

# Grace Nengzouzam

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## GENERAL

- Name: Grace Nengzouzam
- Date of Birth: February 21, 1991
- Nationality: Indian
- Address: Koite village & B.P.O.  
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## ACADEMICS DETAILS

Year	Degree / Certificate	Institute/School	CGPA/Marks	TOPIC
2015-2020	Ph.D.	NERIST		Long-Term Forecasting of Net Irrigation Requirement for India Using Downscaled Weather Prediction Outputs
2013-2015	MTech in Soil and Water Conservation Engineering	NERIST	5 (Out of 5)	Mapping of snow water equivalent for an eastern Himalayan catchment
2011-2013	BTech in Agricultural Engineering	NERIST	4.57 (out of 5)	Spray drying of pineapple juice
2009-2011	Diploma in Agricultural Engineering	NERIST	3.94 (out of 5)	Estimation of Evapotranspiration in different stations of Arunachal Pradesh
2007-2009	12 Equivalent	NERIST	3.91(out of 5)	

## EXPERIENCE

- **Designation: Guest Faculty** (February 2022 - Present)
  - **Institute:** School of Engineering and Technology, Nagaland University
  - **Details of work done:**
    - Teaching various under-graduate courses
    - Supervising BTech Final year students for their dissertation
- **Designation: Senior Research Fellow** (December 2020 – January 2022)
  - **Project:** National Innovation on Climate Resilient Agriculture
  - **Institute:** ICAR-RC for NEH Region
  - **Details of work done:**
    - Simulation and Modelling
- **Designation: Junior Project Fellow** (September 2020-November 2020)
  - **Project: Water security in Himalaya through spring-ecosystem assessment and management**
  - **Institute:** G.B. Pant National Institute of Himalayan Environment, NERC, Itanagar, Arunachal Pradesh
  - **Details of work done:**
    - Field work: Ziro, Arunachal Pradesh, India
    - In situ measurement of physicochemical properties of spring water
    - Springshed management strategies

## MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Associate Member, Institute of Engineers (India)

## SCHOLARSHIP/AWARD/RECOGNITION

- UGC-PGSROF Scholarship for ST/SC
- GATE qualified (2014)
- Certificate of Excellence /Gold medalist (M. Tech., 2015)
- ASRB NET qualified (2018)
- Best Poster Award (Ministry of Jal Shakti, Department of Water Resources RD & GR, Govt. of India, 2019)
- MHRD Scholarship for Doctoral Research

## RESEARCH PUBLICATIONS

### JOURNAL ARTICLES (8)

- **Grace Nengzouzam**, Arnab Bandyopadhyay, and Aditi Bhadra. 2023. Projection of net irrigation requirement over India using a bias-corrected spatially downscaled dataset. *Journal of water and climate change*, 14(4): 1192-1225. doi: 10.2166/wcc.2023.406
- Burhan U Choudhury, **Grace Nengzouzam**, and Adul Islam. 2022. Evaluation of climate change impact on soil erosion in the integrated farming system based hilly micro-watersheds using Revised Universal Soil Loss Equation. *Catena*, 214, 106306.
- Burhan Choudhury, **Grace Nengzouzam**, and Adul Islam. 2022. Runoff and soil erosion in the integrated farming systems based on micro-watersheds under projected climate change scenarios and adaptation strategies in the eastern Himalayan mountain ecosystem (India). *Journal of Environmental Management*, 309, 114667. <https://doi.org/10.1016/j.jenvman.2022.114667>
- Burhan U Choudhury, **Grace Nengzouzam**, Satyabrata Mandal, Bira K Sethy, Samarendra Hazarika, and Vinay K Mishra. Long-term effect of integrated farming systems on soil erosion in hilly micro-watersheds (Indian Eastern Himalayas). *Land Degradation and Development*, 33 (14): 2554-2566. DOI: 10.1002/ldr.4332.
- Burhan Choudhury, **Grace Nengzouzam**, Meeraj A. Ansari, and Adul Islam. 2022. Causes and consequences of soil erosion in northeastern Himalaya, India. *Current Science*, 122 (7). <https://currentscience.ac.in/Volumes/122/07/0772.pdf>
- **Grace Nengzouzam**, Sanayanbi Hodam, Arnab Bandyopadhyay, and Aditi Bhadra. 2020. Spatial and Temporal Trends of High Resolution Gridded Rainfall Data Over India. *Journal of Earth System Science*, 129, 232. <https://doi.org/10.1007/s12040-020-01494-x>
- **Grace Nengzouzam**, Sanayanbi Hodam, Arnab Bandyopadhyay, and Aditi Bhadra. 2019. Spatial and Temporal Trends of High Resolution Gridded Temperature Data Over India. *Asia-Pacific Journal of Atmospheric Sciences*, Vol. 54: 761-772. <https://doi.org/10.1007/s13143-019-00120-1>
- **Grace Nengzouzam**, Ngahorza Chiphang, Shelina Rajkumari, Liza G Kiba, Arnab Bandyopadhyay, and Aditi Bhadra. 2019. Estimation of snow water equivalent from MODIS Albedo for a non-instrumented watershed in Eastern Himalayan Region. *Journal of Himalayan Earth Sciences*, Vol. 52(1):12-26. [http://nceg.uop.edu.pk/GeologicalBulletin/Vol-52\(1\)-2019/Vol-52\(1\)-2019-Paper2.pdf](http://nceg.uop.edu.pk/GeologicalBulletin/Vol-52(1)-2019/Vol-52(1)-2019-Paper2.pdf)

