

---

## CURRICULUM VITAE

---



**Dr. VENKADESH S., Ph.D**  
**Agricultural Meteorologist**

4/214-1, Maruthi Nagar, Krishnapuram Village,  
Perambalur – 621 116, Tamil Nadu (India)  
Email: [venkadeshacrc@gmail.com](mailto:venkadeshacrc@gmail.com)  
Mobile No: (+91) 959 763 5077

---

### RESEARCH INTERESTS

Drought Assessment, Remote Sensing products and GIS Applications, Impacts of Climate Change and Adaptations in Agriculture, Hydrometeorology (Air Pollution, Soil Moisture, Crops, Land Use/Land Cover and Hydrology), Google Earth Engine, Crop-Weather Models, Drone applications and Statistical analysis

---

### EDUCATION

2015- 2019

**Ph.D., Meteorology**

Thesis title: **Drought monitoring using remote sensing products for different agro-climate zones of Tamil Nadu**

**Objective:** To investigate the validity and scope for utilizing high resolution satellite-based precipitation product along with ground based observation and assessing the intensity of meteorological and agricultural drought over different agro-climatic zones of Tamil Nadu

**Supervisor:** Dr.S. Pazhanivelan (Director - Water Technology Centre)  
[pazhanivelans@gmail.com](mailto:pazhanivelans@gmail.com)

**Tamil Nadu Agricultural University**, Tamil Nadu, India  
(October, 2019) with OGPA – 8.03 /10

2012 –2014

**M.Sc., Agricultural Meteorology and Climatology**

Thesis title: **Agro-ecological zonation at micro level using Remote Sensing and Geographical Information System**

**Objective:** To delineate micro-climatic zones by integrating climate variables, natural resource and satellite data for Salem, Thiruvarur and Sivaganga

**Supervisor:** Dr.R. Jagannathan (Retd. Professor) [jagan@tnau.ac.in](mailto:jagan@tnau.ac.in)

**Tamil Nadu Agricultural University**, Tamil Nadu, India (November, 2014) with OGPA – 8.17 /10

2007 –2011

**B.Tech., Agricultural Information Technology**  
**Tamil Nadu Agricultural University**, Tamil Nadu, India  
(October, 2011) with OGPA – 7.17/10

---

---

## AWARDS AND FELLOWSHIPS

- Oct 2022 – Jun 2024 **Regional Representative** of South Asia  
PAGES (Past Global Changes) – Early Career Network  
<https://pastglobalchanges.org/profile/9639>
- May 2022 **United Nations Office for Outer Space Affairs (UNOOSA) – Travel Grant (Ghana, West Africa)**  
United Nations/Ghana/ Prince Sultan Bin Abdulaziz International Prize for Water 5<sup>th</sup> international conference on the use of space technology for water resources management
- Dec –2020 **Virtual Berkner Travel Fellowship (\$ 2500)**  
American Geophysical Union (AGU) Fall Meeting – 2020
- June - 2020 **Sustainability Research & Innovation Congress 2021 Waived Registration Fee**  
Online event-Brisbane, Australia
- Apr 2017 - Sep 2019 **National Fellowship for Scheduled Caste Students (NFSC)**  
Ministry of Social Justice & Empowerment  
University Grant Commission (UGC), India
- Sep – 2018 **India-UK Water Centre (IUKWC) - Travel Grant: Workshop on Advancing Drought Monitoring, Prediction, and Management Capabilities in Lancaster, United Kingdom**

---

## LICENSE

- Mar 2023 – Mar 2033 **Remote Pilot Certificate – Small & Medium Category of Drone**  
Certificate No. PC032300002LK  
Issued by Directorate General of Civil Aviation, Government of India

---

## TEACHING AND WORK EXPERIENCE

- June 2022 –Present **Assistant Professor**  
– Dhanalakshmi Srinivasan Agriculture College affiliated to Tamil Nadu Agricultural University, Perambalur – 621 212, Tamil Nadu, India
- Sep 2021 –Apr 2022 **Assistant Professor**  
– Nammazhvar College of Agriculture and Technology affiliated to Tamil Nadu Agricultural University, Kamuthy, Ramanathapuram-623708, Tamil Nadu, India
- Sep 2020 – May 2021 **Junior Research Fellow (JRF)**  
– Tamil Nadu Irrigated Agricultural Modernization Project (TNIAMP), Tamil Nadu Agricultural University, Coimbatore – 641 003
- Nov 2019 - Aug 2020 **Project Specialist**  
– Indian Institute of Technology, Mandi  
– Water and Energy Saving Reliable Irrigation System (WatER-ERIS): Solar Energy and Cloud-based Decision Support System for Automated Irrigation System (CoPI),” is funded by SERB – IMPRINT2  
– Project No: IITM/SERB (IMPRINT-2)/KV/222
-

