

VEENA SHASHIKANT

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SUMMARY

Multidisciplinary researcher and technical leader with expertise in Remote Sensing (SAR, Optical), GIS, AI/ML, and Data Analytics, focused on sustainable agriculture and environmental conservation. Proven record of peer-reviewed publications (Q1 journals), international presentations, and algorithm development for soil moisture and biomass estimation. Seeking opportunities in research, academia, or advanced geospatial consultancy to contribute innovative, data-driven solutions.

EDUCATION

Doctor of Philosophy (Geospatial Engineering)

December 2024

Faculty of Engineering, University Putra Malaysia.

Thesis Title: **Water cloud model and neural network techniques for soil moisture content retrieval using PALSAR-2 for oil palm plantation.**

CGPA: 3.750

Master of Science (GIS/Geomatics Engineering)

January 2014

Faculty of Engineering, University Putra Malaysia.

Thesis Title: **Estimation of above ground biomass of palm trees using PALSAR images.**

CGPA: 3.971

Bachelor of Engineering (Agriculture and Biosystem)

June 2010

Faculty of Engineering, University Putra Malaysia.

CGPA: 3.244

Diploma in Forestry

August 2006

Faculty of Forestry, University Putra Malaysia.

CGPA: 3.449

PUBLICATION

Paper

1. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W. Utilizing TVDI and NDWI to Classify Severity of Agricultural Drought in Chuping, Malaysia. *Agronomy* 2021, 11, 1243. <https://doi.org/10.3390/agronomy11061243>, Impact Factor: 3.417 – Q1 JCR.
2. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W. Comparison of Field and SAR-Derived Descriptors in the Retrieval of Soil Moisture from Oil Palm Crops Using PALSAR2. *Remote Sens.* 2021, 13, 4729. <https://doi.org/10.3390/rs13234729>, Impact Factor: 4.848 -Q1 JCR.
3. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W. Vegetation Effects on Soil Moisture Retrieval from Water Cloud Model Using PALSAR-2 for Oil Palm Trees. *Remote Sens.* 2021, 13, 4023. <https://doi.org/10.3390/rs13204023>, Impact Factor: 4.848 -Q1 JCR.
4. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P. Challenges of IOT/5G advancement in the oil palm. *Basrah J. Agric. Sci.*, 34 (Special Issue 1), 190-198, 2021. Scopus indexed.
5. Christopher, M.; Pannerselvam, T.; Shashikant, V.; Khalid, N.; Kesavan, K.; Novel, Sprayable, In vitro Produced Arbuscular Mycorrhizal Fungi Formulation for Sustainable Production of Nursery Seedlings (*Elaeis guineensis* Jacq.) in Oil Palm, 9 th International Planters Conference, 15– 16 July 2019.

Conference Keynote Paper

1. Mohamed Shariff, A.R. and Shashikant, V.; "Coping the Matters, Ensuring the Future" by International Oil Palm Conference dated on 14-16th March 2023 at Bali Nusa Dua Convention Center, Bali, Indonesia., Paper title: Moving Towards IoT based oil palm management, AGR-6.1 page 37.

Book Chapter

1. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W. Chapter 18: Comparing Soil Moisture Retrieval from Water Cloud Model and Neural Network using PALSAR-2 for oil palm Estates. Book title Agriculture X AI: Self-sufficiency in Food Production to Achieve for Society 5.0 and SDG Globally. The publication will be available March 27, 2023, Springer-Nature ISBN no.: 9789811981128.
2. Mohamed Rasyid, S.A.; Shashikant, V. and Mohamed Shariff, A.R.; Chapter 14 Application of GIS and Remote Sensing in Rice Mapping, Monitoring and Yield Estimation apart of Smart Technology for Paddy Cultivation: The Malaysian Experience Book by UPM Press 2020, First Print 2020 page 264-283.
3. Shashikant, V. and Mohamed Shariff, A.R.; Chapter Title: AI and Satellite Imaging Technologies for Sustainable oil palm, UPM Press (Submitted).