### BOOK CHAPTER (4)

- **Grace Nengzouzam**, Y. Pordung, R. Phawa, A. Bandyopadhyay, and A. Bhadra. 2017. Determination of Hydraulic Conductivity of Soil from Grain Size Analysis. Chapter 100. *Natural Resources Management for Sustainable Development and Rural Livelihoods*. Vol. 3 (2017): 1299-1311, Today & Tomorrow's Printers and Publishers, New Delhi. ISBN:81-7019-554-1.

- Kiba, L.G., **Nengzouzam, G.**, Ranjan, P. 2023. Flood hazard mapping using hydraulic models and GIS: A review. In: Pandey, M., Gupta, A.K., Oliveto, G. (eds) River, Sediment and Hydrological Extremes: Causes, Impacts and Management. Disaster Resilience and Green Growth. Springer, Singapore. [https://doi.org/10.1007/978-981-99-4811-6\\_4](https://doi.org/10.1007/978-981-99-4811-6_4)
- Kiba, L.G., Lairenjam, C., Verma, A.K., Ranjan, P., **Nengzouzam, G.** 2024. Traditional techniques of rainwater management and conservation in the mountainous regions of North-East India. Ed. Wiley Book “Water Resources Management in Mountainous Regions” (Accepted)
- **Nengzouzam, G.**, Ningthoujam, M., Zimik, W., Lairenjam, C., Verma, A.K., and Kiba, L.G. 2024. Biotechnological Waste Management for sustainable Agriculture. Sustainable Emerging Approach in Agri-business Development (Accepted).
- Kiba, L.G., **Nengzouzam, G.**, Nyamnei, K.Y., Yeanganghu, S.R., and Jubikali. 2025. ‘Prioritizing Sub-Watersheds for Soil Conservation in the Dikhu Watershed, North-East India Using Morphometric and LULC Analysis. In: Rajib Maity and Aman Srivastava (eds) Climate-Smart Water Resource Management: A Paradigm Shift from Ancient to Modern Practices with Integrated Technologies. (Accepted).

#### CONFERENCES (11)

- **Grace Nengzouzam**, Manda Ningthoujam, Wungshim Zimik, Pramod Ch. Dihingia, Chitrasen Lairenjam, Verma, A.K., and Liza G. Kiba. 2023. Biotechnological Waste Management for sustainable Agriculture. National Seminar in Sustainable Emerging Approach in Agri-business Development, scheduled on 1<sup>st</sup> to 3<sup>rd</sup> November, 2023, School of Agricultural Sciences, Medziphema, Nagaland.
- Zimik, W., Lairenjam, C., Ningthoujam, M.D., Dihingia, P.C., and **Nengzouzam, G.** 2023. Effect of blanching on the drying kinetics and behavior of beetroot (*Beta Vulgaris*). National Seminar in Sustainable Emerging Approach in Agri-business Development, scheduled on 1<sup>st</sup> to 3<sup>rd</sup> November, 2023, School of Agricultural Sciences, Medziphema, Nagaland.
- Lairenjam, C., Humtsoe, T., Pucho, M., Kengruse, V., Imnanuksung, Debnath, S., Konyak, N., Kiba, L., Dihingia, P.C., **Nengzouzam, G.**, Ningthoujam, M.D., Zimik, W., and Verma, A.K. 2023. Case study of spring water: A natural resource in three districts of Nagaland. National Seminar in Sustainable Emerging Approach in Agri-business Development, scheduled on 1<sup>st</sup> to 3<sup>rd</sup> November, 2023, School of Agricultural Sciences, Medziphema, Nagaland.
- Zimik, W., Lairenjam, C., Ningthoujam, M. D., Dihingia, P.C., **Nengzouzam, G.**, Ozukum, M. and Hangshing, L. 2023. Studies on Osmotic Dehydration of Beetroot (*Beta vulgaris*), The Abstract of Book: International Conference on Natural Farming for Revitalizing Environment and Resilient Agriculture (NF-RERA, 2023). Pub: College of Agriculture, CAU, Imphal, pp: 110, ISBN: 978-81-947184-4-4, 17-19th March, 2023.
- Chitrasen Lairenjam, **Grace Nengzouzam**, Pramod Dihingia, Wungshim Zimik, and Manda Ningthoujam. 2022. A review on rejuvenation of water bodies for enhanced water scarcity over Nagaland. National Symposium cum Workshop on Springshed Management, scheduled on 18–19 November 2022, North Eastern Regional Institute of Water and Land Management (NERIWALM).
- Lairenjam, C., Dihingia, P.C., Ningthoujam, M. D., **Nengzouzam, G.**, Khatso, V. and Khamo, M. 2022. Assessment of the potential rooftop rainwater harvesting- A case study for Nagaland, Proceedings: 56th Annual convention of India Society of Agricultural of Engineers and International Symposium on Agricultural Engineering Innovation for Global Food security, TNAU, Coimbatore, pp: 289-290, 9-11th November, 2022