---

Nov 2014 -Aug 2015    **Teaching Assistant (TA)**  
Department of Agricultural Meteorology  
College of Horticulture  
– Kerala Agricultural University, Thrissur – 680656, Kerala India

Jan 2012 - Aug 2012    **Junior Research Fellow (JRF)**  
– Sustaining rice production in changing climate – Testing uncertainties and validating selected adaptation techniques on farmers’ fields (*ClimaRice II*), Tamil Nadu Agricultural University, Coimbatore – 641 003

---

## **INTERNSHIP AND PROJECT**

5 July 2021–16 July 2021    **10<sup>th</sup> UNESCO/IOC-RTRC-ODC Training Course on Regional Application of Coupled Climate Models, Qingdao, China**

2 March 2021 – 16 Apr 2021    **Virtual IS-ENES3 Spring School on Climate data use for impact assessments**, IS-ENES3 European Project Manager Wageningen University & Research (WUR), The Netherlands

19 July 2010 – 23 Dec 2010    **“Watershed Structure Designer”** at Gujarat State Watershed Management Agency (GSWMA), Gandhinagar, Gujarat India

**Purpose:** This project is to develop an interface module for Watershed Harvesting and Soil moisture Conservation Structures in order to incorporate hydraulic, quantity and cost estimation structures used by the Gujarat state watershed management agency.

17 May 2010 – 21May 2010    **“Basic Meteorological Training”** at RMC, India Meteorological Centre, Chennai, India

**Purpose:** This intern is to understand about the fundamentals of accuracy of meteorological observations, Climatological data, Cyclone Detection Radars for various weather-related enquiries

---

## **SOFTWARE DEVELOPED**

Developed software in group project during Undergraduate degree in 2011 on **“Water Harvest and Soil Moisture Conservation Designer”** is an interactive software tool using Visual Studio .NET 2008, MS Access, MySQL, SQL Server Edition 2005 and Smart Draw

---

## **PROFESSIONAL MEMBERSHIP**

American Geophysical Union – Annual Member  
Geological Society of America– Annual Member  
International Association of Hydrological Sciences (IAHS) – Life Member  
Indian Meteorological Society – Life Member  
Association of Agro meteorologists– Life Member  
Indian Society of Remote Sensing– Life Member

---

## COMPUTER SKILLS

---

Operating System (OS)	Linux, Windows
Shell Scripting & Programming	Visual Studio .NET and C
Web Development	HTML and Macromedia Dreamweaver MX and AutoCAD
Remote Sensing Software	ESRI ArcGIS (AcrMap, ArcInfo, ArcCatalog), ERDAS, IDRISI, QGIS and MRT Tool (Reprojection tool)
Meteorological Software	DSSAT (Crop modeling Software), InfoCrop, RainMan v4.3 (Rainfall analysis) CropWat, and Weathercock
Statistical Software	RStudio and Java (Beginner)
Digital Imaging	Adobe Photoshop

---

## CONFERENCES / SYMPOSIUMS

1. Dharanipriyaa M., **Venkadesh Samykannu**, and N.Medhini. 2023. Assessment of Soil Erosion based on RUSLE model in Cauvery-Delta Zone of Tamil Nadu Using Google Earth Engine. National Conference Advances in Agro-meteorological Interventions for Climate Resilience Agriculture. Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India. Held 15-17, February 2023.
2. Medhini. N, **Venkadesh Samykannu**, and M. Dharanipriyaa. 2023. Assessment of Remote Sensing based on Annual and Seasonal Precipitation Concentration Index over Tamil Nadu. National Conference Advances in Agro-meteorological Interventions for Climate Resilience Agriculture. Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India. Held 15-17, February 2023.
3. Dhinesh Kumar C, and **S. Venkadesh**. 2023. Drought detection by MODIS-derived VCI from October to December 2016 and 2020 over Tamil Nadu, India. 13<sup>th</sup> NABS National Conference on Current Perspectives for Sustainable Development in Life Sciences, Environment and Agriculture. Periyar University - Salem, Tamil Nadu, India. Held 23-25, January 2023.
4. Kamal Anandh T, and **S. Venkadesh**. 2023. Study of LANDSAT based Land Surface Temperature with NDVI in Coimbatore district of Tamil Nadu (2018-2021). 13<sup>th</sup> NABS National Conference on Current Perspectives for Sustainable Development in Life Sciences, Environment and Agriculture. Periyar University - Salem, Tamil Nadu, India. Held 23-25, January 2023.
5. **Venkadesh Samykannu**. 2022. Assessment of meteorological drought using satellite-derived CHIRPS precipitation product over Tamil Nadu, India. United

Nations/Ghana/PSIPW - 5<sup>th</sup> International conference on the use of space technology for water resources management. 10-13 May 2022.