Conference/Oral Presentation

1. UN/Iran workshop on Space Technology Applications for Drought, Flood and Water Resources Management, 9 th August 2021, presenting Utilizing TVDI and NDWI to classify severity of agricultural drought in Chuping, Malaysia. Presenter: Veena Shashikant.
2. The Joint PI Meeting of JAXA Earth Observation Missions FY2021, 11th November 2021, presenting Vegetation Effects on Soil Moisture Retrieval from Water Cloud Model Using PALSAR-2 for Oil Palm Trees. Presenter: Veena Shashikant.
3. CAFEi 2020 International Conference on Agricultural and Food Engineering, Joint Conference with FRUTIC dated on 3 rd – 4 th February 2021. Presentation title: Challenges of IOT/5G advancement in the oil palm upstream. Presenter: Veena Shashikant.
4. Shashikant, V.; Shariff, A.R.M.; Nordin, L.; Pradhan, B.; Estimation of above ground biomass of oil palm trees by PALSAR. Humanities, Science and Engineering (CHUSER) 3 rd – 4 th December 2012, IEEE Conference Publication, pp 838-841. Presenter: Veena Shashikant

Poster

1. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W.; Poster Title: Development of algorithm for surface soil moisture and vegetation water content in young oil palm trees using PALSAR 2 (Poster ID: AT323). Event: The Joint PI Meeting of JAXA Earth Observation Missions FY2020 dated 18th – 22nd January 2021.
2. Shashikant, V. and Mohamed Shariff, A.R.; Poster Title: Mangrove Forest land cover change detection using SAR in North Pulau Indah, Selangor. Event: Land Use/Cover Changes, Environment and Emissions in South/Southeast Asia – An International Regional Science Meeting by NASA at 22nd – 27th July 2019 in Johor Bahru, Malaysia.
3. Shashikant, V.; Shariff, A.R.M.; Nordin, L.; Pradhan, B.; "NDVI of oil palm trees by LANDSAT Imagery" The 33rd Asian Conference of Remote Sensing (2012), Pattaya, Thailand on 26th – 30th November 2012.
4. Shashikant, V.; Shariff, A.R.M.; Nordin, L.; Pradhan, B.; "Above Ground Biomass Estimation of Oil Palm Tree using PALSAR", The 34th Asian Conference of Remote Sensing (2013), Bali, Indonesia on 20th – 24th October 2013.

Technical Report

1. Shashikant, V.; Mohamed Shariff, A.R.; Wayayok, A.; Kamal, M.R.; Lee, Y.P.; Takeuchi, W., Development of algorithm for surface soil moisture and vegetation water content in oil palm trees using PALSAR 2/3 for JAXA Earth Observation Missions, Japan Aerospace Exploration Agency (JAXA).
2. Shashikant, V.; Shariff, A.R.M.; Nordin, L.; Pradhan, B.; Estimation of above ground biomass of oil palm trees by PALSAR for the 3rd Research Announcement, JAXA.

Copyright

1. Estimation of above ground biomass of oil palm trees using the Phased Array L-Band Synthetic Aperture Radar Data (NO. B197)

Award/Competition

Finalist – UPM 3 Minute Thesis (3MT) Competition (2022)

Selected among the Top 12 university-wide across all faculties for presenting PhD research succinctly and engagingly at the Virtual UPM 3MT Final, held on 20 April 2022.

1st Runner-Up – Faculty of Engineering 3MT Competition (2022)

Achieved First Runner-Up position at the Faculty of Engineering level, qualifying for the university finals. Presentation date: 30 March 2022.

Gold Medal – Malaysian Innovation Expo (MIE Expo) 2013

Awarded Gold Medal for a research innovation project on remote sensing in biomass estimation at Universiti Putra Malaysia, 28 November 2013.

EMPLOYMENT EXPERIENCES

Senior Manager (Administration)

June 2024 - currently

WisdomWorks Sdn. Bhd.

Responsibilities:

1. Oversee day-to-day administrative operations, budgeting, procurement, and project coordination.
2. Development of streamline company operations and ensure compliance with regulatory standards.
3. Coordination for client communication, scheduling, and documentation of service deliverables such as agreements and sales document.
4. Managed corporate communications, proposal writing, and client reporting for technology and consulting projects.
5. Played a key role in business planning and strategic decision-making alongside company leadership.

Senior Technical Support Specialist

August 2014-April 2018

July 2015 – March 2016 & October 2017 – April 2018

Previously

Technical Support Specialist in August 2014 – June 2015

Responsibilities:

1. Execution and oversee of field trials including field visits, report, and presentation for Malaysia trials for product in the pipelines.
2. Management of research assets including payment of research trials; transport and maintenance of application equipment and product storage records.
3. Sampling and data collection of research trials; data entry and archiving; including statistical analyses using computer software to derive initial research insights to business development team.
4. Technical representative to at department data review meetings, quarterly and yearly R&D meetings.

