SANTOSH K. SHAH

SCIENTIST 'F'
Birbal Sahni Institute of Palaeosciences (BSIP),
53 University Road,
Lucknow – 226 007, Uttar Pradesh,
India.

HONORARY ASSOCIATE PROFESSOR
Academy of Scientific and
Innovative Research (AcSIR),
Ghaziabad, Uttar Pradesh,
India.



E-mails: santoshkumar_shah@bsip.res.in; santoshk.shah@gmail.com
Phones: +91 (522) 2742927 (*Off.*); +91 9451246758 (*Cell*)
Fax: +91 (522) 2740485 (*Off.*)
Office webpage: https://www.bsip.res.in
Personal webpage: http://skshah-bsip.mystrikingly.com

EDUCATION:

2007 — **Ph.D. in Botany**
Birbal Sahni Institute of Palaeobotany, Lucknow, India and Department of Botany, University of Lucknow, Lucknow, India
Thesis Advisor: Dr. Amalava Bhattacharyya, BSIP, Lucknow, India
Thesis Title: Analysis of climatic changes in Northeast Himalaya and its comparison with Western Himalaya during Late Quaternary

2001 — **M.Sc. in Botany**
University of North Bengal, Darjeeling, West Bengal, India

1998 — **B.Sc. in Botany** (Honours), Zoology and Chemistry
Kalimpong College, Kalimpong, West Bengal, India

2009 — **Professional course in Geology** (April–July)
BSIP, Lucknow in collaboration with Palaeontological Society of India, Lucknow

2008 — **Diploma in French**
University of Lucknow, Lucknow, India

2007 — **Proficiency in French**
University of Lucknow, Lucknow, India

1999 — **Diploma in Computer Education**
Aptech Computer Education, Kalimpong, West Bengal, India

1999 — **Diploma in Environment Management and ISO 14000/14001**
National Institute of Labour and Management (NILEM) Adyar, Chennai, India

APPOINTMENTS:

01/01/2026 – Till date — **Scientist 'F'**,
Birbal Sahni Institute of Palaeosciences, Lucknow, India

01/01/2021 – 31/12/2025 — **Scientist 'E'**,
Birbal Sahni Institute of Palaeosciences, Lucknow, India

01/01/2017 – 31/12/2020 — **Scientist 'D'**,
Birbal Sahni Institute of Palaeosciences, Lucknow, India

01/01/2013 – 31/12/2016 — **Scientist 'C'**,
Birbal Sahni Institute of Palaeosciences, Lucknow, India

15/09/2008 – 31/12/2012 — **Scientist 'B'**,
Birbal Sahni Institute of Palaeobotany, Lucknow, India

29/03/2007 – 14/09/2008	**Birbal Sahni Research Associate**, Birbal Sahni Institute of Palaeobotany, Lucknow, India
22/08/2003 – 28/03/2007	**Senior Research Fellow**, Birbal Sahni Institute of Palaeobotany, Lucknow, India
01/01/2003 – 30/06/2003	**Junior Research Fellow**, Birbal Sahni Institute of Palaeobotany, Lucknow, India
21/05/2002 – 31/12/2002	**Junior Research Fellow**, Birbal Sahni Institute of Palaeobotany, Lucknow, India
01/09/2001 – 28/02/2002	**Project Assistant**, University of North Bengal, Darjeeling, India

RESEARCH INTEREST:

- ***Dendrochronology***
- ***Dendroclimatology***: Past temperature-, precipitation-, drought-, and Streamflow reconstruction
- ***Dendrohydrology***: Streamflow and flood reconstruction
- ***Dendroecology***: Forest productivity and forest ecology
- ***Climate Field Reconstruction***
- ***Palynology***: Holocene Palynology and Modern Pollen-Climate calibration
- ***Climate analysis***: Instrumental climate and streamflow data analysis

HONOURS, AWARDS AND RECOGNITIONS:

2026	**Global Recognition Award**, BSIP Wall of Fame Awards 2025-26- (Staff Awards)
	Highest Cited Paper Award, BSIP Wall of Fame Awards 2025-26- (Staff Awards)
	Best Paper Award, BSIP Wall of Fame Awards 2025-26- (Staff Awards)
	Executive Member, Vibha - Avadh Vigyan Bharti
2025	**Vice-President**, Breakthrough Science Society (Uttar Pradesh Chapter)
	Coordinator Member, PAGES 2k Hydroclimate Network Phase 5 – (2025-2027)
2019	**President**, Asian Dendrochronological Association – (2019-2021)
	Treasurer, Association of Quaternary Researchers (AOQR) – (2019-2027)
	Governing body Member, Association of Quaternary Researchers (AOQR)
	Founder Member, Association of Quaternary Researchers (AOQR)
	INSA Bilateral Exchange Fellowship: Visited Tree-ring and Environmental Change Group, Xishuangbanna Tropical Botanical Garden (XTBG), CAS, P.R. China; July-August, 2019 (1 month).
2018	**Visiting Scientist**: Tree-ring and Environmental Change Group, Xishuangbanna Tropical Botanical Garden (XTBG), CAS, P.R. China; Jan.-Feb. 2018 (15 days).
2016	**Diamond Jubilee Medal**: for publishing papers of high quality in refereed journals during the two years preceding the year of the award.
2014	**Fellow,** East Himalayan Society for Spermatophyte Taxonomy

Sharda Chandra Memorial Gold Medal: jointly with co-authors of paper entitled "*Analysis of vegetation and climate change during Late Pleistocene from Ziro Valley, Arunachal Pradesh, Eastern Himalaya Region*" published in Quaternary Science Reviewss 101, 111-123,

Paper of the Month Award: for August-September, 2014 at BSIP, Lucknow: For paper entitled "*Analysis of vegetation and climate change during Late Pleistocene from Ziro Valley, Arunachal Pradesh, Eastern Himalaya Region*" published in Quaternary Science Reviews 101, 111-123, 2014 **(co-author)**

Paper of the Month Award: for December, 2014 at BSIP, Lucknow: For paper entitled "Spring temperatures in the far-western Nepal Himalaya since A.D. 1640 reconstructed from *Picea smithiana* tree-ring widths" published in *Climate Dynamics* 45, 2069-2081, 2015 **(correspondence author)**

2008 **B.S.Venkatachala Memorial Gold Medal:** for the best research work done among the Young Scientists of the Birbal Sahni Institute of Palaeobotany, Lucknow, India.

