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Associate Professor



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RESEARCH AND TEACHING INTERESTS

Natural Resources Engineering and Management: Precision farming; surface and groundwater interactions; agricultural water management, and UAV-based image analytics

Diffuse Agricultural Pollution: Pesticides and fertilizer transport; agricultural runoff quality and eutrophication; best management practices (BMPs); smart fertilizers and environmental toxicity, health risk assessment.

EDUCATION

- 2003-2007 **Ph. D, Agricultural Engineering (Soil and Water Conservation Engineering)**
Indian Institute of Technology (I.I.T), Kharagpur, India.
Dissertation: Development and Testing of a Physically Based Model (ZIGASED)
for Simulating Flow and Sediment Transport in Furrow Irrigation
Advisors: R. Singh and N.S. Raghuwanshi
- 1999-2001 **M. Tech, Agricultural Engineering (Irrigation and Drainage Engineering)**
Kerala Agricultural University, Kerala, India
Thesis: Performance Evaluation of Hydrocyclone Filter
Advisor: John K. Thomas
- 1995-1999 **B. Tech, Agricultural Engineering**
ANGR Agricultural University, Andhra Pradesh, India
Project: Development of an Interactive Software for the Design of Farm Storage
Structures
Advisor: C. Igathinathane (now, Associate Professor at Agricultural and Biosystems
Engineering, North Dakota State University, Fargo, ND)

ACADEMIC/RESEARCH POSITIONS

- 2019-till Associate Professor
date *Agricultural and Food Engineering, I.I.T, Kharagpur, India*
- 2013-2019 Assistant Professor
Agricultural and Food Engineering, I.I.T, Kharagpur, India

2010-13	Assistant Scientist/Research Associate <i>Biological Systems Engineering, University of Wisconsin, Madison (USA)</i>
2007-10	Post Doctoral Researcher <i>Land, Air and Water Resources, University of California, Davis (USA)</i>
2003-07	Senior Research Fellow (PhD program) <i>Agricultural and Food Engineering, I.I.T, Kharagpur, India</i>
2001-02	Research Associate <i>KCAET Tavanur, Kerala Agricultural University, Kerala, India.</i>

TEACHING

Under Graduate Level :

- AG40213: Precision Farming (3-0-0)
 AG41202: Groundwater Hydrology (3-1-0)
 AG31003: Land and Water Resources Engineering (3-1-0)
 AG40011: Tubewells and Pumps (3-0-0)
 AG31004: Irrigation and Drainage Engineering (3-1-0)
 AG39003: Land and Water Resources Engineering Lab (0-0-3)
 BSE 571: Small Watershed Engineering at BSE Department, UW-Madison, WI, USA
 BSE 473: Irrigation & Drainage Systems Design at BSE Department, UW-Madison, WI, USA

Graduate Level:

- AG60202: AI applications in Agriculture (3-0-0)
 AG60154: Non-point source pollution and management (3-1-0)
 AG60104: On-farm water management (3-1-0)
 AG60201: Surface Water Hydrology (3-1-0)
 AG69024: On-farm water management laboratory (0-0-3)
 AG69037: Hydrological Systems Laboratory (0-0-3)
 AG69201: Seminar-I (0-0-3)
 AG69202: Seminar-II (0-0-3)
 BSE 671: Erosion and Sediment Transport Principles at BSE Department, UW-Madison, WI, USA

Online Courses:

- **Irrigation and Drainage** (National Programme on Technology Enhanced Learning: NPTEL, SWAYAM, Govt. of India), 2018-23
- **Agriculture: Advances in Agricultural Engineering, Module: Land and Water Resources Engineering** (Annual Refresher Program in Teaching, ARPIT by MoE, Govt. of India), 2020

STUDENT GUIDANCE

Degree	Guidance	Completed	To be completed
PhD	Single	03	02
PhD	Joint	02	04
MTech	Single	39	03
MTech	Joint	02	02
B.Tech	Single	20	08