Technical Development Specialist

April 2016- September 2017

Sumitomo Chemical Enviro-Agro Asia Pacific Sdn. Bhd.

Responsibilities:

1. Establish relationship with key plantation customers, especially R&D and Operation departments.
2. Work closely with Sales and Business Development Manager.
3. Provide support at local level for assigned products when needed.
4. Anticipate and analyze new business opportunities in coordination with channel partners to drive sales growth. Act as a technical representative to customers for BBU range products.
5. Participate in R&D yearly plan on behalf of the company.
6. Prepare biological report trials to support product registration or label extensions.

Graduate Research Fellow

July 2010-March 2014

Geospatial Information Science Research Centre, Universiti Putra Malaysia.

Responsibilities:

- Observing and hands on skill for Oil Palm based projects in the field of remote sensing works.
- Project coordination to allow the task of works is completed on time such as analysis and documenting.
- Doing image analysis and statistics in the project work to allow good outcomes of the project.
- Promoting the benefits of the project to the society through various training and practical in university and outside

Degree internship Trainee

April 2009-July 2009

Frezawa Engineering (M) Sdn Bhd, Subang Jaya, Selangor.

Responsibilities:

- Plan and coordinate the engineering audit for mechanical spare parts.
- Observing and hands on skill at the Air Ground lighting system in Kuala Lumpur International Airport.
- Auditing of the F1 circuit electrical earthing and surge protection system for Sepang International Circuits Sdn. Bhd.
- Trouble shooting and assist in checking the power supply in all the sockets, connectors of the air- conditioning, lights, and fan sockets in a center.

ADDITIONAL INFORMATION

Core Competencies

Remote Sensing (SAR, PALSAR, Landsat), GIS & Mapping (ArcMap, SNAP, ENVI), Machine Learning (Weka, MATLAB, Python basics), Data Analytics (SPSS, Minitab, JMP), Project Management, Scientific Writing, Soil Moisture & Biomass Estimation, IoT in Agriculture

Online Academic Profiles

Google Scholar: scholar.google.com/citations?user=LP53uxMAAAAJ&hl=en

ResearchGate: researchgate.net/profile/Veena-Shashikant

LinkedIn: [linkedin.com/in/gs-dr-veena-jogi-579231a0](https://www.linkedin.com/in/gs-dr-veena-jogi-579231a0)

ORCID: orcid.org/0000-0002-8134-829X

Languages

English: Native
Hindi: Fluent

Malay: Fluent
Tamil: Conversational

Gujarati: Fluent
Chinese: Beginner

- **Professional Membership:**

- Institution of Geospatial and Remote Sensing Malaysia, Professional Member with GS, Member ID: M361.
- Incorporated Society of Planters, Selangor/W. Persekutuan Branch, Member ID: 16907.

- **Personal Interest:**

- Inspirational Reading: Enjoy reading motivational and personal development stories that foster resilience and purpose.
- Sports & Fitness: Active participant in netball and regular jogging to maintain physical well-being and team spirit.
- Outdoor Adventures: Passionate about jungle trekking, nature walks, and camping as a way to connect with the environment and promote mental clarity.

REFERENCE

Professor Sr Gs Dr. Abdul Rashid bin Mohamed Shariff

Professor

Department of Biological and Agricultural Engineering, Faculty of Engineering,
Universiti Putra Malaysia. 43400 Serdang, Selangor.

Tel: (603)-89466424, (601) -2302-5723; Email: rashidpls@upm.edu.my

Dr. Andrew Rath

Owner

Bronzewing Farm - Tasmanian Mountain Pepper, 357 Underwood Road, Underwood, Tasmania 7268
Australia.

Tel: (613) 639-1036; Email: Andrew.Rath@bronzewingfarm-tasmania.com

(Formerly - Principal Scientist Asia Pacific and Oceania, Valent Biosciences Corp.)

Dr. Moses Christopher

Principal Scientist- ASEAN

Sumitomo Chemical Enviro-Agro Asia Pacific Sdn. Bhd

62A, Persiaran Bunga Tanjung 1, Senawang Industrial Park, 70450 Seremban, Negeri Sembilan.

Tel: (601) 2608-0393; Email: mcph.chris@gmail.com.