2006 **Young Scientist Award** and **Second-Best Presentation:** by Department of Science and Technology for the research contribution on Palaeoclimate studies (16th December, 2006). Department of Geology, University of Jammu, Jammu, India

IN-HOUSE PROJECTS AT BSIP, LUCKNOW:

April, 2025–March, 2029 Project: *Holocene Vegetation Reconstruction, Climate Change, Extreme Events and Anthropogenic impact in the Himalayan Region*
Status: Ongoing

Project: *Quaternary Monsoon/Climate Reconstruction through high-resolution multi-proxy studies of lacustrine archives along the East-West Corridor in India (Project Acronym: QLDP-Phase 2)*
Status: Ongoing

April, 2021–March, 2025 Project: *Late Pleistocene–Holocene vegetation and climate reconstructions for the Himalayan region: understanding the dynamics and forcing mechanisms*
Status: Completed

Project: *Quaternary Monsoon/ Climate reconstruction through high resolution multi - proxy studies of Lacustrine archives from central India (Core Monsoon Zone and Indo-Gangetic Plain)*
Status: Completed

April, 2019–March, 2021 Project: *Tree-ring based climate reconstruction of the Eastern Himalaya: A spatio-temporal perspective of multi-decadal variability*
Status: Completed

April, 2017–March, 2019 Project: *Spatio-temporal reconstruction of temperature and hydroclimatic variability in eastern and western Himalaya based on tree-rings*
Status: Completed

April, 2012–March, 2017 Project: *Tree-ring analysis from high altitude areas of Himalayan region: A comparative approach with emphasis on the eastern sector* (Project number: 10.2 under XII Five Year Plan (2012-2017))
Status: Completed

April, 2007–March, 2012 Project: *Analysis of climatic changes based on multi proxy data during Holocene from peninsular and Himalayan region* (Project number: 10.2 under XI Five Year Plan (2007-2012))
Status: Completed

EXTRAMURAL / SPONSORED PROJECTS:

Co-Principal Investigator
Project: *Response of forest ecosystem to climate change in the Karnali region of Nepal Himalaya*
Sponsor: Tribhuvan University, Kirtipur, Nepal.
Principal Investigator: Narayan Prasad Gaire, Patan Multiple Campus, Tribhuvan University, Lalitpur, Nepal.
Status of the project: Ongoing

Principal Investigator
Project: *Past climate change and tree line dynamics based on tree-ring data from the Himalayan region*
Sponsor: SERB Division, DST, New Delhi
Status of the project: Completed

Member
Project: *Tree line shift in central Nepal Himalaya and climate reconstruction of past millennia*
Sponsor: Nepal Academy of Science and Technology, Nepal.
Principal Investigator: Tree-ring society of Nepal;
Status of the project: Completed

Co-Principal Investigator
Project: *Analysis of Climatic changes since LGM from South-West continental margin India using multi-proxy data: Pollen, Diatom and Tree-ring data*
Sponsor: ISRO-GBP, India.
Principal Investigator: Dr. Amalava Bhattacharyya, BSIP, Lucknow, India
Status of the project: Completed

PARTICIPATION IN OTHER PROJECTS:

22/08/2003 – 28/03/2007
Worked as: Senior Research Fellow (SRF)
Project/ Principal Investigator: *Analysis of climatic changes in North-east India during last several thousand years using pollen and tree-ring data* / A. Bhattacharyya, BSIP, Lucknow
Sponsor: Department of Science and Technology, New Delhi

01/01/2003 – 30/06/2003
Worked as: Junior Research Fellow (JRF)
Project/ Principal Investigator: *Analysis of climatic changes vis-à-vis glacial fluctuations using pollen and tree-ring data in Gangotri glacier area, Garhwal Himalaya* / A. Bhattacharyya, BSIP, Lucknow
Sponsor: Department of Science and Technology, New Delhi

21/05/2002 – 31/12/2002
Worked as: Junior Research Fellow (JRF)
Project/ Principal Investigator: *Analysis of climatic changes in eastern Himalayan region using tree-ring data* / A. Bhattacharyya, BSIP, Lucknow
Sponsor: Department of Science and Technology, New Delhi

PUBLICATIONS:

Publication's summary:

Total Publication **91** [*Journal Articles, Reviews and Book chapters **85;** Scientific report **6***]

Journal Articles, Reviews and Book Chapters

2026 [85] Rahman TW, Mehrotra N, **Shah SK.** 2026. Dendroclimatic potential of blue intensity in *Abies pindrow* from Himachal Pradesh, western Himalaya. *Journal of Palaeosciences*. (**Accepted**)

[84] Gaire NP, Regmi A, Giri SR, Dhakal BP, Poudel S, **Shah SK**. 2026. Growth and climatic sensitivity of *Rhododendron barbatum* from Western Nepal Himalaya: A Dendrochronological approach. *Journal of Palaeosciences*. (**Accepted**)

[83] Gaire NP, Dhakal YR, Karki K, Desar K. Poudel S, Aryal S, Dhakal BP, **Shah SK**. 2026. Impact of climate change on growth of *Abies spectabilis* at alpine treeline ecotone in Nepal Himalaya. *Banko Janakari* 36(2), 29-43. https://doi.org/10.3126/banko.v36i2.83637

[82] Deeksha, **Shah SK**, Mehrotra N, Singh M. 2026. Climatic drivers of Teak (*Tectona grandis*) radial growth with emphasis on soil moisture variability in northern Chhattisgarh, central India. *Quaternary* 9(1), 8: 1-24. https://doi.org/10.3390/quat9010008

[81] Peña K, **Shah SK**, Bräuning A. 2026. DendroRegulation: Enhancing 'Organic Code of the Environment (COA)' regulations using tree rings in southern Ecuador. *Tree-ring Research* 82(1):1–16. https://doi.org/10.3959/TRR2025-8.

2025 [80] Gaire NP, Dhakal YR, Ghimire S, Bhandari S, Poudel S, **Shah SK**. 2025. Response of *Abies spectabilis* from the treeline ecotone to climate change in Mustang region of Nepal Himalaya. *Forestry: Journal of Institute of Forestry, Nepal* 22(1):1–9. https://doi.org/10.3126/forestry.v22i1.85769.

