

Curriculum Vitae-Gurmeet Kaur



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Education:

Ph.D, Panjab University, Chandigarh, India

M.Sc. (Hons. School) Geology, Panjab University, Chandigarh, India

B.Sc. (Hons. School) Geology, Panjab University, Chandigarh, India

Specialization: Petrology, Mineralogy, Geochemistry

Post-doctoral fellow at Lakehead University, Thunder Bay, ON, Canada.

Awards and Honours:

- i. Editorial board member** for the book series: 'Natural stones and world heritage' with CRC publisher/Balkema (Taylor and Francis Group).
- ii. IUGS Publications committee member** from August 2018 onwards.
- iii. Vice chair** representing south Asia (IUGS Subcommittee on Heritage Stones). Member - Executive Board of the Heritage Stone Subcommittee.
- iv. Visiting Scholar** (June, 2015 to August, 2015) at Department of Geology, Lakehead University, Thunder Bay, Ontario, Canada.
- v. Visiting faculty** (13 to 17 July, 2015) at Laurentian university, Sudbury, Ontario, Canada.

- vi. Visiting Scholar from June, 2014 to July, 2014 (2 months) at Department of Geology, Lakehead University, Thunder Bay, Ontario, Canada.
- vii. Visiting Scholar from June, 2013 to August, 2013 (3 months) at Department of Geology, Lakehead University, Thunder Bay, Ontario, Canada.
- viii. **Best poster presentation award** at the 10th International Kimberlite Conference held at Bangalore, 2012.
- ix. **Best Oral Presentation award** at a National conference organized by Rajiv Gandhi National University of Law, Patiala, Punjab in March, 2016.
- x. Awarded partial funding from **11th IKC committee** to attend and present research work at the 11th International Kimberlite Conference held at Gaborone, Botswana in September, 2017.
- xi. Awarded partial funding from **Panjab University through (University Grants Commission), New Delhi, India** to attend 35th IGC at Cape Town, South Africa.
- xii. Awarded full funding from the **Indian National Science Academy, New Delhi** to attend 34th IGC at Brisbane, Australia.
- xiii. Awarded full funding from the **33rd IGC committee and Department of Science and Technology, India** to attend 33rd IGC at Oslo, Norway.
- xiv. Awarded full funding from **10th IKC committee** to attend and present research work at the 10th IKC held at Bangalore, India.
- xv. Elected fellow of **Geological Society of India** in 2004.
- xvi. Qualified Joint **CSIR-UGC National Eligibility Test (NET)** and Eligibility for Lectureship, 1997.
- xvii. Awarded Junior Research Fellowship (JRF) for three years (1998-2001) from **Council for scientific and Industrial Research, New Delhi**.
- xviii. Awarded Senior Research Fellowship (SRF) for two years (2001-2003) from **Council for scientific and Industrial Research, New Delhi**.
- xix. Awarded National Merit Scholarship in B.Sc. (Hons. School).

International/ National Conference presentations:

- i. Attended EGU session on Heritage stones in April 2019 and presented posters on Himachal slates, Jaisalmer limestones, Jpdhpur sandstone with a proposal for their Global Heritage Stone Resource designation.

- ii. Attended Salamanca stone workshop in the 1st week of October, 2018 and presented posters on Vindhyan sandstone, Makrana marble and Deccan basalt and trachyte from India for proposing them as Global Heritage Stone Resources.
- iii. Presented research work on Gundrapalli lamproite from Ramadugu lamproite field, India at the 11th International Kimberlite Conference held at Gaborone, Botswana from 18th to 22nd September, 2017.
- iv. Presented research work on (i) lamproites from Vattikod, India and (ii) Saga of mining: the Indian Scenario at the 35th International Geological Congress held at Cape Town, South Africa from 28th August to 2nd September, 2016.
- v. Presented research work on kimberlites from India at the 34th International Geological Congress held at Brisbane, Australia from 5th to 10th August, 2012.
- vi. Presented research work on kimberlites from India at the 10th International Kimberlite Conference held from 6th to 11th Feb., 2012 at Bangalore, India.
- vii. Presented research work on bimodal volcanics from central India at the 33rd International Geological Congress held at Oslo, Norway from 5th to 14th August, 2008.
- viii. Presented papers in more than **two dozen International and national** conferences and seminars organized in **India** in the last ten years.

