA
23. **Sanku Datta Mudi**, Prasanta Kalita, and Bikkar Singh Sidhu. Quantifying biological properties of wastewater and understanding watershed scale N transport, 2009, CSSRI, Karnal, India

### F. Non-refereed abstracts and proceedings

24. Erik Zamora, **Sanku Dattamudi**, JL Foster Malone, Debankur Sanyal, and Greta Schuster. Analysis of land management practices on soil health and agricultural sustainability in South Texas. 2024, South Padre Island, TX
25. VSVG Naresh, Sankar Ramasamy and **Sanku Dattamudi**. Effect of silicon application on growth and yield parameters of rice (*Oryza sativa* L.). 2024, South Padre Island, TX
26. Erik Zamora, Satya Vurranki, Julianna Leal, **Sanku Dattamudi**, Saoli Chanda, and Krishnaswamy Jayachandran. Efficacy of organic nutrient sources to improve soil water holding capacity (WHC) during radish production. 2024, South Padre Island, TX
27. Yuxia Huang, Mahendra Bhandari, Sushil Paudyal, **Sanku Dattamudi**, Jose Baca, Wei Zhang, and Xavier Gonzales. Cross-Disciplinary Mentoring for Undergraduates: Data Analytics in Agriculture. 2024. College Station, TX.

## Research and scholarly activities

### A. Research proposals – funded (PI and Co-PI)

**(Total funding brought to TAMUK: $1.34 M; Total funding participated: $6.3 M)**

| Role | Project information | Funding agency | Total funding | TAMUK Share |
|---|---|---|---|---|
| PI | Fostering climate-friendly sustainable farming through integration of biochar and cover crops in Texas and Florida. USDA-Southern SARE | USDA Southern SARE | $399,220 | $297,264 |
| PI | Effects of cover crops, organic amendment, and tillage practices on soil water dynamics | Texas Water Development Board (TWDB) | $256,000 | $256,000 |
| PI | Developing Soil Carbon Balance (SCB) in a long-term row crop production system | USDA Southern SARE | $21,992 | $21,992 |

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|---|---|---|---|---|
| PI | Organic farming: A gateway for healthy and sustainable food production | Greater Texas Foundation (Internal grant) | $2,996 | $2,996 |
| PI | The use of cyanobacteria biofertilizer to increase crop productivity, improve soil health, and agricultural sustainability in Florida. Project period: 2021 - 2025 | USDA Southern SARE | $242,000 | |
| PI | Efficacy of cyanobacteria biofertilizer and two other common organic nutrient sources for snap bean (*Phaseolus vulgaris*) production. Project period: 2022 | USDA Southern SARE; YES grant | $4,433 | |
| PI | Efficacy of organic nutrient sources to improve water holding capacity: An experiential learning for young scholar in agricultural science. Project period: 2023-2024 | USDA Southern SARE; YES grant | $4,939 | $4,939 |
| Co-PI | Strengthening faculty for teaching the next generation of wicked problem solvers | USDA NIFA HEC | $733,343 | $348,478 |
| Co-PI | Cross Training on Data Analytic Experience in Agriculture (CODE-AG). Project period: 2023-2027 | USDA NIFA HSI | $996,251 | $195,024 |
| Co-PI | Fostering sustainable organic cotton production in the US through research and outreach on organic regenerative practices. Project period: 2023-2026 | USDA OARI | $3.5 M | $61,455 |
| Co-PI | Expanding natural resources career development program. Project period: 2023 - 2025 | USDA NRCS | $150,000 | $150,000 |

**B. Research proposals – under review**

| | | | |
|---|---|---|---|
| PI | Legume mixture intercropping in citrus orchards: an approach to increase production efficiency, enhance soil health, and improve agricultural sustainability<br>Status: (Pre-proposal submitted in Nov, 2024). | USDA NIFA SCRI | $3.0 M |
| Co-PD | CREST Phase II Preliminary Proposal: Center for Research, Education, Application, and Technology Transfer Excellence for Sustainable Water in Agriculture<br>PI for section: Efficacy of soil amendments to improve plant available water content in soil | NSF CREST | $7.5 M |
| PI | Fostering sustainable practices in a family-owned farm in South Texas: An approach to increase production resiliency and improve soil health | USDA Southern SARE On-Farm | $29,829 |

## C. Other juried activities

### Editorial board members (by invitation only)

- Frontiers in Agronomy – Agroecological Cropping Systems
- Pollutants [MDPI] – Topical Advisory Panel member
- Acta Scientific Agriculture
- Journal of Advancement in Plant Science
- Journal of Agriculture and Aquaculture

### Grant reviewer

- USDA Southern SARE Graduate student grant – 2021, 2022
- USDA Southern SARE On-Farm Research Grants - 2022