[79] **Shah SK**, Rahman TW, Mehrotra N, Thomte L, Pandey U, Saikia A, Wiles GC. 2025. Blue is the new colour of Indian Himalayan tree rings: A pilot study on blue intensity of Abies pindrow, a new climate proxy from Kashmir Valley, western Himalaya. *Dendrochronologia* 94, 126438. https://doi.org/10.1016/j.dendro.2025.126438

[78] Mehrotra N**, Shah SK**. 2025. Regional climate and vegetation interactions in the high-altitude forests of North Sikkim, eastern Himalaya: A palynological approach. *Journal of the Palaeontological Society of India* 71(1): 132–145. https://doi.org/10.1177/05529360251378276

[77] Kholdaenko YA, Belokopytova L, Zhirnova DF, **Shah SK**, Mehrotra N, Babushkina EA, Vaganov EA. 2025. Wood anatomical structure of *Picea obovata* in plantation stands of different planting densities. *Dendrochronologia* 94: 126396. https://doi.org/10.1016/j.dendro.2025.126396

[76] Islam N, Vennemanna T, Büntgen U, Krusic PJ, **Shah SK**, Lane SN. Tree-ring based May-June streamflow reconstruction of Zemu River in the Eastern Himalaya. *Journal of Hydrology-Regional studies* 60: 102508. https://doi.org/10.1016/j.ejrh.2025.102508

[75] **Shah SK**. 2025. Assessing climate-growth relationship with monthly and daily climate: A study on tree-rings of *Abies densa* Griff. from North Sikkim, Eastern Himalaya. *Pleione* 19(1): 121-131. https://doi.org/10.26679/Pleione.19.1.2025.121-131

[74] Mehrotra N, **Shah SK**, Malsawmliana, Kar R. 2025. Modern pollen distribution across Mizoram, northeastern India, impacted by regional climate and anthropogenic activities. *The Holocene* 35(4): 434-445. https://doi.org/10.1177/09596836241307299

[73] Husna A, **Shah SK,** Mehrotra N, Thomte L, Deeksha, Rahman TW, Pandey U, Islam N, Gaire NP, Singh D. 2025. Streamflow reconstruction using multi-taxa tree-ring records from Kullu Valley, Himachal Pradesh, western Himalaya. *Quaternary* 8(1): 1-22. https://doi.org/10.3390/quat8010009

2024 [72] Gaire NP, Dhakal YR, **Shah SK**, Fan ZX. 2024. Potential of tree-ring chronologies for multi-centennial streamflow reconstructions: an insight from Nepal. *Proceedings of IAHS* 387: 33-39. https://doi.org/10.5194/piahs-387-33-2024

[71] Belokopytova LV, Zhirnova DF, Mehrotra N, **Shah SK**, Babushkina EA, Veganov EA. 2024. Improving the equation of nonlinear relationships between cell anatomical parameters of conifer wood. *Trees* 38: 1593-1599. https://doi.org/10.1007/s00468-024-02559-w

[70] Tshering C, Thomte L, Dukpa D, **Shah SK**. 2024. Increasing growth sensitivity of *Pinus wallichiana* to summer season maximum temperature – Evidence from central Bhutan Himalaya. *Dendrobiology* 91: 125-136. https://doi.org/10.12657/denbio.091.010

[69] Mehrotra N, **Shah SK**, Kar R. 2024. Palynology: a tool to decipher the impact of anthropogenic activity on palaeo-vegetation - a review based on fossil pollen records from India. In Samanta B, Thakre D. (Eds): *Application of Palynology in Stratigraphy and climate studies*. Springer. Gewerbestrasse, Switzerland. https://doi.org/10.1007/978-3-031-51877-5_8

[68] Singh AK, **Shah SK**, Pandey U, Deeksha, Thomte L, Rahman TW, Mehrotra N, Singh DS, Kotlia BS. 2024. Vegetation Index (NDVI) reconstruction from western Himalaya through dendrochronological analysis of *Cedrus deodara*. *Theoretical and Applied Climatology* 115: 1713-1723. https://doi.org/10.1007/s00704-023-04718-4

[67] Babushkina EA, Zhirnova DF, Belokopytova LV, Mehrotra N, Dergunov DR, **Shah SK**, Veganov EA. 2024. Conifer quantitative wood anatomy as proxy data: application in agricultural yield reconstruction. *Trees* 38: 573-589. https://doi.org/10.1007/s00468-023-02437-x

2023 [66] Pandey U, Nakatsuka T, Mehrotra N, Zhen L, Kato Y, Sano M, **Shah SK.** 2023. Tree-rings stable isotope ($\delta^{18}O$ and $\delta^{2}H$) based 368 years long term precipitation reconstruction of South Eastern Kashmir Himalaya. *Science of the Total Environment* 892*:* 164640. https://doi.org/10.1016/j.scitotenv.2023.164640

[65] Mehrotra N, Basavaiah N, **Shah SK.** 2023. Revisit the Medieval Warm Period and Little Ice Age in Proxy Records from Zemu Glacier Sediments, Eastern Himalaya: Vegetation and Climate Reconstruction. *Quaternary* 6(2): 32 https://doi.org/10.3390/quat6020032

[64] Gaire NP, **Shah SK**, Sharma B, Mehrotra N, Thapa UK, Zan ZX, Aryal PC, Bhuju DR. 2023. Spatial minimum temperature reconstruction over the last three centuries for eastern Nepal Himalaya based on tree rings of *Larix griffithiana*. *Theoretical and Applied Climatology* 152. 895-910. https://doi.org/10.1007/s00704-023-04432-1

[63] **Shah SK**, Berkelhammer M, Li Q, Mehrotra N, Thomte L, Shell R, Pandey U, Gaire NP, Kathayat G, Sinha A. 2023. Regional tree-ring oxygen isotope deduced summer monsoon drought variability for Kumaun-Gharwal Himalaya. *Quaternary Science Reviews* 301: 107927. https://doi.org/10.1016/j.quascirev.2022.107927

[62] Thomte L, **Shah SK**, Mehrotra N, Saikia A, Bhagabati AK. 2023. Dendrochronology in the tropics using tree-rings of *Pinus kesiya*. *Dendrochronologia* 78: 126070. https://doi.org/10.1016/j.dendro.2023.126070

[61] Gaire NP, Fan ZX, Chhetri PK, **Shah SK**, Bhuju DR, Wang J, Sharma B, Peilli S, Dhakal YR. 2023. Treeline Dynamics in Nepal Himalaya in a Response to Complexity of Factors. In Singh SP, Reshi ZA, Joshi, R (Eds): *Ecology of Himalayan Treeline Ecotone*, Springer, Singapore. https://doi.org/10.1007/978-981-19-4476-5_22

