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RESEARCH INTEREST

Diatoms, Micropalaeontology, Palaeoceanography, Paleoclimatology

ACADEMIC CAREER

- Ph.D. - 2007, University of Lucknow, Lucknow, India.
- Master of Science - 2003, C.S.J.M. University, Kanpur, India.

RESEARCH CAREER

- **Scientist – 'E'** (Jan. 2026 – till date), Birbal Sahni Institute of Palaeosciences.
- **Scientist – 'D'** (Jan. 2022 – Dec. 2025), Birbal Sahni Institute of Palaeosciences.
- **Scientist – 'C'** (Jan. 2018 – Dec. 2021), Birbal Sahni Institute of Palaeosciences.
- **SERB Overseas Postdoctoral Fellow** (Dec. 2017 – Dec. 2018), EPOC, UMR-CNRS, Université de Bordeaux, France.
- **Visiting Scientist** (June–Aug. 2017), MARUM – Center for Marine Environmental Sciences, University of Bremen, Germany.
- **Scientist – 'B'** (Oct. 2013 – Dec. 2017), Birbal Sahni Institute of Palaeosciences.
- **U.G.C. Dr. D.S. Kothari Postdoctoral Fellow** (Sep. 2011 – Oct. 2013), Marine Science Department, Goa University.
- **Scientific Committee on Antarctic Research Fellow** (Jan.–April 2011), EPOC, UMR-CNRS, Université de Bordeaux, France.
- **Research Scientist – 'C'** (Jan. 2010 – July 2011), National Centre for Polar and Ocean Research, Goa.
- **Research Associate** (Jan. 2008 – Jan. 2010), National Centre for Polar and Ocean Research, Goa.
- **Senior Research Fellow** (April 2006 – Jan. 2008), Department of Botany, University of Lucknow.
- **Junior Research Fellow** (April 2004 – April 2006), Department of Botany, University of Lucknow.

AWARDS

- SERB Overseas Postdoctoral Fellowship 2016-17.
- Indian National Science Academy (INSA) Award for International Bilateral Exchange Program 2017.
- PAGES Travel Grant 2013 for 4th Polar Marine Diatom Taxonomy and Ecology Workshop at Cardiff University, Wales, U.K.
- U.G.C. Dr. D.S. Kothari Postdoctoral Fellowship 2011.

- Best Poster Presentation in National Seminar on modern and palaeo sediments & XXVIII Convention of Indian Association of Sedimentologists, 24th – 26th Nov. 2011, at Jawaharlal Nehru University, New Delhi.
- Scientific Committee on Antarctic Research (SCAR) Fellowship 2010 by the International Science Council (ISC).