6. **Venkadesh Samykannu**. 2021. Trend Analysis in Potential Evapotranspiration Using Mann-Kendall and Sen slope's Tests in Tamil Nadu of India. National Symposium on Advances in Remote Sensing: Trends, Challenges and Opportunities (NS-ARS21). December 9-11, 2021
7. **Venkadesh Samykannu**, S. Pazhanivelan, and K.Mrunalini. 2021. Validation of Satellite-Based Precipitation Products over Tamil Nadu. International Symposium on Tropical Meteorology "Changing Climate: Consequences and Challenges (INTROMET-C4)". Indian Meteorological Society - Cochin Chapter & Cochin University of Science and Technology (CUSAT), Cochin, Kerala State, India. Held 23-26, November 2021.
8. **Samykannu, Venkadesh**. 2021. Accuracy assessment of TRMM precipitation product in different Agro-Climatic Zones of Tamil Nadu, India. Joint WCRP-WWRP Symposium on Data Assimilation and Reanalysis in collaboration with the ECMWF Annual Seminar 2021. *Held 13 - 17 September* (virtual).
9. **Samykannu, Venkadesh**, S. Pazhanivelan, K. P. Ragunath, S. Panneerselvam, Mrunalini Kancheti, P. J. Prajesh, and R. Kumaraperumal. 2021. Satellite derived seasonal analysis of precipitation (CHIRPS) and vegetation (NDVI) over Tamil Nadu, India. *43rd COSPAR Scientific Assembly. Held 28 January-4 February*, 43: 118.
10. **Venkadesh Samykannu**. 2021. Investigating Temporal Relationships between Vegetation (NDVI) and Soil Moisture (SMAP) in Tamil Nadu, India. NOAA GML Global Monitoring Annual Conference 2021. *Held 24 - 28 May*.
11. **Venkadesh Samykannu**, and S.Panneer Selvam. 2021. Review of Remotely Sensed Satellite Data for Groundwater Assessment. Fourth Indian National Groundwater Conference (INGWC-2021) on Groundwater Management in Arid and Semi-Arid Regions of Hard Rock Terrains. 22-24 March.
12. **Venkadesh Samykannu**. 2021. Temporal relationships of PERSIANN and MODIS-NDWI satellite images in Tamil Nadu, India. Land-Atmosphere Interactions 2021 Workshop. June 10-21.
13. **Venkadesh, S.**, Pazhanivelan, S., and Arumugam, P. 2020. Comparison of GPM-IMERG and TRMM 3B43 precipitation products with dense network of rain-gauges for the Northeast monsoon season over Tamil Nadu, India. In AGU Fall Meeting Abstracts (Vol. 2020, pp. H200-0028).
14. **Venkadesh Samykannu**, S. Pazhanivelan, P. J. Prajesh, K. P. Ragunath, and R. Kumaraperumal 2020. Assessment of Agricultural Drought Using Remote Sensing Based on MODIS NDVI for Different Agro-Climatic Zones of Tamil Nadu, India. In GSA 2020

Connects Online. Geological Society of America, 2020. Vol 52, No. 6.  
<http://dx.doi.org/10.1130/abs/2020am-355725>.

15. **Venkadesh Samykannu**, S. Pazhanivelan, P. J. Prajesh, K. P. Rangunath, and R. Kumaraperumal 2020. Evaluation of GPM-IMERG precipitation product in Heavy Rainfall event during Northeast monsoon season in 2015 over Tamil Nadu, India. TROPMET 2020 National Symposium on Weather and Climate Services over Mountainous Regions 14-17 December.
16. **Venkadesh Samykannu**, K.P.Rangunath, and Rajalakshmi Dhandapani. 2020. Micro-level delineation of agro meteorological zones in the Sivagangai district of Southern India using remote sensing and GIS techniques. 41 Asian Conference on Remote Sensing on Remote Sensing for Digital Economy (ACRS2020 Online). 9-11 November.
17. **Venkadesh Samykannu**, Pazhanivelan Sellaperumal, Prajesh P. J, K.P.Rangunath, and R. Kumaraperumal. 2020. Spatio-temporal assessment of drought severity maps using agricultural drought severity index for seven agro climatic zones of Tamil Nadu, India. 41 Asian Conference on Remote Sensing on Remote Sensing for Digital Economy (ACRS2020 Online). 9-11 November.
18. **Venkadesh Samykannu**, S.Pazhanivelan, and S.Panneer Selvam. 2020. Assessment of agricultural drought using rainfall deviation index at district level for Tamil Nadu, India. International Virtual Conference on Earth's Changing Climate: Past, Present & Future, 15-17 October.
19. **Venkadesh Samykannu**. 2018. Validation of MODIS and CHIRPS Products for Drought Monitoring. India-UK Water Centre Workshop on Advancing Drought Monitoring, Prediction, and Management Capabilities Lancaster, UK, 18th – 20th September.
20. **S. Venkadesh**. 2016. Analysis of Rainfall for crop planning in Yercaud block of Salem District – Tamil Nadu. Proceedings of National Conference on Climate Change Impacts and Natural Resources Management, 18th - 19th February, Anna University, Chennai, India pp.147.