[60] Pandey U, **Shah SK**, Mehrotra N. 2023. Fluctuations of Kolahoi glacier, Kashmir valley, its assessment with tree-rings of *Pinus wallichiana* and comparable satellite imageries and field survey records. In Pandey M, Pandey PC, Ray Y, Arora A, Jawak SD, Shukla UK (Eds): *Advances in Remote Sensing Technology and The Three Poles*, John Wiley & Sons Ltd: 203-212. https://doi.org/10.1002/9781119787754.ch13

[59] Deeksha, Mehrotra N, Thomte L, **Shah SK**. 2023. Seasonal and annual rainfall trends in Chhattisgarh, Central India – A study towards understanding hydroclimatic scenario for environmental assessment. In Jain R. (Ed): *Global Environmental Challenges Management & Sustainable Development*. Pratush Publisher, New Delhi.

2022 [58] Mehrotra N**, Shah SK**, Basavaiah N, Kar R. 2022. Middle to Late Holocene climate, vegetation and sea-level changes in NW Tripura, northeast India, based on palynological and mineral magnetic evidence. *Journal of Paleolimnology 68:* 297-313. https://doi.org/10.1007/s10933-022-00249-6

[57] Gaire NP, Zaw Z, Fan ZX, Bräuning A, Sharma B, Dhakal YR, Timilsena R, **Shah SK**, Bhuju DR. 2022. Increasing extreme events in the central Himalaya revealed from a tree-ring based

multi-century streamflow reconstruction of Karnali River Basin. *Journal of Hydrology* 610: 127801. https://doi.org/10.1016/j.jhydrol.2022.127801

[56] Thomte L, Bhagabati AK, **Shah SK.** 2022. Soil moisture-based winter-spring drought variability over West Karbi Anglong region, Assam, Northeast India using tree-rings of *Pinus kesiya*. *Environmental Challenges* 7: 100512. https://doi.org/10.1016/j.envc.2022.100512

[55] Thomte L, **Shah SK**, Mehrotra N, Bhagabati AK, Saikia A. 2022. Influence of climate on multiple tree-ring parameters of *Pinus kesiya* from Manipur, Northeast India. *Dendrochronologia* 71: 125906. https://doi.org/10.1016/j.dendro.2021.125906

[54] **Shah SK**, Mehrotra N, Gaire NP, Thomte L, Sharma B, Pandey U, Katel O. 2022. Potential utility of Himalayan tree-ring $\delta^{18}O$ to reveal spatial patterns of past drought variability – It's assessments and implications. In Kumaran KPN, Padmalal D (Eds): *Holocene Climate Change and Environment*, Elsevier. 265-292. https://doi.org/10.1016/B978-0-323-90085-0.00003-6

[53] Demina AV, Belokopytova LV, Zhirnova DF, Mehrotra N, **Shah SK**, Babushkina EA, Vaganov EA. 2022. Degree of connectivity in reconstructed precipitation dynamics and extremes for semiarid regions across South Siberia. *Dendrochronologia* 71. 125903. https://doi.org/10.1016/j.dendro.2021.125903

2021 [52] Upadhyay KK, **Shah SK**, Roy A, Tripathi SK. 2021. Dendroclimatology of teak indicates prevailing climatic conditions of tropical moist forests in India. *Ecological Indicators* 129: 107888. https://doi.org/10.1016/j.ecolind.2021.107888

[51] Babushkina EA, Zhirnova DF, Belokopytova LV, Mehrotra N, **Shah SK**, Keler VV, Vaganov EA. 2021. Prospects of Using Tree-Ring Earlywood and Latewood Width for Reconstruction of Crops Yield on Example of South Siberia. *Forests* 12: 174. https://doi.org/10.3390/f12020174

2020 [50] Thomte L, **Shah SK**, Mehrotra N, Bhagabati AK, Saikia A. 2020. Response between tree-rings of *Pinus kesiya* and daily climate – A study from Manipur, Northeast India. *The Palaeobotanist* 69: 27-34. https://doi.org/10.54991/jop.2020.28

[49] Gaire NP, Fan ZX, **Shah SK**, Thapa UK, Rokaya MB. 2020. Tree-ring record of winter temperature from Humla, Karnali in central Himalaya: A 229 years-long perspective for recent warming trend. *Geografiska Annaler: Series A, Physical Geography* 102(3): 297-316. https://doi.org/10.1080/04353676.2020.1751446

2019 [48] **Shah SK**, Pandey U, Mehrotra N, Wiles GC, Chandra R. 2019. A winter temperature reconstruction for the Lidder Valley, Kashmir, Northwest Himalaya based on tree–rings of *Pinus wallichiana*. *Climate Dynamics* 53: 4059-4075. https://doi.org/10.1007/s00382-019-04773-6

[47] Speer JH, **Shah SK**, Truettner C, Pacheco A, Bekker MF, Dukpa D, Cook ER, Tenzin K. 2019. Past Flood and River Flow Variability from Extreme Events Recorded in Trees Rings on the Dhur River, Bhutan. *Dendrochronologia* 56: 125606. https://doi.org/10.1016/j.dendro.2019.125605

[46] Upadhyay KK, **Shah SK**, Roy A, Mehrotra N, Tripathi SK. 2019. Dendrochronological potential of *Tectona grandis*, *Pinus kesiya* and *Quercus serrata* from Mizoram, Northeast India. *Indian Journal of Ecology* 46(4): 722-728

[45] Bhandari S, Gaire NP, **Shah SK**, Speer JH, Bhuju DR, Thapa UK. 2019. A 307-year tree-ring SPEI reconstruction indicates modern drought in western Nepal Himalayas. *Tree-ring Research* 75(2): 73-85. https://doi.org/10.3959/1536-1098-75.2.73

[44] **Shah SK**, Singh R, Mehrotra N, Thomte L. 2019. River flow reconstruction of the Lohit River Basin, North-east India based on tree–rings of *Pinus merkus*ii (Merkus pine). *The Palaeobotanist* 68: 113-124. https://doi.org/10.54991/jop.2019.38

