



Abhishek Kumar

SENIOR RESEARCH FELLOW

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Education

Doctor of Philosophy (Botany/Plant Ecology)

PANJAB UNIVERSITY, CHANDIGARH, IN

2017-Present

Master of Science (Botany)

PANJAB UNIVERSITY, CHANDIGARH, IN

2015-2017

Bachelor of Science (Botany, Chemistry, Zoology)

ARYA PG COLLEGE, PANIPAT, IN

2012-2015

Awards and Distinctions

Young Scientist Award

PUNJAB ACADEMY OF SCIENCES, PATIALA

2022

Best Poster Award

NATIONAL CONFERENCE ON CLIMATE CHANGE, CSIR-NBRI, LUCKNOW

2020

Junior Research Fellowship

UNIVERSITY GRANTS COMMISSION, NEW DELHI

2017

Research Interests

- **Macroecology** Elevational patterns and determinants of plant species richness
- **Population Ecology** Climate-related redistribution of mountain trees (*Pinus*, *Quercus* and *Rhododendron*)
- **Ecosystem Ecology** Patterns and determinants of litter decomposition in terrestrial ecosystems
- **Restoration Ecology** Ecological restoration of coal mine spoils

Selected Publications

A complete list of publications is available from my ORCID (<https://orcid.org/0000-0003-2252-7623>)

JOURNAL ARTICLES

- Kumar, P., **Kumar, A.**, Patil, M., Hussain, S., & Singh, A. N. (2024). Factors influencing tree biomass and carbon stock in the Western Himalayas, India. *Frontiers in Forests and Global Change*, 6, 1328694. <https://doi.org/10.3389/ffgc.2023.1328694>
- Singh, A. N., & **Kumar, A.** (2022). Comparative soil restoration potential of exotic and native woody plantations on coal mine spoil in a dry tropical environment of India: A case study. *Land Degradation & Development*, 33(12), 1971–1984. <https://doi.org/10.1002/ldr.4286>
- Singh, A. N., & **Kumar, A.** (2022). Ecological performances of exotic and native woody species on coal mine spoil in Indian dry tropical region. *Ecological Engineering*, 174, 106470. <https://doi.org/10.1016/j.ecoleng.2021.106470>
- **Kumar, A.**, Patil, M., Kumar, P., Kumar, M., & Singh, A. N. (2022). Plant ecology in Indian Siwalik range: A systematic map and its bibliometric analysis. *Tropical Ecology*, 63(3), 338–350. <https://doi.org/10.1007/s42965-022-00229-x>

- Patil, M., **Kumar, A.**, Kumar, P., Cheema, N. K., Kaur, R., Bhatti, R., & Singh, A. N. (2020). Comparative litter decomposability traits of selected native and exotic woody species from an urban environment of north-western Siwalik region, India. *Scientific Reports*, 10, 7888. <https://doi.org/10.1038/s41598-020-64576-2>

BOOK CHAPTERS

- **Kumar, A.**, Patil, M., Kumar, P., & Singh, A. N. (2021). Phosphorus and litter decomposability traits in tropical forest ecosystems under changing environment: A synthesis. In R. K. Chaturvedi, R. Singh, & R. Bhadouria (Eds.), *Tropical dry forests: Emerging features and ecological perspectives* (pp. 311–336). Nova Science Publishers.
- **Kumar, A.**, Yadav, R., Patil, M., Kumar, P., Zhang, L., Kaur, A., Sharma, S., Hussain, S., Tokas, D., & Singh, A. N. (2020). Sustainable management of national parks and protected areas for conserving biodiversity in India. In L. Zhang (Ed.), *Advances in forest management under global change* (pp. 75–91). IntechOpen. <https://doi.org/10.5772/intechopen.92435>

Skills and Qualifications

A full list of accomplishments and certificates is available from my webpage (<https://akumar.netlify.app>)

- R statistical environment and RStudio
- Data analysis and visualisation (MuMIn, piecewiseSEM, stats, tidyverse)
- Mapping and spatial data analysis (ggplot2, sf, terra, tmap)
- Species distribution modelling (biomod2, MaxEnt)
- Systematic reviews and meta-analysis (bibliometrix, metafor, revtools)
- Reproducible research (git, quarto, rmarkdown, knitr)
- Microsoft office (Excel, PowerPoint, Word)
- Reference management (Mendeley)
- Scientific and technical writing

Professional Memberships

Society of Open, Reliable and Transparent Ecology and Evolutionary Biology (SORTEE)

STUDENT MEMBER (#521)

Keizer, Oregon, US

2023-Present

Punjab Academy of Sciences

LIFE MEMBER (#L-1599)

Patiala, Punjab, IN

2022-Present

International Association for Vegetation Science (IAVS)

STUDENT MEMBER (#67527876)

Bethesda, Maryland, US

2021-2025

References

Dr. Anand Narain Singh

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Panjab University, Chandigarh, IN

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Prof. Amrik Singh Ahluwalia

MSC SUPERVISOR

Eternal University, Sirmaur, IN

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Dr. Balkar Singh

BSC LECTURER

Arya PG College, Panipat, IN

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