---

## CHAPTER IN BOOKS

1. **Venkadesh, S.**, Pazhanivelan, S., Mrunalini, K. 2022. Monitoring of Meteorological Drought Based on Rainfall Departure Using Remotely Sensed CHIRPS Precipitation Product over Tamil Nadu, India. In: Bhunia, G.S., Chatterjee, U., Lalmalsawmzauva, K., Shit, P.K. (eds) Anthropogeomorphology. Geography of the Physical Environment. Springer, Cham. [https://doi.org/10.1007/978-3-030-77572-8\\_19](https://doi.org/10.1007/978-3-030-77572-8_19)
2. S.Panneerselvam, and **Samykannu Venkadesh**. 2020. Uncertainty quantification for parameters in soil-water balance model. Book on Agriculture & Forestry: Current Trends,

Perspectives, Publisher: Immortal Publications Prasadampadu, Vijayawada Andhra Pradesh, India – 521108. ISBN: 978-93-5437-486-9

---

### **POPULAR ARTICLE IN MAGAZINES**

1. **Samykanu Venkadesh**, and Sellaperumal Pazhanivelan. 2021. Micro climatic studies on cropped area using flux tower. Indian Farmer, Volume 8, Issue 04, Pp. 310-315. ISSN: 2394-1227.
  2. **Venkadesh Samykanu**. 2021. Sensing Rainfall From Space. Agrobios Newsletter, Volume: 20, Issue: 2, Pp. 11. ISSN: 0972-7027.
  3. **Venkadesh Samykanu**. 2021. Crop Water Requirements and Irrigation Scheduling Using Cropwat Software. Agrobios Newsletter, Volume: 19, Issue: 12, Pp. 25. ISSN: 0972-7027.
  4. **Venkadesh Samykanu**. 2021. Water-Energy-Food Nexus. Agrobios Newsletter, Volume: 20, Issue: 01, Pp. 20. ISSN: 0972-7027.
- 

### **TRAINING AND WORKSHOP**

- Participated in an International workshop on “**Workshop on Advancing Drought Monitoring, Prediction, and Management Capabilities**” organized by India-UK Water Centre (IUKWC) in Lancaster, UK(2018)
- Participated Two days Lecture workshop on “**Impact of climate change on biodiversity and environment**” organized by Bharathiar University, Coimbatore, India (2018)
- Attended a short-term training course on **Agricultural Applications using Space Based Observations**” organized by Space Application Centre (ISRO), Ahmedabad, India (2018)
- Attended a training on “**Basics of Satellite Meteorology**” organized by Space Application Centre (ISRO), Ahmedabad, India (2018)
- Participated in “**GeoConnect 2018: Advanced remote sensing technologies: Hyperspectral and LIDAR**” organized by Earth and Space Science, IISST, Thiruvananthapuram, India (2018)
- Participated in the International conference on “**Climate Change and Adaptation Empowering Small Holders and Ensuring Food Security**” organized by TamilNadu Agricultural University, Coimbatore, India (2017).
- Organizing committee member for the national level symposium on “**Climate driven food production systems agrometeorological interventions**” conducted by Agro Climate Research Center, TNAU, Coimbatore, India(2016)
- Participated workshop on **Open Source Software in Geographic Information System**” organized by Kerala Agricultural University, India(2014)

- Completed the training program on “A beginner’s course on GIS using ArcGIS” at Tamil Nadu Agricultural University, Coimbatore, India(2010)
- Attended a technical symposium on “**GIS for sustainable future**” organized by Nirmala College, Coimbatore, India(2010)

