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RESEARCH GROUP:

BIOSTRATIGRAPHY

FIELD OF SPECIALIZATION:

PALEOCLIMATE AND QUATERNARY PALYNOLOGY

EDUCATION:

PhD - Thesis titled “Palynological investigations of peat deposit with respect to the Late Quaternary climate history of the North west Himalaya” 2014. HNBGU, Srinagar, India,

M.Sc. - Geology, HNBGU, Srinagar, India, 2006.

B.Sc. - Geology, Botany and Zoology, HNBGU, Srinagar, India, 2004.

PROFESSIONAL EXPERIENCE:

Scientist – ‘C’, (17-06-2019 to till date) at WIHG, Dehradun.

Scientist – ‘B’, (17-06-2015 to 16-06-2019) at WIHG, Dehradun.

VISITING POSITIONS: NIL

TEACHING EXPERIENCE: NIL

SERVICES:

a. Supervision/Guidance to Ph.D. Students: 02 (In Progress)

b. Training:

1. M.Tech./M.Sc Dissertation supervised: 03
2. Summer/winter trainings supervised: 12

c. Teaching: NA

d. Membership: Nil

e. Editorial Board: NA

f. International/National Seminars/Workshop:

- 1 Sharma, P., **Rawat, S.**, Srivastava, P., Meena, N.K., Agnihotri, R., Kumar, A., Chahal, P., Gahlaud, S.K.S., Shukla, U.K., 2019. High Resolution Climate (Monsoon) Record of the Last Three Millennia Reconstructed from a Multi-Proxy Analysis of an Organic Rich Sediment Deposit (Ladakh-NW Himalaya). AGU Fall Meeting 2019, December 9-13.
- 2 **Rawat, S., and Phadtare N.R.**, 2019. Mid to late Holocene changes in the Indian Summer Monsoon: a multi proxy record from the Bhagirathi valley, Northwest Garhwal Himalaya, 20th Congress of the International Union of Quaternary Research (INQUA) – 2019, Dublin, Ireland, July 25-31.
- 3 Rawat, V., **Rawat, S.**, Negi, P.S., Kotlia, B.S., 2019. A ~ 6000year high resolution continuous paleoproductivity and paleoenvironmental record reconstructed from the paleolake sediments of Pinder valley, Garhwal Himalaya, 20th Congress of the International Union of Quaternary Research (INQUA) – 2019, Dublin, Ireland, July 25-31.
- 4 Choudhurimayum Pankaj Sharma, **Suman Rawat**, Pradeep Srivastava, Narendra K. Meena, Rajesh Agnihotri, Anil Kumar, Poonam Chahal, S.K.S. Gahlaud, U. K. Shukla. 2019. High resolution climate record of the last ~3 ka from a multi proxy analysis of an organic rich sediment deposit (Ladakh-NW Himalaya) in 3rd NGRSM, WIHG, Dehradun 6-8 June.
- 5 Shweta Singh, Anil K. Gupta, **Suman Lata Rawat**, Santosh K. Rai, Ajoy K. Bhaumik. 2019. Multiproxy approach to understand tipping elements of the Indian summer Monsoon in the central Ganga Basin in 3rd NGRSM, WIHG, Dehradun 6-8 June.