RESEARCH PROJECTS**Completed:**

S.No.	Title	Role	Sponsoring Agency	Cost in Lakhs	Duration
1	Water & nutrient use efficiency of different rice management techniques with the use of on-farm reservoirs facilities	CO-PI	MHRD	46.72	01-04-2014 to 31-10-2017 (43 months)
2	Development of a sensor-based networking system for improved water management for irrigated crops	PI	MHRD	46.02	01-04-2014 to 31-10-2017 (43 months)
3	Application of nano-fertilizers for improved crop production and nutrient use efficiency	PI	MHRD	46.02	01-04-2014 to 31-10-2017 (43 months)
4	Optimum water & fertilizer-N management strategies for rice crop	CO-PI	ICAR	18.05	13-01-2016 to 12-04-2017 (15 months)
5	Production and testing of granulated bio-nutrients derived from dairy manure	PI	SRIC, IIT Kharagpur	26.85	10-10-2014 to 09-10-2017 (36 months)
6	Development of a conceptual water balance model for various ecosystems of India	CO-PI	SAC, Ahmedabad	20.30	01-01-2014 to 31-03-2017 (36 months)
7	Sustainable food security through technological interventions for production, processing and logistics	CO-PI	MHRD	2600	19-02-2014 upto 31-03-2018 (45 months)
8	Soil matrix temperature gradient influence on migration of plant nutrients in soil	PI	SRIC, IITKGP	25	15-07-2018 upto 14-07-2021 (36 months)
9	An integrated autonomous UAV and WSN - based system for crop management and crop condition monitoring	CO-PI	IMPRINT1-MHRD	195	08-02-2017 upto 24-06-2023 (77 months)
10	Development and evaluation of real-time river-reservoir water quality advisory system (waqas)	CO-PI	IMPRINT-2; MHRD	52.5	02-01-2019 upto 15-11-2023 (59 months)
11	India Young Water Professional Training Program	Collaborator	The Australian Partnership , Govt. of Australia	AU\$27 5000	2021-22
12	Development of digital platform for financial inclusion and rural women empowerment	CO-PI	SPARC-MHRD	45.9	15-03-2019 upto 30-09-2023 (55 months)
13	Securing water for agricultural and food sustainability: developing transdisciplinary approach to ground water management	PI	SPARC-MHRD	58.5	30-04-2019 upto 20-10-2023 (54 months)
14	Measurement, Monitoring and Management of Groundwater	PI	Vritika-SERB	1.50	18-07-2022 upto 16-06-2023 (11 months)

Projects on-going:

S.No.	Project Title	Role	Funding Agency	Cost in Lakh	Duration
1	AI Based Imaging Solution for Detection of Pest attack in Tea Leaves using Aerial Imaging	PI	NTRF-Kolkata	34.5	03-04-2023 upto 02-04-2026 (36 months)
2	Development of Portable Photonic Crystal Bloch Surface Wave Sensors for the Detection of Dithiocarbamate Pesticides in Agri-Food Systems	CO-PI	DST-TDP	76.92	Accepted

CONSULTANCY PROJECTS:**Completed:**

S.No.	Title	Role	Sponsoring Agency	Cost in Lakhs	Duration
1	Validation of remote sensing technology-based crop yield estimation	CO-PI	Greenthink Ventures Pvt. Ltd, Kolkata	1.53	15/02/2021-30/09/2021
2	Testing of Nano Liquid Complex Fertilizers (N-K and P-K) for Cereals (LFPC)	PI	109 nano composite technologies private Limited	3.60	21/02/2022-01/05/2024
3	Sensor-based precision irrigation water application modeling using soil, crop and weather parameters (more crop per drop)	CO-PI	Aquastride India Pvt Ltd.	32.75	26/09/2022to 26/06/2024

NON-TEACHING ACTIVITIES

2020-26	In-charge, Library	AgFE Department, IIT Kharagpur
2024-26	Member, Farm Management	AgFE Department, IIT Kharagpur
2018-23	Faculty Advisor (UG 4yrs)	AgFE Department, IIT Kharagpur
2014-19	Assistant Warden (mess)	Homi Jhahangir Babha Hall of Residence, IIT Kharagpur
2014-15	Faculty Advisor,(PG-LWRE)	AgFE Department, IIT Kharagpur
2014-15	ERP in-charge	AgFE Department, IIT Kharagpur
2014-15	Member, DAC (PGS&R)	AgFE Department, IIT Kharagpur
2014	Course co-ordinator, International Summer and Winter Term (ISWT)	IIT Kharagpur
2014	Member, Smart and Swach Campus Initiative	IIT Kharagpur
2015	Co-coordinator (On Stage-Programmes), Agri-Expo 2015	AgFE Department, IIT Kharagpur
2014	Laboratory Development: Non-Point Source Pollution	AgFE Department, IIT Kharagpur