[43] Gaire NP, Dhakal YR, **Shah SK**, Fan ZX, Bräuning A, Thapa UK, Bhandari S, Aryal S, Bhuju DR. 2019. Drought (scPDSI) reconstruction of trans-Himalayan region in western Nepal using *Pinus wallichiana* tree-rings. *Palaeogeography, Palaeoclimatology, Palaeoecology* 514: 251-264. https://doi.org/10.1016/j.palaeo.2018.10.026

[42] Mehrotra N**, Shah SK**. 2019, Basavaiah N, Laskar AH, Yadava MG. Resonance of the '4.2ka event' and terminations of global civilizations during the Holocene, in the palaeoclimate records around PT Tso Lake, Eastern Himalaya. *Quaternary International* 507: 206-216. https://doi.org/10.1016/j.quaint.2018.09.027

2018 [41] **Shah SK**, Pandey U, Mehrotra N. 2018. Precipitation reconstruction for the Lidder Valley, Kashmir Himalaya using tree-rings of *Cedrus deodara*. *International Journal of Climatology* 38: 758-773. https://doi.org/10.1002/joc.5405

[40] Babushkina EA, Belokopytova LV, Zhirnova DF, **Shah SK**, Kostyakova TV. 2018. Climatically driven yield variability of major crops in Khakassia (South Siberia). *International Journal of Biometeorology* 62: 939-948. https://doi.org/10.1007/s00484-017-1496-9

[39] Babushkina EA, Belokopytova LV, **Shah SK**, Zhirnova DF. 2018. Past crops yield dynamics reconstruction from tree-ring chronologies in the forest-steppe zone based on low-and high-frequency components. *International Journal of Biometeorology* 62: 861-871. https://doi.org/10.1007/s00484-017-1488-9

[38] Mehrotra N**, Shah SK**. 2018. A preliminary study of the modern pollen of Tripura, Northeast India. *The Palaeobotanist* 67: 21-31. https://doi.org/10.54991/jop.2018.45

[37] Pandey U, **Shah SK**, Mehrotra N. 2016. Tree-ring studies from Kashmir valley: Present status and future perspectives. *Geophytology* 46(2): 207-220.

2017 [36] **Shah SK**, Mehrotra N. 2017. Tree–ring studies of *Toona ciliata* from subtropical wet hill forests of Kalimpong, eastern Himalaya. *Dendrochronologia* 46: 46-55. https://doi.org/10.1016/j.dendro.2017.10.001

[35] Gaire NP, Bhuju DR, Koirala M, **Shah SK,** Carrer M, Timilsena R. 2017. Tree-ring based spring precipitation reconstruction in western Nepal Himalaya since AD 1840. *Dendrochronologia* 42: 21-30. https://doi.org/10.1016/j.dendro.2016.12.004

[34] **Shah SK**, Pandey U, Mehrotra N, Chandra R. 2017. Tree-ring analysis of *Cedrus deodara* in Pahalgam, Kashmir valley, India: influence of climate and regional linkages. *Himalayan Research Journal* II(III): 1-8.

[33] Mehrotra N, **Shah SK**, 2017. The Late Quaternary sediments from Tripura, North-east India: perspective on the constraints of their radiocarbon dating. *Geophytology* 47(2): 221-227.

[32] Mehrotra RC, Mehrotra N, Srivastava G, **Shah SK.** 2017. Occurrence of fossil woods in the Unakoti district, Tripura and their palaeoclimatic significance. *Journal of the Palaeontological Society of India* 62(1): 17-30.

2016 [31] Dhakal YR, Gaire NP, Aryal S, **Shah SK,** Bhandari S, Kunwar U, Rayamajhi S. Treeline shift in central Nepal Himalaya and climate reconstruction of past millennia. 2016 In: Bhuju DR, McLaughlin K, Sijapati J, Devkota BD, Shrestha N, Ghimire GP, Neupane PK. (eds.), Building Knowledge for Climate Resilience in Nepal. Nepal Academy of Science and Technology, Lalitpur. Pp 41-44.

2015 [30] **Shah SK**, Touchan R, Babushkina E, Shishov VV, Meko DM, Abramenko OV, Belokopytova LV, Hordo M, Jevšenak J, Kędziora W, Kostyakova TV, Moskwa A, Oleksiak Z, Omurova G, Ovchinnikov S, Sadeghpour M, Saikia A, Sidenko T, Strantsov A, Tamkevičiūtė M, Tomusiak R, Tychkov I, Sewastynowicz Ł. 2015. August-July precipitation from tree rings in forest-

steppe zone of central Siberia (Russia). *Tree-ring research* 71(1): 37-44. https://doi.org/10.3959/1536-1098-71.1.37

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2014 [28] Bhattacharyya A, Mehrotra N, **Shah SK,** Basavaiah N, Chaudhary V, Singh IB. 2014. Analysis of vegetation and climate change during Late Pleistocene from Ziro Valley, Arunachal Pradesh, Eastern Himalaya Region. *Quaternary Science Reviews* 101: 111-123. https://doi.org/10.1016/j.quascirev.2014.07.008

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[26] **Shah SK**, Shekhar M, Bhattacharyya A. 2014. Anomalous distribution of *Cedrus deodara* and *Pinus roxburghii* in Parbati valley, Kullu, Western Himalaya: An assessment in Dendrochronological perspective. *Quaternary International* 325: 205-212. https://doi.org/10.1016/j.quaint.2013.09.024

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2013 [23] **Shah SK**, Bhattacharyya A, Shekhar M. 2013. Reconstructing discharge of Beas river basin, Kullu valley, western Himalaya based on tree-ring data. *Quaternary International* 286: 138-147. https://doi.org/10.1016/j.quaint.2012.09.029

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2012 [20] **Shah SK**, Bhattacharyya A. 2012. Spatio-temporal growth variability three *Pinus* species of Northeast Himalaya with relation to climate. *Dendrochronologia* 30: 266-278. https://doi.org/10.1016/j.dendro.2012.02.003

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2011 [18] Bhattacharyya A, Mehrotra N, **Shah SK**. 2011. Holocene vegetation and climate of South Tripura based on Palynological analysis. *Journal Geological Society of India* 77: 521-526. https://doi.org/10.1007/s12594-011-0056-x

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2010 [13] Gaire NP, Dhakal YR, Lekhak HC, Bhuju DR, **Shah SK**. 2010. Vegetation Dynamics in Treeline Ecotone of Langtang National Park, Central Nepal. *Nepal Journal of Science and Technology* 11: 107-114.