- 6 **Rawat S.**, Kumar, P., Sinha, A., 2018. Centennial to millennial scale climate and vegetation changes during Holocene in the Central-Western-Himalaya, **65th Accelerator User Workshop** at IUAC. 16 December, 2018
- 7 Rawat, V., **Rawat, S.**, Negi, P.S., Kotlia, B., 2018. Organic Carbon records of Climate Changes since Mid-Holocene from Garhwal, Uttarakhand Himalaya. In: National Conference on Earth System Science with special reference to Himalaya: advancement and challenges, WIHG, Dehradun, May 16-18.
- 8 **Rawat, S.** 2018. Late Quaternary climate records: A multi proxy Approach from Lahaul Himalaya, French Institute of Pondicherry, Pondicherry, India. 29 Jan to 4 Feb, 2018.
- 9 **Rawat, S.**, Gupta, A.K., Negi, P.S., 2017. Mid to late Holocene climate variability in Garhwal Himalaya, India, 5th OSM PAGES, Zaragoza Spain, May 9-13.
- 10 **Rawat S.**, 2015. Mineral magnetic record of Late Pleistocene- Holocene environmental changes in lake and peat deposits of Lahaul, NW Himalaya. 30th Himalaya Karakoram Tibet Workshop (HKT 2015), WIHG, Dehradun, October 6–8, Page 286-287.
- 11 Srivastava, P., Sundriyal, Y.P., Kumar, A., **Rawat S.**, Rana, N.K., Wasson, R.J., Agnihotri, R., Meena, N.K., Ziegler, A.D., 2015. Paleoflood records in Himalaya. In 30th Himalaya-Karakoram-Tibet Workshop (HKT 2015), WIHG, Dehradun, October 6-8, Page 55.
- 12 **Rawat S.**, Gupta, Anil K., Sangode. S.J., Srivastava, P., Nainwal, H.C., 2015. Reconstruction of climate variability during the last ~13000 years in the Lahaul, NW Himalaya: A multi proxy approach. XIX INQUA Congress, Nagoya Japan, July 26-August 2.
- 13 **Rawat S.**, Gupta, Anil K., Sangode. S.J., 2013. Multi proxy climate record back to AD 497 from Lahaul, Northwest Himalaya, India. XXIV Indian colloquium on micropaleontology and stratigraphy, WIHG, Dehradun, November 18-20.
- 14 **Rawat, S.**, Gupta, Anil K., Sangode, S.J., Phadtare, N.R., Nainwal, H.C., 2013. Reconstruction of Late Quaternary climate change as derived from a pollen record from Lahaul Himalaya, Himachal Pradesh, India. PAGES, YSM & PAGES OSM “The Past: A Compass for Future Earth” Goa, February 11-16.
- 15 **Rawat, S.**, Phadtare, N.R., Sangode, S.J., 2011. Reconstruction of Late glacial to early Holocene vegetation and climate history based on pollen record from the lake sediments in

Himachal Pradesh, India. XXIII Indian colloquium on micropaleontology and stratigraphy, Bangalore University, Bangalore, December 9-11.

- 16 **Rawat, S.**, Phadtare, N.R., Sangode, S.J., 2011. Late-glacial pollen evidence of the Younger Dryas cold event from the lake sediments in Himachal Pradesh, India. International conference on Indian monsoon and Himalayan Geodynamics, WIHG, Dehradun, Nov 2-5.
- 17 **Rawat, S.**, Sangode, S.J., Phadtare, N.R., Suresh, N., 2009. A mineral magnetic record of warm - humid climate around 6 Ka BP in the NW Higher Himalaya. Climatic changes during the Quaternary, National Institute of Oceanography, Goa, India October 22-23.