EXPERT TALKS

- 2024 **Irrigation informatics.** Advanced Entrepreneurship and Skill Development Programme (Advanced E-SDP) of MSMEs entitled "Agro-informatics" on 29 February 2024 to 5 March 2024 at IIT Kharagpur.
- 2024 **Precision Agriculture.** Advanced Entrepreneurship and Skill Development Programme (Advanced E-SDP) of MSMEs entitled "Precision Agriculture and Protected Cultivation" on 19 March 2024 to 24 March 2024 at IIT Kharagpur.
- 2022 **"Monitoring of crop field through Drone for Plant protection and Nutrient deficiency (Data capture, Data analysis, Mapping and site-suitable application)";** Training on Application of Drone Technology in Agriculture by State Agricultural Management and Extension Training Institute & Agricultural Training Centre (SAMETI-WB), 16th Sept 2022.
- 2018 Fertigation system in greenhouse, Greenhouse operator program, part of skill development program by PFDC, IIT Kharagpur

SHORT-TERM COURSES

- 2021 SPARC webinar series on Integrated Surface-Groundwater Management for Sustainable Development
- 2018 GIAN course on Agricultural Watersheds: Hydrologic and water quality data collection and analysis
- 2016 GIAN course on Water in the landscape
- 2014 ISWT course on-site waste water treatment and management

WORKSHOPS ORGANIZED/ATTENDED

- 2020 SPARC sponsored workshop on **"Securing Water for Agricultural and Food Sustainability: Developing Transdisciplinary Approach to Groundwater Management"** on January 20, 2020, at G.B. Pant University of Agriculture and Technology, Pant Nagar
- 2019 Two-day **National Workshop on River-Reservoir Water Management and Modelling**, Sponsored by DST-SERB, Aug 21-22, 2019, @IIT Kharagpur
- 2015 Indo-Egypt bilateral expert committee meeting on **Nanoscience and Technology** scheduled to be held in Cairo, Egypt during November 16 to 17, 2015.

MoU PROPOSED

- 2020 **Australia-India Water Centre (virtual)**, partnering 9 Australian universities and 15 Indian universities/institutions
- 2022 **Development and Evaluation of Real-Time River-Reservoir Water Quality Advisory System (WAQAS)** between IIT Kharagpur and Civil Engineering Department, DVC Maithon-Project based
- 2023 **Development of Sensor-based Irrigation Water Application Modeling using Soil, Crop and Weather Parameters** between IIT Kharagpur and Aquastride Technologies Pvt. Ltd, India Pvt Ltd. Secunderabad-Project based.

MENTORSHIP/TRAINING

2024	Supervisor, NPTEL Pre-Research Fellow-2024
2024	Supervisor, Australia India Water Centre (AIWC)- Young Water Professional Training Program, Input into YWP Training Program
2022	Supervisor, Vritika-SERB: Measurement, Monitoring and Management of Groundwater
2022	Supervisor, Australia India Water Centre (AIWC) Young Water Professional Training Program
2021	Australian Researcher Cooperation Hub India (ARCH-India)

PROFESSIONAL ACTIVITIES

2024-	Editorial Board Member, Discover Agriculture, Springer Nature
2024-	Guest Editor, Discover Environment, Springer Nature
2022-	Editorial Board Member, EAB, ACS Agricultural Science and Technology
2022-	Review Editor, Frontiers in Sustainable Food Systems: Water
2012-	Editorial Board Member, Journal of Water Resources and Protection (JWARP)
2007-	Reviewer for more than 30 international peer-reviewed journals (J. of Mathematical and Computer Modelling-Elsevier, Computers and Geosciences-Elsevier, Biosystems Engineering-Elsevier, J. of Stochastic Environmental Research & Risk Assessment-Springer, Irrigation Science-Springer, Soil Science Society America J. , J. of Hydrologic Engineering-ASCE, Hydrological Process-Wiley interScience, etc.)
2005	Student Auditor of BC Roy Hostel, I.I.T Kharagpur, India
2005	Member of American Society of Agricultural and Biological Engineers Life Member of ISAE
2004	Life Member of Indian Science Congress
2003	Member of Institution of Engineers (India)