- A. Bandyopadhyay, **Grace Nengzouam**, W. Rahul Singh, N. Hangsing, and A. Bhadra. 2018. Comparison of Various Re-analyses Gridded Data with Observed Data from Meteorological Stations over India. EPiC Series in Engineering, Vol. 3: 190-198. HIC 2018. 13<sup>th</sup> International Conference on Hydroinformatics.
- P. Mishra, **Grace Nengzouam**, R. Dui, Arishinaro, L. Ete, A. Bhadra, and A. Bandyopadhyay. 2018. Validation of Developed Stage-Discharge Rating Curve of Nuranang River Under Historical and Projected Climatic Scenarios. International Seminar on Land and Water Issues in South East Asia: Status, Challenges and Opportunities, NERIWALM, Tezpur.
- **Grace Nengzouam**, P. Mishra, V. Khatso, N.K. Mondal, T. Mathew, K. Michelle, A. Bhadra, and A. Bandyopadhyay. 2016. Intra-annual Variation in Mean Areal Precipitation of Arunachal Pradesh Using Thiessen Polygon Method. International Conference on Climate Change Mitigation and Technologies for Adaptation, 2016 (IC3MTA 2016), Synod College, Shillong, Meghalaya, Institute for Research and Development India (IRD India). ISBN 978-93-81693-07-2.
- W. Zimik, P.A. Kumar, A.I. Singh, **Grace Nengzouam**, and D. Roy. 2014. Optimization of Process Parameters for Spray Drying of Pineapple Juice of Arunachal Pradesh (India) Using Response Surface Methodology. National Conference on Emerging Technology Trends in Agricultural Engineering, NERIST, Arunachal Pradesh.
- Shelina Rajkumari, K.T. Senzeba, N.Chiphang, and **Grace Nengzouam**. 2014. Determination of Snowmelt-depth Using Index Method with the help of Remote Sensing. National Conference on Emerging Technology Trends in Agricultural Engineering, NERIST, Arunachal Pradesh.

## TRAININGS/WORKSHOPS

- Attended a SERB and INAE sponsored two-day Symposium on “Technologies for Sustainable Developments in North-Eastern Region” held during 20<sup>th</sup> to 21<sup>st</sup>, November 2023 in Tezpur University, Tezpur, Assam.
- Participated as a resource person in the 3 days training programme on “Soil Health Management using Animal Manure for Improving Crop Productivity in Hill Agriculture” during 22<sup>nd</sup> to 24<sup>th</sup> March, 2021, funded by ICAR-Central Institute for Research on Goats, Makdoom, Mathura, India.
- Attended a two weeks course on “Crop Water Use Estimation in 21<sup>st</sup> Century with Advances in Geospatial Technologies” during 22<sup>nd</sup> April, 2019 to 02<sup>nd</sup> May, 2019. JNTUH College of Engineering, Hyderabad.
- Attended one month industrial training on “Minor Irrigation, Command Area Development and Flood Control Works”, under Water Resources Department, Government of Arunachal Pradesh, w.e.f. 1<sup>st</sup> June, 2012 to 30<sup>th</sup> June, 2012.
- Participated in the National Level Training Programme on Disaster Management held during 27<sup>th</sup> to 29<sup>th</sup> February 2020 at NERIST.
- Participated in the two days “Industry Institute Interaction Workshop on Ergonomics, Safety and Occupational health” organized by the Department of Agricultural Engineering from 30<sup>th</sup> September to 1<sup>st</sup> October, 2016 at the North Eastern Regional Institute of Science and Technology (NERIST), Nirjuli, Arunachal Pradesh.
- Participated in the “4<sup>th</sup> INDEST User Convention (E-Journals User Training Workshop)” organized by the AICTE-INDEST User Committee, North Eastern Regional Institute of Science and Technology, Nirjuli, Arunachal Pradesh held on 22<sup>nd</sup> to 23<sup>rd</sup> August, 2015 and 31<sup>st</sup> October, 2015.

## LANGUAGES

- English
- Hindi
- Manipuri
- Mizo/Lushai

## EXTRA CURRICULAR ACTIVITIES

- Active participation in programs organized under National Service Scheme
- Participated in institute level sports

## REFERENCES

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I do hereby declare that all the above information is true and correct to the best of my knowledge.



Grace Nengzouam