---

#### **ADDITIONAL RESPONSIBILITY**

- Contribution as a **Reviewer** in Virtual Conference on Disaster Risk Reduction VCDRR - Civil Engineering for a Disaster Resilient Society during 19-21 March 2021, organized by National Institute of Technology Karnataka (NITK), Asian Disaster Reduction and Response Network (ADRRN), and Institute of Himalayan Risk Reduction (IHRR) Nepal
- Contribution as **Technical Expert Committee** in Virtual Conference on Disaster Risk Reduction VCDRR - Civil Engineering for a Disaster Resilient Society during 19-21 March 2021, organized by National Institute of Technology Karnataka (NITK), Asian Disaster Reduction and Response Network (ADRRN), and Institute of Himalayan Risk Reduction (IHRR) Nepal

---

#### **PUBLICATIONS**

1. Pazhanivelan, S., Geethalakshmi, V., **Samykanu, V.**, Kumaraperumal, R., Kancheti, M., Kaliaperumal, R., Raju, M., Yadav, M.K. Evaluation of SPI and Rainfall Departure Based on Multi-Satellite Precipitation Products for Meteorological Drought Monitoring in Tamil Nadu. *Water* 2023, 15, 1435. <https://doi.org/10.3390/w15071435>
2. **Samykanu, Venkadesh**, Pazhanivelan, S. and Mrunalini, K. 2021. Performance of satellite-based precipitation products using dense network of rain-gauge observations in Tamil Nadu. *SKUAST Journal of Research*, 23(1), pp.53-59.
3. **Samykanu, Venkadesh**, Rangunath Kaliaperumal, and Rajalakshmi Dhandapani. 2021. Spatial assessment of length of growing period for selected districts in Tamil Nadu. *International Journal of Farm Sciences*. 11(3): 98-102.
4. **Venkadesh Samykanu**, and S. Pazhanivelan. 2021. Validation of PERSIANN precipitation product using TAWN rain gauge network over different agro-climatic zones in Tamil Nadu. *Madras Agricultural Journal*. 108(September (7-9)), p.1.
5. **Venkadesh, S.**, S. Pazhanivelan, K.P. Rangunath, R. Kumaraperumal, S. Panneerselvam and Sathy, R. 2019. Assessment of Agricultural Drought using MODIS NDVI based Vegetation Status for Different Agro Climatic Zones of Tamil Nadu. *Int.J.Curr.Microbiol.App.Sci*. 8(05): xx-xx. doi: <https://doi.org/10.20546/ijcmas.2019.805.xx>
6. **Venkadesh S.**, S. Pazhanivelan, K. P. Rangunath, R. Kumaraperumal, S. Panneerselvam and Sathy R. 2019. Spatio-Temporal Analysis of Meteorological Drought in Cauvery Delta Zone



of Tamil Nadu. *Int.J.Curr.Microbiol.App.Sci.* 8(06): xx-xx. doi:  
<https://doi.org/10.20546/ijcmas.2019.806.xx>

7. **Venkadesh, S.**, Jagannathan, R., and Ragunath, K. P. 2019. GIS Based Analysis of Spatial Distribution of NDVI for Agricultural Applications in Salem District – Tamil Nadu, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-3/W6, 165–167, <https://doi.org/10.5194/isprs-archives-XLII-3-W6-165-2019>.

---

### **NATIONAL CADET CORPS**

- Attended a combined annual training camp on CATC-CUM RDC & TSC (B) SEL & TRG CAMP (SD/SW – JD/JW) organized by directorate of Tamil Nadu, Puducherry and Andaman & Nicobar at Chikkanna Govt Arts College, Tiruppur, India (2008)
- 

### **REFERENCES**

<p><b>Dr. S. Pazhanivelan.,Ph.D</b> Director &amp; Nodal Officer (TNIAMP) Water Technology Centre Tamil Nadu Agricultural University Coimbatore - 641 003, Tamil Nadu (India) Email:<a href="mailto:pazhanivelans@gmail.com">pazhanivelans@gmail.com</a> Office : 0422 6611278 Mobile No: +91 90475 99446 URL: <a href="https://tnau.ac.in/wtc/directors-desk/">https://tnau.ac.in/wtc/directors-desk/</a></p>	<p><b>Dr. K. S. Kasiviswanathan., Ph.D</b> Assistant Professor Department of Water Resource Development &amp; Management, Indian Institute of Technology, Roorkee. Email:<a href="mailto:kasifwt@iitr.ac.in">kasifwt@iitr.ac.in</a> <a href="mailto:k.kasiviswanathan@wr.iitr.ac.in">k.kasiviswanathan@wr.iitr.ac.in</a> Mobile No: +91 9952199196 URL: <a href="https://www.iitr.ac.in/~WR/K_S_Kasiviswanathan">https://www.iitr.ac.in/~WR/K_S_Kasiviswanathan</a></p>
--	---