AWARDS AND ACHIEVEMENTS

2023	2 nd Best Poster Award, International Conference on Sustainable Agricultural Technologies, CDAC-Kolkata
2019	2 nd Best Poster Award, 53 rd Annual Convention and Symposium of the Indian Society of Agricultural Engineers (ISAE), BHU, Varanasi, India
2018	Best Oral Award, 52 nd Annual Convention and Symposium of the Indian Society of Agricultural Engineers (ISAE), AAU, Anand, Gujarat, India
2016	Best Poster Award, Emerging Technologies in Agricultural and Food Engineering, Kharagpur, WB, India
2016	Best Oral Award, Emerging Technologies in Agricultural and Food Engineering, Kharagpur, WB, India
2016	Best Paper Award, ETWREE, MVGR College of Engineering, Vizianagaram, India
2016	Expert Committee Member, India-Egypt Bilateral Scientific Collaboration in Nano-Science

2015	Best Poster Award, 49 th Annual Convention and Symposium of the Indian Society of Agricultural Engineers (ISAE), PAU, Ludhiana, Punjab, India
2003-2007	Volkswagen (Stiftung, Germany) fellowship for pursuing Ph.D at I.I.T, Kharagpur, India
2005	Qualified for Early Faculty Induction Programme (AICTE, New Delhi)-promotes young and bright graduates towards teaching profession
2001	Qualified for National Eligibility Test (NET-2001; ICAR, New Delhi) -requirement for an Assistant Professorship in Agricultural Universities
1999- 2001	KAU Fellowship for pursuing M. Tech at Kerala Agricultural University, India
1997	Nominee for Painting Competition at the South Zone Youth Festival, Hyderabad, India
1997	University First Prize , Intra-University Painting Competition, ANGR Agricultural University, Hyderabad, India
1996	Overall championship in sports (College of Agric. Eng., Bapatla, India)
1992-1994	A.P. State Merit Scholarship for pursuing junior college education.
1989	Qualified in Mathematics Olympiad conducted by Department of Education, Govt. of India
1989	State first rank in A.P.R.S. Entrance Examination for pursuing High School Studies

FACILITIES/INFRASTRUCTURE DEVELOPED

2014	Nonpoint source pollution laboratory
2015	Solute transport Experimental Unit
2016	Nanofertilizer Synthesis and Testing Unit
2019	IITHO: IIT Hydrological Observatory, AgFE Department
2023	IoT Laboratory

SOFTWARE DEVELOPED

2002	WERA: Wind energy resources analyzer
2007	ZIGASED: Simulating flow and sediment transport in irrigation systems
2016	CURF: Control release urea fertilizer model
2022	WAQT: Water quality assessment tool
2023	AgDaMo: Agricultural data monitoring
2023	PBM4Nano: Planetary Ball Milling model for synthesizing nanoparticles
2024	CropXmapper: managing crop biotic and abiotic stresses (<i>copyright applied</i>)
2024	AIM: Aerial Information mapper
2024	IITea: Infestation and information in tea
2024	IIT-FM: Irrigation Information Tool for Finger millet

TEACHING/RESEARCH AIDS DEVELOPED

2016	Pan granulator for granulating animal manure
2023	Drainable porosity measurement
2024	Tensiometer test chamber
2024	Low-cost septum type tensiometer reader

PHD EXAMINER/REVIEWER

2021	PhD thesis evaluator, Civil Engineering Department, IIT Bombay
2023	Fabrication of Fe and Zn Nanosystems as Efficient Nutrient Sources by Poorna Chandrika, BITS Pilani

SKILLS

Personality	Follow five tenets: <i>courtesy, integrity, perseverance, self-control, indomitable spirit</i>
Work	Follow four principles: initiative, involvement, and adaptability
Software development	Front end: VB Back end: VB, C, Python
Software tools	SigmaPlot, SAS, CROPWAT, DSSAT, APSIM, SWAT, SRFR
Field research	<ul style="list-style-type: none"> • ArLoRa_Ag: A wireless sensor data acquisition and communication system • An automated efficient water saving irrigation system for rice cultivation • A non-weighing lysimeter setup for rice cultivation • IIT Hydrological Observatory for water balance study
Laboratory	Nutrient analysis using Qickchem Lachat, Seal AQ2, EasyChem300 discrete analyzer, UV-VS Spectroscopy, XRF, Rheometer, compression test, Rainfall simulator, Greenhouse and growth chambers
Languages	English (fluent), Hindi (fluent), Telugu (fluent), Malayalam (basic knowledge)