Workshops/trainings attended

1. Participated in PAGES co-funded LandCover6K working group meeting "**Pollen based estimates of past land cover in South and Southeast Asia: A first evaluation of results, methods and new approaches in view of climate (and paleoclimate) models incorporating the monsoon system**" at French Institute of Pondicherry, Pondicherry, India from 11th to 14th September, 2019.
2. Attended and presented work for the utilization of AMS radiocarbon ¹⁴C dating facility in **65th Accelerator User Workshop** at IUAC, New Delhi on 16th December, 2018.
3. Attended **Women Scientist and Entrepreneur Conclave at India International Science Festival-2018** held at Lucknow from 5th to 8th October, 2018.
4. Attended one day workshop on **Technological empowerment of women** organized by NASI, New Delhi on 08.03.2018.
5. Attended and presented work in INQUA-HaBCom, "**Methods and Challenges for Quantitative Palynology and Paleoecology in South Asia**" at French Institute of Pondicherry, Pondicherry, India from 29th Jan to 4th February, 2018. **Rawat, S.**, 2018. Late Quaternary climate records: A multi proxy Approach from Lahaul Himalaya.
6. Attended "**Workshop on Geochronology**" from 16 – 17 November, 2017 at IUAC, New Delhi.
7. Attended **TOC instrument installation training** at WIHG, Dehradun from 1-3 April, 2017.
8. Attended "**Urja Sangam-2015**" organized by ONGC Videsh Limited at New Delhi on 27 March, 2015.
9. Participated in DST-SERB Winter School on "**Quaternary geology and climate change**" from 6 - 19 January, 2014 at Dept. of Geology, Univ. of Pune, Pune.
10. Participated in Brainstorming session on "**Palaeoclimate records from the Ganga Plain**" from 3 - 4 April, 2014 at WIHG, Dehradun.
11. Participated in SERC School on "**Global Warming and Climate Change**" organized by Department of Science and Technology and Centre for Climate Change Research, IITM from 1 - 21 December, 2010 at IITM Pune.

12. Participated in Workshop on “**Application of Morphometric analysis in palaeontology**” (MAP) from 25 July - 8 August, 2010 at WIHG, Dehradun.
13. Attended ‘Geomatics-2009 Tutorials’ on “**Geomatics in Disaster Management**” from 2 - 3 February, 2009 at IIRS, Dehradun.

g. External Research Fund received & Project Handled:

- i. **Principal Investigator (PI)** in Science and Engineering Research Board (SERB), Department of Science & Technology (DST) sponsored **Early Career Research Award project** (ECR/2017/001046/EAS) entitled “**Holocene centennial to millennial scale changes in Indian summer monsoon: a multi proxy record from high altitude regions of Uttarakhand Himalaya**” from Aug, 2017 to July, 2020 (**Project grant: Rs. 40, 46,200/-**).
- ii. **CO-PI**: “Education and awareness program for earthquake preparedness and hazard mitigation: Chakrata and other tribal regions of Uttarakhand”. Sanction letter no. 7754,244/01/2017/WIHG/A.P./Estt. (**Project grant: Rs. 37, 8600**). **Team members**: A. Paul, P. Kumar, **Suman Lata Rawat** and P. Bisht.

h. Member of important Committees:

One of the **Convener** of “*National Geo-Research Scholars meet*”, organized at WIHG, Dehradun from July 1 to 4, 2016.

AWARDS/FELLOWSHIPS/HONORS/MEMORIAL LECTURES:

a. Awards/Medals/Prizes:

- i. **Prof. R. C. Misra Gold Medal in 2018** for outstanding contribution in the field of geo-scientific research. *Received on June 29, 2018 at WIHG, Dehradun.*
- ii. **Wadia Institute Foundation Day Best Paper Award-2015** for the research paper entitled “*Late Pleistocene – Holocene vegetation and Indian summer monsoon record from the Lahaul, Northwest Himalaya, India*” published in **Quaternary Science Reviews** 114, 167-181. **Impact factor: 4.334**. *Received on June 29, 2016 at WIHG, Dehradun.*

b. Fellowships:

c. Memorial Lectures: Nil

d. Recognition/Honors:

The International association of Lions clubs District 321-C1 has felicitated with “**Nari Shakti Ratan Award**” in recognition of inspiring women through self-reliance, self-esteem and self-confidence and intelligence in our social dynamics on 28 April, 2019.