2009 [12] **Shah SK**, Bhattacharyya A. 2009. Tree-ring analysis of sub-fossil woods of *Pinus wallichiana* from Ziro valley, Arunachal Pradesh, North-East Himalaya. *Journal of Geological Society of India* 74: 503-508.

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2008 [09] Chakraborty S, Dutta K, Bhattacharyya A, Nigam M, Schuur EAG, **Shah SK.** 2008. Atmospheric ^{14}C variability recorded in tree-rings from Peninsular India: implications for fossil fuel CO_2 emission and Atmospheric transport. *Radiocarbon* 50(3): 321-330. https://doi.org/10.1017/S0033822200053467

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2007 [07] Bhattacharyya A, Eckstein D, **Shah SK**, Chaudhury V. 2007. Analyses of climatic changes around Perambiculum, south India based on early wood mean vessel area of teak. *Current Science* 93(8): 1159-1164.

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[05] **Shah SK**, Bhattacharyya A, Chaudhary V. 2007. Reconstruction of June-September Precipitation based on tree-ring data of Teak (*Tectona grandis* L.) from Hoshangabad, Madhya Pradesh, India. *Dendrochronologia* 25: 57-64. https://doi.org/10.1016/j.dendro.2007.02.001

2006 [04] Mehrotra RC, Bhattacharyya A, **Shah SK**. 2006. Petrified neogene woods of Tripura. *The Palaeobotanist* 55: 67-76. https://doi.org/10.54991/jop.2006.96

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2003 [01] Bhattacharyya A, Chaudhary V, **Shah SK.** 2003. Tree-Ring Analysis of Tropical Indian Trees. In *Proceedings of the International PAGES workshop and training program at the French Institute, Pondicherry*, pp 241-242.

Scientific reports

2026 [06] Peña K, Allen K, Robertson I, Edvardsson J, Jevšenak J, Pederson N, **Shah SK**, Islam M, Popa A, Ngoma J, Gaire NP, Kattel DB, Dema J, Jaén-Barrios N, Ferrero ME, Rodríguez-Ramírez EC, Castruita-Esparza LU, Peña R, Bräuning A. 2026. The 2nd International Dendrochronology Conference (ECUADENDRO 2026): Understanding environmental change for sustainable decision-making. *Tree-ring Research*. https://doi.org/10.3959/TRR2026-8 (**In Press**)

2025 [05] Peña K, Kirchhefer AJ, Edvardsson J, Pederson N, Islam M, Bhattacharjee K, Kabir CR, **Shah SK**, Rahman TW, Stahle DW, Groenendijk P, Khan A, Iqbal J, Peña R, Hadad MA, Rinn F. 2025. ECUADENDRO 2025: The 1st Ecuadorian Dendrochronology Conference (Meeting Report). *Tree-ring Research* 81(2): 91-95. https://doi.org/10.3959/TRR2025-2

2023 [04] Mehrotra N, **Shah SK**. 2023. Insight into the 4.2 ka event records in northeastern India: a global connection and the geological evidence. *PAGES Newsletter* 31(1): 28-29. https://doi.org/10.22498/pages.31.1.28

2020 [03] **Shah SK,** Kapur VV, Manoj MC, Srivastava J, Prasad V. 2020. Recent Advancement(s) at the Birbal Sahni Institute of Palaeosciences, Lucknow: An Overview. *Proceedings of Indian National Science Academy 86(1).* 675-688. https://doi.org/10.16943/ptinsa/2020/49826

2016 [02] Bhuju DR, **Shah SK,** Gaire NP. 2016. Environmental reconstruction and impact of climate change on vegetation at tree-lines of Nepal Himalaya. *Annual report of Pro Natura Foundation Japan* 24, pp 24

2014 [01] Mehrotra N, **Shah SK.** 2014. Review of Holocene palaeoclimate of Northeast India based on Pollen records. Quaternary Geology and Climate Change Newsletter 1(1), pp 15-16.

PUBLICATION IN HINDI:

2023 [01] पाण्डेय उत्तम, गाँधी नवीन, **शाह संतोष कुमार**, मेहरोत्रा निवेदिता. २०२३. जलवायु परिवर्तन अनुसन्धान में वृक्षो का योगदान। इंद्रधनुष पत्रिका, अंक २१, पृष्ठ १०-११.

RESEARCH SUPERVISIONS:

***Ph.D. Thesis* [Total: 7]**

2025-Ongoing [07]

Title	:	*Climate sensitivity and growth dynamics across the western Himalayan region using multiple tree-ring parameters of Pinus roxburghii*
Scholar	:	Rutvika Kiritbhai Kahar (Birbal Sahni Research Scholar)
Ph.D. Registration	:	Department of Botany, Lucknow University
Supervisor	:	Dr. Aaditya Abha Singh, Department of Botany, Lucknow University
Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India

2024-Ongoing [06]

Title	:	*Assessing climate driven growth patterns in conifer species in Central-Western Himalaya: A Dendroecological Approach*
Scholar	:	Khushboo Kashyap (UGC-JRF)
Ph.D. Registration	:	Jawaharlal Nehru University, New Delhi, India
Supervisor	:	Prof. Satish Chandra Garkoti, School of Environment Sciences, JNU, New Delhi, India
Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India

2023-Ongoing	[05]	*Title*	:	*Response of forest to climate change in Karnali region of Nepal Himalaya and past climate reconstruction*
		Scholar	:	Yub Raj Dhakal (TU Funded Project Research Scholar)
		Ph.D. Registration	:	Tribhuvan University, Nepal
		Supervisor	:	Prof. Narayan P. Gaire, Department of Environmental Science, Patan Multiple Campus, Tribhuvan University, Lalitpur, Nepal
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2022-Ongoing	[04]	*Title*	:	*Climate reconstruction from Kashmir Valley, northwest Himalaya, based on blue intensity from tree ring*
		Scholar	:	Tanveer W. Rahman (UGC-JRF)
		Ph.D. Registration	:	Department of Geography, Gauhati University, Guwahati, Assam, India
		Supervisor	:	Prof. Anup Saikia, Department of Geography, Gauhati University, Guwahati Assam, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2021-2025	[03]	*Title*	:	*Hydroclimatic variability based on instrumental and proxy records of Chhattisgarh, Central India*
		Scholar	:	Deeksha (DST-INSPIRE Fellow)
		Ph.D. Registration	:	CAS in Geology, Lucknow University, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2018-2022	[02]	*Title*	:	*Climate signals from multiple tree-ring parameter of Pinus kesiya from Northeast India*
		Scholar	:	Lamginsang Thomte (UGC-JRF)
		Ph.D. Registration	:	Department of Geography, Gauhati University, Guwahati, Assam, India
		Supervisor	:	Prof. A K Bhagabati Department of Geography, Gauhati University, Guwahati Assam
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2014-2018	[01]	*Title*	:	*Dendroclimatology of Liddar valley and adjoining areas in Kashmir Himalaya*
		Scholar	:	Uttam Pandey (DST Funded Project JRF)
		Ph.D. Registration	:	CAS in Geology, Lucknow University, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India