PUBLICATIONS

PUBLICATIONS IN SCI JOURNALS:

- 1) Durgam, M., **Mailapalli, D. R.**, & Singh, R. (2024). Prediction of Soil Temperature in Wheat Field Using Machine Learning Models. *Communications in Soil Science and Plant Analysis*, 1-25. (<https://doi.org/10.1080/00103624.2024.2402795>), **IF:1.3**.
- 2) Shekhar, S., Pohshna, C., Khose, S. B., **Mailapalli, D. R.**, & Raghuwanshi, N. S. (2024). Hydrus-1D Model for Simulating Potassium Transport in Rice Crop Irrigated with Alternate Wetting and Drying Practice. *Communications in Soil Science and Plant Analysis*, 1-18 (<https://www.tandfonline.com/doi/full/10.1080/00103624.2024.2378153>), **IF:1.3**.
- 3) Khose, S. B., **Mailapalli, D. R.** (2024). Spatial mapping of soil moisture content using very-high resolution UAV-based multispectral image analytics. *Smart Agricultural Technology*, 8: 100467. **IF: 6.3**
- 4) Shekhar, S., Pohshna, C., Khose, S. B., **Mailapalli, D. R.**, & Raghuwanshi, N. S. (2024). Hydrus-1D Model for Simulating Potassium Transport in Rice Crop Irrigated with Alternate Wetting and Drying Practice. *Communications in Soil Science and Plant Analysis*, 1-18. **IF: 1.3**
- 5) Khose, S. B. & **Mailapalli, D. R.** (2024). UAV-based multispectral image analytics and machine learning for predicting crop nitrogen in rice. *Geocarto International*, 39(1), 2373867. **IF: 3.3**
- 6) Biswal, S., Pathak, N., Chatterjee, C., & **Mailapalli, D. R.** (2024). Estimation of aboveground biomass from spectral and textural characteristics of paddy crop using UAV-multispectral images and machine learning techniques. *Geocarto International*, 39(1). **IF: 3.3**
- 7) Alam, M. A., **Mailapalli, D. R.**, & Maheshwari, B. (2024). Assessing groundwater quality, health risks, and policy implications: A case study of West Medinipur District, West Bengal, India. *World Water Policy*. **CS: 1.5**
- 8) Pohshna, C., **Mailapalli, D. R.** (2023). Characterization and testing of nanohydroxyapatite synthesized from eggshells as a phosphorus source for rice crops. *Journal of Soil Science and Plant Nutrition*, 23(3), 4491-4504. **IF: 3.9**
- 9) Pohshna, C., **Mailapalli, D. R.** (2023). Modeling the particle size of nanomaterials synthesized in a planetary ball mill. *OpenNano*, 14, 100191. **CS: 2.9**
- 10) Shivakumar, S., Shanmuganathan, M., Goonetilleke, A., Day, D., Sarkar, A., Hagare, D., Maheshwari, B., Spencer, R., Thimmegowda, M. N., **Mailapalli, D. R.**, Purkait, M. K., Mahadevappa, S. M. B. (2023). Managing floods in Chennai City as part of situation understanding and improvement project. *World Water Policy*, 9(3), 349–370. **CS: 1.7**
- 11) Maheshwari, B., Atkins, D., Hagare, D., Spencer, R., Dillon, P., Jain, S., Rollason, R., Reynolds, J., Dollin, J., Batelaan, O., Packham, R., Patel, J. B., Purkait, M. K., Bhaduri, A., **Mailapalli, D.**, Ashok, A., Prasad, J. (2023). Mentoring in the young water professionals' training program: Lessons for effective capacity development. *World Water Policy*, 9(3), 334–348. **CS: 1.7**
- 12) Alam, A. Md., **Mailapalli, D. R.**, Maheshwari, B. (2023). Assessing groundwater quality, health risks and policy implications: A case study of West Medinipur district, West Bengal. *World Water Policy*. <https://doi.org/10.1002/wwp2.12160>. **CS: 1.7**