PUBLICATIONS

- Nautiyal, A., **Shukla, S.K.**, Mohan, R. 2026. Deep-water nutrients mediated glacial-interglacial diatom productivity in the Indian Polar Front Zone of the Southern Ocean. Marine Micropaleontology 206, 102604. **(Corresponding Author).**
- Nautiyal, A., **Shukla, S.K.**, Mohan, R. 2025. Deep-water nutrients mediated glacial-interglacial diatom productivity in the Indian Polar Front Zone of the Southern Ocean. 28 August 2025, **Preprint (Version 1) available at Research Square**. **(Corresponding Author).**
- Chaddha, A.S., **Shukla, S.K.**, Sharma, A., Kumar, K., Thakkar, M.G., Patel, D.K., Satyanarayana, G.N.V. 2025. Calcium Carbonate as a Potential Template for the Origin of Life: Coupled Inorganic–Organic Geochemistry of Travertine Deposit from Puga Hot Spring. **ACS Earth Space Chem.** 9(7): 1905-1926. **(Corresponding Author).**
- Chaddha, A.S., **Shukla, S.K.**, Kumar, K., Sharma, A., Thakkar, M.G., Patel, D., Satyanarayana, G.N.V. 2025. Biomarkers of Puga Hot Spring, Ladakh, India: Tracing plausible Prebiotic Pathways and Biogenic Metabolites. **Preprint ChemRxiv**. **(Other Author).**
- Chaddha, A.S., **Shukla, S.K.**, Kumar, K., Sharma, A., Kapur, V.V., Phartiyal, B., Thakkar, M.G. 2024. "Clues of Life" through Mineral Lattice Investigation in the Extreme Cold Conditions of Ladakh, India: An Astrobiological Perspective Using the Geyser Travertine Deposit of Puga Hot Spring. 25 November 2024, **Preprint (Version 1) available at Research Square. (Other Author).**
- Sagar, R., Kapur, V.V., Kumar, K., Morthekai, P., Sharma, A., **Shukla, S.K.**, Ghosh, A.K., Chauhan, G. and Thakkar, M.G., 2024. First record of Chelonian coprolites from the Early-Middle Miocene Kutch Basin, western India, and their palaeodietary and palaeobiological implications. **Geobios**, 84: 83-101. **(Other Author).**
- **Shukla, S.K.**, Chaddha, A.S., Kumar, K., Sharma, A., Pandey, S.K., Kapur, V.V., Phartiyal, B., Shivam, A., Dabhi, A., Bhushan, R. **2023**. Hot spring diatoms are linked to extreme cold conditions: A new perspective for astrobiological implication from the sinter deposit of Puga hot spring, Ladakh, India. **Authorea Preprints ESS Open Archive**. December 03, 2023. **(First Author).**
- Farooqui, A., Khan, S., Agnihotri, R., Phartiyal, B., **Shukla, S.** 2023. Monitoring hydroecology and climatic variability since ~4.6 ka from palynological, sedimentological and environmental perspectives in an Ox-bow lake, Central Ganga Plain, India. **The Holocene**, 33(10), 1272-1288. **(Other Author).**
- **Shukla, S.K.**, Crosta, X., and Ikehara, M. **2023**. Synergic role of frontal migration and silicic acid concentration in driving diatom productivity in the Indian sector of the Southern Ocean over the past 350 ka. **Marine Micropaleontology**, 181, 102245. **(First and Corresponding Author).**
- Agarwal, S., **Shukla, S.K.**, Srivastava, P., and Sundriyal, Y. **2023**. Peat sequence diatoms from Kedarnath, Central Himalaya, used to reconstruct mid-late Holocene hydroclimatic conditions. **Palaeogeography, Palaeoclimatology, Palaeoecology**, 612, 111381. (**Corresponding Author).**