COUNTRIES VISITED:

Japan: **XIX INQUA Congress** and presented one paper July 26-Aug 2, 2015

Spain: **5th OSM PAGES Meeting** and presented one paper May 9-13, 2017

Ireland: **20th INQUA Congress at Dublin, Ireland**” from **25th to 31st Jul, 2019**

NATIONAL/INTERNATIONAL (outside DST-WIHG) COLLABORATION:

Inside WIHG Collaborator:

PATENT NA

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SCHOLARSHIPS AWARDED, GATE

Ph.D. Advisors:

Prof. Anil K. Gupta, Indian Institute of Technology, Kharagpur and **Prof. H. C. Nainwal**, HNB Garhwal University

LIST OF PUBLICATIONS

(a) SCI Papers

1. Sharma, P., **Rawat, S.**, Srivastava, P., Meena, N.K., Agnihotri, R., Kumar, A., Chahal, P., Gahlaud, S.K.S., Shukla, U.K., 2020. High-resolution climatic (monsoonal) variability reconstructed from a continuous ~2700-year sediment record from Northwest Himalaya (Ladakh). **The Holocene 30 (3)**, 441–457.

2. Sangode, S.J., Meshram, D.C., **Rawat, S.**, Suresh, N., Srivastava, P. 2017. Sedimentary and geomorphic observations along Pangong strand of the Karakoram fault (NW Himalaya) depicting Holocene uplift. **Himalayan Geology** 38(2), 111-128.
3. Sangode, S.J., Meshram, D.C., **Rawat, S.**, Kulkarni, Y., Chate, D.M., Gudadhe, S.S., 2017. Sedimentary and geomorphic signatures of a cloud burst and triggered flash floods in the Indus valley of Ladakh Himalaya. **Himalayan Geology** 38(1), 12-29.
4. Srivastava P., Kumar, A., Chaudhary, S., Meena, N., Sundriyal, Y.P., **Rawat, S.**, Rana, N.K., Perumal, J., Bisht, P., Sharma, D., Agnihotri, R., Juyal, N., Wasson, R.J., Ziegler, A.D. 2017. Paleoflood records of Himalaya. **Geomorphology, SI: Quaternary of Himalaya**. 284, 17-30. <http://dx.doi.org/10.1016/j.geomorph.2016.12.011>.
5. **Rawat, S.**, Gupta, Anil K., Srivastava, P., Sangode, S.J., Nainwal, H.C. 2015. A 13,000 year record of environmental magnetic variations in the lake and peat deposits from Chandra valley, Lahaul: Implications to Holocene monsoonal variability in the NW Himalaya. **Palaeogeography Palaeoclimatology Palaeoecology** 440, 116–127. <http://dx.doi.org/10.1016/j.palaeo.2015.08.044>.
6. **Rawat, S.**, Gupta, Anil K., Sangode S.J., Srivastava, P., Nainwal, H.C. 2015. Late Pleistocene – Holocene vegetation and Indian summer monsoon record from the Lahaul, Northwest Himalaya, India. **Quaternary Science Reviews** 114, 167-181. <http://dx.doi.org/10.1016/j.quascirev.2015.01.032>.
7. Sangode, S.J., **Rawat, S.**, Meshram, D.C., Phadtare, N.R., Suresh, N. 2013. Integrated mineral magnetic and lithologic studies to delineate dynamic modes of depositional conditions in the Leh valley basin, Ladakh Himalaya, India. **Geological Society of India** 82, 107-120.
8. **Rawat, S.**, Phadtare, N.R., Sangode, S.J. 2012. The Younger Dryas cold event in NW Himalaya based on pollen record from the lake sediments in Himachal Pradesh, India. **Current Science** 102(8), 1193-1198.
9. Sangode, S.J., Phadtare N.R., Meshram, D.C., **Rawat, S.**, Suresh, N. 2011. A record of lake outburst in the Indus Valley of the Ladakh Himalaya, India. **Current Science** 100(11), 1712-1718.

(b) Non-SCI Articles: Nil

- (c) Chapter in Books: Nil**
- (d) Books-authored/Edited volume: Nil**
- (e) Abstract volume: Nil**
- (f) Reports/Other Documents: Nil**
- (g) Articles in Proceeding Volumes: Nil**