- 13) Shekhar, S., **Mailapalli, D. R.**, Raghuwanshi, N. S., Pohshna, C. (2023). Hydrus-1D model for simulating phosphorus transport in paddy crop irrigated with alternate wetting and drying practice. *Communications in Soil Science and Plant Analysis*, 1-22. **IF: 1.8**
- 14) Shekar, S., **Mailapalli, D.R.**, Raghuwanshi, N.S. (2023). Simulation and optimization of ponding water and nutrient management in rice irrigated with alternate wetting and drying practice under a humid subtropical region in India. *Paddy and Water Environment*, 19, 1-19. **IF: 2.2**
- 15) Biswal, S., Chatterjee, C., **Mailapalli, D. R.** (2023). Damage Assessment Due to Wheat Lodging Using UAV-Based Multispectral and Thermal Imageries. *Journal of the Indian Society of Remote Sensing*, 51(5), 935-948. **IF: 2.5**
- 16) Shekhar, S., **Mailapalli, D. R.**, Raghuwanshi, N. S. (2022). Effect of alternate wetting and drying irrigation practice on rice crop growth and yield: A lysimeter study. *ACS Agricultural Science & Technology*, 2(5), 919-931. **IF: 2.5**
- 17) Pohshna, C., **Mailapalli, D. R.** (2021). Engineered urea-doped hydroxyapatite nanomaterials as nitrogen and phosphorus fertilizers for rice. *ACS Agricultural Science & Technology*, 2(1), 100-112. **IF: 2.5**
- 18) Shekhar, S., **Mailapalli, D. R.**, Das, B. S., Mishra, A., Raghuwanshi, N. S. (2021). Hydrus-1D for simulating potassium transport in flooded paddy soils. *Communications in Soil Science and Plant Analysis*, 52(22), 2803-2820. **IF: 1.8**
- 19) Debnath, S., Mishra, A., **Mailapalli, D. R.**, Raghuwanshi, N. S. (2021). Identifying most promising agronomic adaptation strategies to close rainfed rice yield gap in future: a model-based assessment. *Journal of Water and Climate Change*, 12(6), 2854-2874. **IF: 2.5**
- 20) Biswas, A., **Mailapalli, D.R.**, Raghuwanshi, N.S. (2021). APSIM-Oryza model for simulating paddy consumptive water footprints under alternate wetting and drying practice for Kharagpur, West Bengal, India. *Paddy and Water Environment*, 19, 481-498. **IF: 2.2**
- 21) Shekar, S., **Mailapalli, D.R.**, Raghuwanshi, N.S. (2021). Simulating Nitrogen Transport in Paddy Crop Irrigated with Alternate Wetting and Drying Practice. *Paddy and Water Environment*, 19, 499-513. **IF: 2.2**
- 22) Biswas, A., **Mailapalli, D. R.**, Raghuwanshi, N. S. (2021). Consumptive water footprints, water use efficiencies and productivities of rice under alternate wetting and drying for Kharagpur, West Bengal, India. *Water Supply*, 21(6), 2935-2946. **IF: 1.7**
- 23) Biswas, A., **Mailapalli, D.R.**, and Raghuwanshi, N.S. (2021). Treated municipal wastewater to fulfil crop water footprints and irrigation demand – a review. *Water Supply*, 21 (4): 1398-1409. **IF: 1.7**
- 24) Biswas, A., **Mailapalli, D. R.**, Raghuwanshi, N. S. (2021). Modelling the effect of changing transplanting date on consumptive water footprints for paddy under the system of rice intensification. *Journal of the Science of Food and Agriculture*, 101(13), 5378-5390. **IF: 4.1**
- 25) Shekhar, S., Tamilrasan, R., **Mailapalli, D.R.**, Raghuwanshi, N.S. (2020). Estimation of Evapotranspiration for Paddy under Alternate Wetting and Drying Irrigation Practice. *Irrigation and Drainage*, 70: 195-206. **IF: 1.9**
- 26) Debnath, S., Mishra, A., **Mailapalli, D.R.**, Raghuwanshi, N.S., Sridhar, V (2021). Assessment of Rice Yield Gap under a Changing Climate in India, *Journal of Water and Climate Change*, 12 (4): 1245-