- Sagar, R., Kapur, V.V., Kumar, K., Morthekai, P., Sharma, A., **Shukla, S.K.**, Ghosh, A.K., Chauhan, G., Thakkar, M.G. 2022. The First Record on CM-Sized Vertebrate Coprolites from the Early-Middle Miocene (Aquitanian-Langhian) Khari Nadi and Chassra Formations, Kutch Basin, Western India: Palaeobiological Significance. **Preprint Available at SSRN**. **(Other Author).** (November 7, 2022).
- Crosta, X., Kohfeld, K.E., Bostock, H.C., Chadwick, M., Du Vivier, A., Esper, O., Etourneau, J., Jones, J., Leventer, A., Müller, J., Rhodes, R.H., Allen, C.S., Ghadi, P., Lamping, N., Lange, C.B., Lawler, K.-A., Lund, D., Marzocchi, A., Meissner, K.J., Menviel, L., Nair, A., Patterson, M., Pike, J., Prebble, J.G., Riesselman, C., Sadatzki, H., Sime, L.C., **Shukla, S.K.**, Thöle, L., Vorrath, M.-E., Xiao, W., and Yang, J. **2022**. Antarctic sea ice over the past 130 000 years – Part 1: a review of what proxy records tell us. **Climate of the Past**, 18, 1729-1756. **(Other Author).**
- Crosta, X., Kohfeld, K.E., Bostock, H.C., Chadwick, M., Du Vivier, A., Esper, O., Etourneau, J., Jones, J., Leventer, A., Müller, J., Rhodes, R.H., Allen, C.S., Ghadi, P., Lamping, N., Lange, C., Lawler, K-E., Lund, D., Marzocchi, A., Meissner, K.J., Menviel, L., Nair, A., Patterson, M., Pike, J., Prebble, J.G., Riesselman, C., Sadatzki, H., Sime, L.C., **Shukla, S.K.**, Thöle, L., Vorrath, M-E., Xiao, W., Yang, J. 2022. Antarctic sea ice over the past 130,000 years, Part 1: A review of what proxy records tell us. **EGUsphere Preprint** [online]. **(Other Author).**
- **Shukla, S.K.**, Crosta, X., and Ikehara, M. **2021**. Sea surface temperatures in the Indian Sub-Antarctic Southern Ocean for the last four interglacial periods. **Geophysical Research Letters**, 48, e2020GL090994. **(First and Corresponding Author).**
- Farooqui, A., Pillai, S.K., Agnihotri, D., Khan, S., Tewari, R., **Shukla, S.K.**, Ali, S., Trivedi, A., Pandita, S.K., Kumar, K., Bhat, G.D., and Agnihotri, R. **2021**. Impact of climate on the evolution of vegetation in tectonically active Karewa basin, Kashmir Himalayas. **Journal of Earth System Science** 130, 93. **(Other Author).**
- Crosta, X., **Shukla, S.K.**, Ther, O., Ikehara, M., Yamane, M., and Yokoyama, Y. **2020**. Last Abundant Appearance Datum of *Hemidiscus karstenii* driven by climate change. **Marine Micropaleontology**, 157, 101861. **(Other Author).**
- Nair, A., Ghadi, P., Mohan, R., Manoj, M.C., Crosta, X., **Shukla, S.K.**, and Thamban, M. **2020**. Glacial-interglacial flux and size variability of *Fragilariopsis kerguelensis* and *Thalassiosira lentiginosa* from the Indian sector of the Southern Ocean. **Deep Sea Research Part II: Topical Studies in Oceanography**, 178, 104746. **(Other Author).**
- **Shukla, S.K.**, and Romero, O. **2018**. Glacial valve size variation of the Southern Ocean diatom *Fragilariopsis kerguelensis* preserved in the Benguela Upwelling System, southeastern Atlantic. **Palaeogeography, Palaeoclimatology, Palaeoecology**, 499: 112-122. **(First and Corresponding Author).**
- **Shukla, S.K.**, and Crosta, X. **2017**. *Fragilariopsis kerguelensis* size variability from the Indian subtropical Southern Ocean over the last 42 000 years. **Antarctic Science**, 29(2): 139-146. **(First and Corresponding Author).**
- **Shukla, S.K.**, Crespin, J., and Crosta, X. **2016**. *Thalassiosira lentiginosa* size variation and associated biogenic silica burial in the Southern Ocean over the last 42 kyrs. **Marine Micropaleontology**, 127, 74-85. **(First and Corresponding Author).**
- Stroynowski, Z., Minzoni, R., **Shukla, S.K.** **2014**. 4th Polar Marine Diatom Taxonomy and Ecology Workshop. PAGES Magazine 22(1): 48. **(Other Author).**
- **Shukla, S.K.**, Crosta, X., Cortese, G., and Nayak, G.N. **2013**. Climate mediated size variability of diatom *Fragilariopsis kerguelensis* in the Southern Ocean. **Quaternary Science Reviews**, 69, 49-58. **(First and Corresponding Author).**