***M.Sc. Dissertation*s [Total: 16]**

2026	[16]	*Title*	:	Standardized Precipitation Evapotranspiration Index (SPEI) reconstruction in the Lidder Valley, Western Himalaya using tree-ring width and earlywood blue intensity of *Cedrus deodara* (Himalayan Cedar)
		Student	:	Shiva Mishra

		Affiliation	:	Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Supervisor	:	Dr. Anoop Kumar Singh, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[15]	*Title*	:	Assessing the efficacy of Blue Intensity in tree-rings of *Tsuga dumosa* (Himalayan Hemlock) as a climate proxy in Talle Valley, Arunachal Pradesh, eastern Himalaya
		Student	:	Awantika Kumari
		Affiliation	:	Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Supervisor	:	Dr. Antara Gupta, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2025	[14]	*Title*	:	Aspects of climatic influences on multiple tree-ring parameters of *Tsuga dumosa* from Arunachal Pradesh, eastern Himalaya
		Student	:	Anushka Verma
		Affiliation	:	CAS in Geology, University of Lucknow, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2024	[13]	*Title*	:	Tree-ring $\delta^{18}O$ of Cedrus deodara reflects vapor pressure variations and indicates atmospheric aridity in the Gharwal-Kumaun Himalaya since the 17th Century
		Student	:	Shivani Gautam
		Affiliation	:	Department of Chemistry, University of Lucknow, Lucknow, India
		Supervisor	:	Dr. Shashi Pandey, Department of Chemistry, University of Lucknow, Lucknow, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[12]	*Title*	:	Recent warming trend in tree-ring based August-September temperature reconstruction from North Sikkim, eastern Himalaya
		Student	:	Basunandan Handique
		Affiliation	:	Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Supervisor	:	Dr. Ravindra Kumar, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India

	[11]	*Title*	:	Tree-ring $\delta^{18}O$ based streamflow reconstructions in the Karnali River Basin, Nepal for 223-year (1778-2000 CE)
		Student	:	Smriti Pandey
		Affiliation	:	CAS in Geology, University of Lucknow, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[10]	*Title*	:	Assessment of tree-ring $\delta^{18}O$ as a record of multi-century streamflow reconstruction in Punantsang Chhu Basin, Bhutan Himalaya
		Student	:	Tanu Soni
		Affiliation	:	CAS in Geology, University of Lucknow, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2023	[09]	*Title*	:	*Multispecies tree-ring based streamflow reconstruction in Parvati valley, Western Himalaya, India*
		Student	:	Asmaul Husna
		Affiliation	:	Tropical Forestry, Dresden University of Technology, Germany / Department of Science, University of Copenhagen, Denmark
		Supervisor	:	Dr. Ernst van der Maaten, Institute of Forest Growth and Forest Computer Sciences, Tharandt, Germany
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2020	[08]	*Title*	:	*Snowfall reconstruction of Pahalgam, Lidder valley, Jammu and Kashmir based on tree-rings of Cedrus deodara*
		Student	:	Deeksha
		Affiliation	:	CAS in Geology, University of Lucknow, Lucknow, India
		Supervisor	:	Prof. Munendra Singh, Department of Geology, CAS, Lucknow University
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[07]	*Title*	:	*Snowfall data analysis of Jammu and Kashmir, India*
		Student	:	Ayush Bharti
		Affiliation	:	Department of Energy and Environment, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Supervisor	:	Ms. Priyanka Singh, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2019	[06]	*Title*	:	*Tree-rings study of Pinus wallichiana from Chumey valley, Bumthang, Bhutan*

		Student	:	Jambay Dema
		Affiliation	:	College of Natural Resources, Royal University of Bhutan, Lobesa, Bhutan
		Supervisor	:	Dr. Om Katel, College of Natural Resources, Royal University of Bhutan, Lobesa, Bhutan
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[05]	*Title*	:	*Response of climate on radial growth of Pinus kesiya in East Khasi Hills of Meghalaya, India*
		Student	:	Iaikitkupar Lyngdoh
		Affiliation	:	College of Natural Resources, Royal University of Bhutan, Lobesa, Bhutan
		Supervisor	:	Dr. Om Katel, College of Natural Resources, Royal University of Bhutan, Lobesa, Bhutan
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2017	[04]	*Title*	:	*Tree-ring based streamflow reconstruction for the Lohit basin, Arunachal Pradesh, North-east India*
		Student	:	Rohini Singh
		Affiliation	:	School of Earth Sciences, Department of Geology, Banasthali University, Rajasthan, India
		Supervisor	:	Mr. Amit K. Mishra, School of Earth Sciences, Department of Geology, Banasthali University, Rajasthan, India
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2013	[03]	*Title*	:	*Climatic reconstruction of western Nepal Himalaya spanning over three centuries as inferred from ring-widths of Picea smithiana (Wall.) Boiss*
		Student	:	Udya K. Thapa
		Affiliation	:	Golden Gate Int'l College (affiliated to Tribhuvan University, Kathmandu, Nepal), Nepal
		Supervisor	:	Dr. Dinesh Raj Bhuju, Nepal Academy of Science and Technology, Nepal
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
2009	[02]	*Title*	:	*Forest ecology and tree-ring pattern at the treeline of Langtang National Park, Rasuwa, Nepal Himalaya*
		Student	:	Yub Raj Dhakal
		Affiliation	:	Central Department of Environmental Science, Tribhuvan University, Nepal
		Supervisor	:	Dr. Dinesh Raj Bhuju, Nepal Academy of Science and Technology, Nepal
		Co-Supervisor	:	Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India
	[01]	*Title*	:	*Ecology and Dendroclimatology of Treeline Forest in Langtang National Park, Nepal Himalaya*
		Student	:	Narayan Prasad Gaire
		Affiliation	:	Central Department of Environmental Science, Tribhuvan University, Nepal

