**Statistical analysis software:**

R, Python, SAS, MS-Excel etc.



**SAHEED GARNAIK**

PhD(Soil Science & Agricultural Chemistry)  
OUAT, Bhubaneswar, India

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**Skills and experience:**

Lab wet chemistry analysis

Instrument handling (XRD, ICP-AES, ICP-MS, GCMC, SEM, TEM, Spectroradiometer etc.)

Plant nutrition and soil fertility management

Soil quality assessment

Carbon footprint, energy and trade off analysis

Machine learning

Spectral modelling

Geospatial modelling

GIS using ARC-GIS and Q-GIS

**Education**

**B.Sc. (Hons) Agriculture:**

Odisha University of Agriculture & Technology, Grade point: 8.21/10

Soil Science, Agronomy, Horticulture, Plant breeding, Statistics, Computer Science

**M.Sc. (Soil Science)**

Punjab Agricultural University, Grade point: 7.84/10

Soil physics, chemistry, biology, Pedology, Electro chemistry, Physical chemistry, Environmental Science, Analytical techniques and instrument methods, Statistics, Biodiversity and biosafety

**Ph.D. (Soil Science and Agricultural Chemistry)**

Odisha University of Agriculture & Technology, Grade point: 9.17/10

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**Publications**

1. **Garnaik, S**., Samant, P.K., Mandal, M., Patra, R.K., Wanjari, R.H., Mohanty, T.R., Dwibedi, S.K., Parihar, C.M.; Nayak, H.S., 2024. Diverse Nutrient Management Strategies for Achieving a Sustainable Energy-Food-Environment Nexus in Rice-Rice Production Systems. ***Environment, Development and Sustainability***. p.1-28. https://doi.org/10.1007/s10668-024-04737-9.
2. **Garnaik, S**., Samant, P.K., Mandal, M., Mohanty, T.R., Dwibedi, S.K., Patra, R.K., Mohapatra, K.K., Wanjari, R.H., Sethi, D., Sena, D.R. and Sapkota, T.B., Parihar, C.M.; Nayak, H.S., 2022. Untangling the effect of soil quality on rice productivity under a 16-years long-term fertilizer experiment using conditional random forest. ***Computers and Electronics in Agriculture***, *197*, p.106965.
3. **Garnaik, S**., Sekhon, B.S., Sahoo, S. and Dhaliwal, S.S., 2020. Comparative assessment of soil fertility status of various agroecological regions under intensive cultivation in Northwest India. ***Environmental Monitoring and Assessment***, *192*(5), pp.1-18.
4. **Garnaik, S.**, Samant, P.K., Mandal, M., Sethi, D., Wanjari, R.H., Mohanty, T.R., Dwibedi, S.K., Parihar, C.M. and Nayak, H.S., 2024. Long-term assessment of diverse nutrient management strategies in a rice-rice cropping system: analyzing yield trends, resource use efficiency and economic viability over a sixteen-year period. ***Journal of Plant Nutrition***, 47(6), pp.905-925.
5. Nayak, H.S., Parihar, C.M., Mandal, B.N., Patra, K., Jat, S.L., Singh, R., Singh, V.K., Jat, M.L., **Garnaik, S**., Nayak, J. and Abdallah, A.M., 2022. Point placement of late vegetative stage nitrogen splits increase the productivity, N-use efficiency and profitability of tropical maize under decade long conservation agriculture. ***European Journal of Agronomy***, *133*, p.126417.
6. Mohapatra, K.K., Nayak, A.K., Patra, R.K., Tripathi, R., Swain, C.K., Moharana, K.C., Kumar, A., Shahid, M., Mohanty, S., **Garnaik**, **S.** and Nayak, H.S., 2023. Multi-criteria assessment to screen climate smart rice establishment techniques in coastal rice production system of India. ***Frontiers in Plant Science***, 14.
7. Nayak, H.S., Parihar, C.M., Jat, S.L., Lata, Mandal, B.N., Singh, V.K., **Garnaik, S**., Muduli, L. and Sahu, S. 2019. Effect of nitrogen point placement on energetic and soil enzymatic activities on long-term conservation agriculture-based maize (Zea mays)-wheat (Triticum aestivum) system of western Indo-Gangetic plains. ***Indian Journal of Agricultural Sciences***, 89(12):2102-2106.
8. Sharma, A.R., Parihar, C.M., Sarkar, A., **Garnaik, S**., Srikanth Reddy, S. and Nayak, H.S. 2023. Nutrient Management in Conservation Agriculture-based Production Systems: Some Practical Considerations. ***Indian Journal of Fertilisers***, 19 (11): 1122-1131.
9. Nayak, J., Intodia, S., Verma, A., Meena, R., Mundra, S., **Garnaik, S**. And Banerjee, H., 2023. Comparison of sorghum (Sorghum bicolor) cultivars for productivity and nitrogen-use efficiency under different fertilizer levels in rainfed condition. ***Indian Journal of Agronomy***, 68(3), pp.331-334.

**Awards/Honours**

1. ICAR-NTS-2017 (Physical Science group)
2. ICAR-NET
3. UGC-**Junior research fellowship** (Environmental Science)
4. UGC-NET in environmental science (eligibility for Assistant Professor)
5. Young Scientist award

**M.Sc. (Soil Science) thesis title**

Development of spectral models for assessing soil fertility status in various agroecological sub-regions of Punjab

**Ph.D. (Soil Science) thesis title**

Long-term effect of nutrient application on soil quality, resource use efficiency and crop productivity under rice-rice cropping system in *Inceptisols* of Odisha