- **Shukla, S.K.**, and Mohan, R. **2012**. The contribution of diatoms to worldwide crude oil deposits" In: The Science of Algal Fuels: Cellular Origin, Life in Extreme Habitats and Astrobiology, Eds. R. Gordon & J. Seckbach. Dordrecht, Springer, Vol. 25: 355-382. **(First and Corresponding Author).**
- **Shukla, S.K.**, and Sudhakar, M. **2011**. Comparison of modern and fossil diatom assemblages and the implication on sea-ice conditions in coastal Antarctic region. **Mausam**, 62(4): 659-664. **(First Author).**
- Mohan, R., **Shukla, S.K.**, Patil, S.M., Shetye, S.S., Kerkar, K.K. **2011**. Diatoms from surface sediments of Enderby Basin of Indian Sector of Southern Ocean. **Journal of Geological Society of India**, 78(1): 36-44. **(Other Author).**
- Shetye, S.S., Mohan, R., **Shukla, S.K.**, Sudhakar, M., and Ravindra, R. **2011**. Variability of *Nonionellina labradorica* Dawson in surface sediments from Kongsfjorden, West Spitsbergen. **Acta Geologica Sinica**, 85(3): 549-558. **(Other Author).**
- Anilkumar, N., Mohan, R., **Shukla, S.K.**, Pednekar, S.M., Sudhakar, M., and Ravindra, R. **2010**. Signature of coastal upwelling in Prydz Bay, East Antarctica during austral summer 2006. **Current Science** 99(10): 1390-1394. **(Other Author).**
- Mohan, R., **Shukla, S.K.**, Patil, S.M., Shetye, S.S., Kerkar, K.K., and Ravindra, R. **2010**. Diatom morphometry and its application to decipher past climatic changes. **Gondwana Geological Magazine** 25(1): 133-138. **(Other Author).**
- **Shukla, S.K.**, Mohan, R., and Sudhakar, M. **2009**. Diatoms a potential tool to understand past oceanographic settings. **Current Science** 97(12): 1726-1734. **(First Author).**
- Mohan, R., **Shukla, S.K.**, Anilkumar, N., Sudhakar, M., Prakash, S., and Ramesh, R. **2009**. Relative microalgal concentration in Prydz Bay, East Antarctica during late austral summer, 2006. **Algae** 24(3): 139-147. **(Other Author).**
- **Shukla, S.K.**, Misra, P.K., and Shukla, C.P. **2009**. Cyanophycean Algae from the foothills of Indo-Western Himalaya. **Ecoprint, Nepal** 16: 65-73. **(First Author).**
- Dwivedi, R.K., Shukla, C.P., Misra, P.K., **Shukla, S.K.**, and Seth, M.K. **2009**. On desmids from Southern Himachal Pradesh of Indo-Western Himalaya. **Feddes Repertorium** 120(3-4): 236-249. **(Other Author).**
- **Shukla, S.K.**, Shukla, C.P., and Misra, P.K. **2008**. Desmids (Chlorophyceae, Conjugales, Desmidiaceae) from foothills of Western Himalaya, India. **Algae** 23(1): 1-14. **(First Author).**
- **Shukla, S.K.**, Shukla, C.P., and Misra, P.K. **2008**. Three taxa of Pennate diatom *Nitzschia* Hassall from foothills of Western Himalaya. **Proceedings of National Academy of Sciences, Allahabad Sect. B** 78(IV): 358-361. **(First Author).**
- Dwivedi, R.K., **Shukla, S.K.**, Shukla, C.P., Misra, P.K., and Seth, M.K. **2008**. Cyanophycean flora of Southern Himachal Pradesh, India. **Ecoprint, Nepal** 15: 29-36.
- **Shukla, S.K.**, Misra, P.K., and Shukla, C.P. **2007**. Chlorococcalean algae from the foothills of Indo-Western Himalaya. **Journal of Indian Botanical Society** 86(3&4): 80-85.
- Misra, P.K., Rai, A.K., and **Shukla, S.K.** **2007**. Some fresh water desmids from Kumaon Himalaya. **Journal of Applied Biosciences** 33(1): 53-58.
- Misra, P.K., Rai, A.K., Chauhan, R.S., and **Shukla, S.K.** 2007. Algal flora of Naukuchia Tal, Nainital district, Uttaranchal state. **Journal of Indian Botanical Society** 86(1&2): 71-77.
- Misra, P.K., Chauhan, R.S., and **Shukla, S.K.** 2007. Some fresh water diatoms from Almora district, Uttaranchal state. **Journal of Indian Botanical Society** 86(3&4): 74-79.
- Misra, P.K., **Shukla, S.K.**, and Chauhan, R.S. **2006**. Some fresh water bacillariophycean algae from foothills of Western Himalayas, India. **Phytotaxonomy** 6: 111-115.

- Misra, P.K., and **Shukla, S.K. 2006**. Some freshwater diatoms from Uttaranchal state. **Journal of Applied Biosciences** 32(1): 74-80.

WORKSHOPS/EXPEDITIONS

- 1st PAGES C-SIDE (Cycles of Sea Ice dynamics in the Earth System) Workshop (23rd to 26th Oct. 2018) at Simon Fraser University, Vancouver, Canada.
- 4th Polar Marine Diatom Taxonomy and Ecology Workshop (4th –9th Aug. 2013) at Cardiff University, Wales, U.K.
- Education Course in Asia Pacific Interfinish 2010 and extended training on Secondary Ion Mass Spectrometry of diatoms at the National University of Singapore at Biopolis, Singapore (19-10-2010 to 23-10-2010).
- Participation in 3rd Indian Scientific Expedition to Southern Ocean (19-02-2009 to 20-03-2009).
- Participation in the 2nd Indian Scientific Expedition to the Arctic, 2008 (28-07-2008 to 28-08-2008).
- Participation in a multidisciplinary cruise onboard ORV Sagar Kanya to the Tropical Indian Ocean (27-01-2008 to 18-02-2008).
- Workshop on Taxonomy of freshwater Algae at Centre for Advanced Studies in Botany, Madras University, Chennai, 2004, sponsored by AICOPTAX, Ministry of Environment & Forest, New Delhi.