Supervisor : Dr. Dinesh Raj Bhuju, Nepal Academy of Science and Technology, Nepal

Co-Supervisor : Santosh K. Shah, Birbal Sahni Institute of Palaeosciences, Lucknow, India

***Internship* supervision [Total: 2]**

2026 [02] Aditi Singh, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India (*Internship on Dendrochronology*)

[01] Prachi Verma, Department of Geology, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, India (*Internship on Dendrochronology*)

SYNERGISTIC ACTIVITIES:

Resource Person / Training instructor

2025 [07] Resource person: Pre-INQUA National Workshop on "*Recent Developments in Quaternary Studies: Focus on NE India" and "National Hands-on Training on Quaternary Microfossils*" at Department of Geology, Gauhati University, Assam; November 24-28, 2025

2022 [06] Imparted training at BSIP, Lucknow on "*Basic Dendrochronology and its application in climate reconstruction*" to a Scientist and a Chief Technical Officer from Institute of Wood Science and Technology, Bangaluru, India; September 12-16, 2022

2018 [05] Instructor for "*Training on Dendrochronology and its application*" held at Resources Himalaya Foundation, Kathmandu, Nepal; organized by Tree-ring Society of Nepal; August 24-25, 2018

[04] Group Leader/ Instructor for field week of project *Dendroclimatology and Dendrohydrology* during *10th World Dendro Conference*; June 2-22, 2018

2017 [03] Training Workshop on *"Tree ring analysis using Matlab and R"* Tree-ring and Environmental Change Group, Xishuangbanna Tropical Botanical Garden (XTBG), Chinese Academy of Sciences, P.R. China; January 31, 2017

2014 [02] Training Workshop on *"Reconstructing Climate Using Dendrochronological Tools"* held at Resources Himalaya Foundation, Kathmandu, Nepal; organized by Tree-ring Society of Nepal; February 3-7, 2014

[01] Training Workshop on "*Concepts in Quaternary climate studies with emphasis on Dendrochronology and Palynology*" held at Srinagar, Garhwal Himalaya, Uttaranchal; organized by BSIP, Lucknow, India; 2009

Editorial Services

2024 [01] Member, Topical Advisory Panel, Quaternary (MDPI Journal) – *Since January, 2024*

2023 [01] Associate Editor, Dendrochronologia (Elsevier Journal) – *Since October, 2023*

Organizer

2022 [04] Co-organizing Secretary, "*The 7th Asian Dendro-Conference & the 7th Chinese Dendro-Conference, Land-sea Interaction and Environmental Issues"*, April 20-24, 2022

2021 [03] Training coordinator, for National virtual training programme *"Quaternary Palynology – Lets explore the fascinating world of pollen & spores"* organised Association of Quaternary Researchers in association with Birbal Sahni Institute of Palaeosciences, Lucknow; February 22-24, 2021.

2019 [02] Local Organizer, for virtual online conference on "*Earth's Changing climate*", Online conference organized by Society of Earth Scientist, October 15-17, 2020

[01] Organizing Secretary of "*AsianDendro 2019 - The 6th Asian Dendrochronology Conference*" held at BSIP, Lucknow during November 24–30, 2019

Scientific Committee Associations

2026 [01] Session Review Committee member: *ECUADENDRO 2026: The 2nd Ecuadorian Dendrochronology Conference " Tree Rings, Climate and Environmental Governance"*; January 22-23, 2026

2025 [01] Member: BSIP Local Working Committee (LWC) for *"XXII INQUA 2027 Congress, India"*; January 28- February 3, 2027

[02] Convenor: Science Program Committee (SPC) for *"XXII INQUA 2027 Congress, India"*; January 28- February 3, 2027

[03] Session Review Committee member: *ECUADENDRO 2025: The 1st Ecuadorian Dendrochronology Conference "Unlocking the Secrets of Time from Tree Rings"*; January 23-24, 2025

2018 [01] *10th World Dendro Conference*; June 2-22, 2018

2015 [01] The fourth *International Asian Dendrochronological Conference on climate change and tree rings*, Kathmandu, Nepal; March 9-12, 2015

Organizing Committee Member

2017 [02] Brainstorming workshop on "*Quaternary Environments and Climates: Focus on Holocene and Anthropocene*" BSIP Lucknow, February 21–23, 2017

2014 [01] National conference on "*Quaternary Climate Change: New approaches and emerging challenges*" BSIP Lucknow, December 15–16, 2014

Session Chaired

2026 [01] Session chair during *PRITHVI 2026 – The Palaeoscience Film Festival of India and National Dialogue on Earth Science Communication*; July 23–25, 2026 at BSIP, Lucknow.

2014 [03] Session chair, during *40th Convention of Indian Association of Sedimentologists and National Conference*; December 11–12, 2014 at BSIP, Lucknow.

2018 [03] Session chair, Dendrohydrology during *10th World Dendro Conference*; June 2–22, 2018

2014 [02] Session chair for session "High resolution Palaeoclimatic Change" during *National Conference on Quaternary Climate Change: New Approaches and Emerging Challenges*" held at BSIP, Lucknow; December 15–16, 2014

2011 [01] Session chair for session "Vegetation and land-cover calibration: Models & Methods" during *IGBP PAGES PHAROS Workshop: Land-cover reconstructions in the monsoon affected tropical world-pollen modelling approach and data synthesis* held at French Institute of Pondichrerry, Puducherry; January 27–29, 2011

External Examiner for PhD viva-voce

2018 [03] Department of Env. Science, Tribhuvan University, Kathmandu, Nepal; August, 2018

2016 [02] Institute of Forestry, Pokhara, Tribhuvan University, Nepal; November, 2016

[01] Department of Environmental Science, Tribhuvan University, Kathmandu, Nepal; September, 2016

PROFESSIONAL MEMBERSHIPS:

- Breakthrough Science Society – *Annual Member*
- Association of Quaternary Researchers (AOQR) – *Life Member*
- Vijnana Bharati (VIBHA) – *Life Member*
- The Indian Science Congress Association – *Life Member*
- Asian Dendrochronology Association (ADA) – *Annual Member*
- East Himalayan Society of Spermatophyte Taxonomy – *Life Member and Fellow*
- The Palaeobotanical Society – *Life Member*
- Palaeontological Society of India – *Life Member*
- Tree-ring society of Nepal – *Life Member*

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