1267. **IF: 1.9**

- 27) Pradhan, S., Durgam, M., **Mailapalli, D.R.** (2020). Urea loaded hydroxyapatite nanocarrier for efficient delivery of plant nutrients in rice. *Archives of Agronomy and Soil Science*, 1-12. **IF: 2.4**
- 28) Shekhar, S., **Mailapalli, D.R.**, Raghuwanshi, N.S., Das, B.S. (2020). Hydrus-1D model for simulating water flow through paddy soils under alternate wetting and drying irrigation practice. *Paddy and Water Environment* 18 (1), 73-85. **IF: 2.2**
- 29) Dubey, A., **Mailapalli, D. R.** (2019). Zeolite coated urea fertilizer using different binders: Fabrication, material properties and nitrogen release studies. *Environmental Technology & Innovation*, 16, 100452. **IF: 7.1**
- 30) Prasad, L. R. V., **Mailapalli, D. R.** (2018). Evaluation of nitrogen fertilization patterns using DSSAT for enhancing grain yield and nitrogen use efficiency in rice. *Communications in Soil Science and Plant Analysis*, 49(12):1401-1417, **IF: 1.8**
- 31) Debnath, S., Mishra, A., **Mailapalli, D.R.**, Raghuwanshi, N.S. (2018). Quantifying Yield Gap for Rice Cropping Systems in Lower Gangetic Plains. *Paddy and Water Environment*, 16 (3): 601-615, **IF: 2.2**
- 32) Dubey, A., **Mailapalli, D.R.** (2018). Development of control release urea fertilizer model for water and nitrogen movement in flooded rice. *Paddy and Water Environment*, 16(1):1- 13. **IF: 2.2**
- 33) Pradhan, S., **Mailapalli, D.R.** (2017) Interaction of Engineered Nanoparticles with the Agri-Environment. *Journal of Agricultural and Food Chemistry*, 65 (38): 8279-8294. **IF: 6.1**
- 34) **Mailapalli, D.R.**, Thompson, A.M. (2016). Effect of Polyacrylamide Coated Biosolid on Phosphorus Movement in Soil-Plant-Water System. *Journal of Solid Waste Technology and Management*, 42 (4):260-271. **IF: 0.2**
- 35) **Mailapalli, D.R.**, Benton, J., Woods, T. (2015). Biomechanics of the Taekwondo axe kick: A review. *Journal of Human Sports and Exercise*, 10 (1): 141-145. **IF: 0.39.**
- 36) **Mailapalli, D.R.**, Raghuwanshi, N.S., Singh, R. (2013). Sediment transport model for surface irrigation systems. *Applied and Environmental Soil Science*. **IF: 2.2**
- 37) **Mailapalli, D.R.**, Burger, M., Horwath, W.R., Wallender, W.W. (2013). Crop residue biomass effects on agricultural runoff quality. *Applied and Environmental Soil Science*. **IF: 2.2**
- 38) **Mailapalli, D.R.**, Thompson, A.M. (2012). Nitrogen leaching from Saybrook soil amended with biosolid and polyacrylamide. *Journal of Water Resource and Protection*, 4(11), 968-979. **IF: 1.01**
- 39) **Mailapalli, D.R.**, Horwath, W., Wallender, W.W., Burger, M. (2012). Infiltration, Runoff, and Export of Dissolved Organic Carbon from Furrow-Irrigated Forage Fields under Cover Crop and No-Till Management in the Arid Climate of California. *Irrigation and Drainage Engineering, ASCE*, 138 (1): 35-42. **IF: 2.6**
- 40) **Mailapalli, D.R.**, Thompson, A.M. (2011). Sediment and Phosphorus Loads in Runoff and Leachate using Polyacrylamide Coated Milorganite™ and Gypsum. *Agricultural Water Management*. 101: 27-34. **IF: 6.7**
- 41) Raghuwanshi, N.S., Saha, R., **Mailapalli, D.R.**, Upadhyaya, S.K. (2011). Infiltration evaluations strategy for border irrigation management. *Irrigation and Drainage Engineering, ASCE*, 137 (9): 602-609. **IF: 2.6**
- 42) Joyce, B.A., Wallender, W.W., **Mailapalli, D.R.** (2010). Application of Pesticide Transport Model for

Simulating Diazinon Runoff in California's Central Valley. *Journal of Hydrology*, 395 (1-2):79-90. **IF: 6.4**

- 43) **Mailapalli, D.R.**, Wallender, W.W., Burger, M. and Horwath, W. (2010). Field length, tillage and crop residue effects on dissolved organic carbon in furrow irrigation. *Agricultural Water Management*, 98:29-37. **IF: 6.7**
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