### Reviewer for scholarly journals – Reviewed more than 40 articles so far

- Sustainability
- Agriculture
- Agriculture, Ecosystems & Environment
- Applied Science
- Current Pollution Reports Journal
- Journal Agronomy
- Frontiers in Microbiology
- Ecological Engineering
- Wetlands
- Agronomy (MDPI)
- International Journal of Environmental Research and Public Health (MDPI)
- Atmospheric Environment
- Journal of Environmental quality
- Science of The Total Environment
- Acta Scientific Agriculture
- Land (MDPI)
- Soil Systems (MDPI)
- Water (MDPI)
- Biocell
- Notulae Botanicae Horti Agrobotanici Cluj-Napoca
- Qeios

## Professional Growth and Activities

### a. Membership in professional societies

- Soil Science Society of America (SSSA)
- American Society of Agronomy (ASA)
- Crop Science Society of America (CSSA)
- National Association of Geoscience Teachers (NAGT)
- Gamma Sigma Delta (The honor society for Agriculture)
- Ecological Society of America (ESA)
- North American Colleges and Teachers of Agriculture (NACTA)

## Honors and Awards

- Center for Research Excellence in Science and Technology (CREST) FIU faculty travel grant, 2018
- SERC Earth Educators' Rendezvous award for early career faculty, 2018
- National Association of Geoscience Teachers (NGAT), Activity Review Camp award, 2018
- Florida International University EE Faculty Travel Grant award, 2018
- American Society of Sugarcane Technologists (ASSCT)-Louisiana division fellowship award, 2014
- Air and Waste Management Association (AWMA) graduate student award for excellence in air quality research and study, 2014
- Louisiana Environmental Health Association (LEHA) Frank Dautriel outstanding graduate student award, 2014
- Gamma Sigma Delta merit honor roll award for outstanding graduate student at Louisiana State University, 2014
- School of Plant, Environmental and Soil Sciences (SPESS) graduate student award, 2014 & 2015
- Louisiana State University travel grant award, 2013 & 2014
- Graduate Research Assistantship (USDA-AFRI) at Louisiana State University, 2010 to 2016
- US-India Sandwich Research Program fellow, University of Illinois Urbana-Champaign, 2009

## Other Professional Activities

### Certification/license

- Florida Tomato Food Safety Certification (T-Gap)
- National Environmental Laboratory Accreditation Conference (NELAC) certified
- Online Boating Safety Certification approved by NASBLA
- Basic Aviation Safety (A-100) certificate approved by USDA and USDI
- DBHYDRO training certificate (hydrological, meteorological, hydrogeological, & water quality data)
- CPR and First Aid certification from DAN
- Lab Safety Training certificate at Louisiana State University

### Extension and Outreach activities/experience

- Florida International University Agroecology iCATCH manager, 2019- present
- GrowFest for Hispanic farmers, Growers and Stakeholders, FIU representative, 2019, 2021
- Organizer/Facilitator of Round Table and Webinar for 'Stronger2gether', 2019
- Physical meetings, phone conferences with Underserved Hispanic Farmers in South Florida, 2019
- Collaboration with South Florida Water Management District (SFWMD) and US Army Corps of Engineers (USACE) for wetland ecology management, Everglades
- Nebraska Corn Stakeholders meeting, 2018
- Farmers Field Day (FFD) active participant, Louisiana State University, 2014, 2015

### Leadership and Community service

- President, International Student Association (ISA) of Louisiana State University, 2013-2014
- President, International Cultural Center (ICC) of Louisiana State University, 2013-2014
- Vice-President, Graduate Student Association (GSA) of Louisiana State University, 2013-2014
- Active involvement in 'campus life' of Louisiana State University in 2013-2014 academic year

- Treasurer, Baton Rouge Bengali Association (BRBLA), Louisiana, 2010-2014
- Volunteer of Blood Donation camp, American Red Cross at UIUC Urbana main campus, 2009

**Judge/selection committee**

- Judge for poster (total seven) at Southern ASA conference, Atlanta, GA, 2024
- Judge for posters (total seven) at Tri-society annual conference, St. Louis, MO, 2023
- Judge of Undergraduate Research FIU symposium, 2022
- Judge of Elementary Science Fair, Miami-Dade College, 2019
- Judge of McNair graduate fellowship program oral presentation competition, 2018
- Judge for Graduate Student Scholarly Presentations at FIU, 2018
- Judge for McNair undergraduate fellowship program poster competition, FIU, 2017
- Selection committee members for 3-minute thesis presentation competition at LSU, 2014
- Judge for the Louisiana section '*Envirothon*' competition of high school students, 2014