Invited Talks:

- i. Invited talk at Indian Institute of Science (IISc), Bangalore on '**Mineralogical Studies and their relevance vis-à-vis Indian Kimberlites and Lamproites**' on 30th June, 2017
- ii. Invited talk in the monthly lecture series of the Geological society of India, Bangalore on '**Relevance of Mineralogical Studies on Kimberlites and Lamproites: The Indian Scenario**' on 28th June, 2017.
- iii. Invited talk on '**Exotic minerals and rocks**' on 30th April, 2017 at DST-Inspire camp organized by Chandigarh University.
- iv. Delivered Popular invited talk on '**Diamonds and kimberlites**' at the Panjab Engineering college, Chandigarh in March, 2017.
- v. Invited talk on '**Diamonds**' at CHASCON-2009, Panjab University, Chandigarh, India.

Resource person at academic events:

- i. Mentor for senior school students at the Department of Science and Technology-INSPIRE camp organized at Panjab University in March, 2018.
- ii. Mentor for senior school students at the Department of Science and Technology-INSPIRE camp organized at Panjab University in November, 2017.
- iii. Resource person for college students at the Department of Science and Technology-INSPIRE camp organized at Chandigarh University, April, 2017.
- iv. Mentor for senior school students at the Department of Science and Technology-INSPIRE camp organized at Panjab University in November, 2016.
- v. Mentor for senior school students at the Department of Science and Technology-INSPIRE camp organized at Panjab University in April, 2017.
- vi. Course content writer of post graduate courses in Environment Science and Diploma courses of Indira Gandhi National Open University, New Delhi
- vii. Unit writer for e- PG pathshala (e-content for post graduate students), University Grants Commission, New Delhi

Projects completed:

- i. Young scientist DST project (2004-2008) awarded by Department of Science and Technology, Govt. of India, New Delhi.
- ii. Member of National working group of UNESCO funded project **IGCP-557: Diamonds, Xenoliths and Kimberlites (2007-2012)**
- iii. PURSE project sponsored by Department of Science and Technology, Govt. of India(2009-2012).

Ongoing International Project: IGCP 637 Heritage stone designation.

Funded by IUGS and UNESCO. Leaders: Dolores Pereira/Barry Cooper/Brian R. Pratt/Piero Primavori/Maria Heloisa/Gurmeet Kaur

Ph.D. students under supervision

- i. Degree Awarded: 2
- ii. Pursuing: 4

Project Work (Student nos.)

- i. Masters Project work: 10 students

Field Exposure in India and Abroad (Important ones):

- Architectonic heritages of Delhi, Jaipur, Agra, Fatehpur Sikri, Mumbai, Pune, Jaisalmer, Jodhpur, Jaipur, Puri, Konark, Bhubaneswar to name a few.
- Basalt quarries of Maharashtra
- Marble quarries of Makrana and Aandhi, Rajasthan
- Panna, Madhya Pradesh (the only functional diamond mine of India)
- Kimberlite and lamproite fields of south India
- Pb-Zn mines in Rajasthan
- Copper mines in Rajasthan
- Bimodal volcanic rocks of central India
- Deccan traps of south India (basalts and trachytes)
- Vindhyan Sandstones
- Nepheline syenite complex of Rajasthan
- Granites from Rajasthan, Central India and south India
- Jhamar Kotra phosphorite (stromatolitic) quarry of Rajasthan.

IUGS Heritage Stone Project:

Presented posters on popular stones from India at EGU held in Vienna, Austria from 7th to 12th April 2019.

- Gurmeet Kaur et al., 2019: Proterozoic Himachal Pradesh Slate: A Heritage Stone
- Parminder Kaur, Gurmeet Kaur et al., 2019: Jaisalmer Golden Limestone and Sandstone: A Heritage Stone Province from the Desert of Western India.
- Amritpaul Singh, Gurmeet Kaur et al., 2019: Jodhpur Sandstone: An Architectonic Heritage Stone from India

Presented posters on popular stones from India at Stone workshop at Salamanca held in October 2018 proposing them as Global Heritage Stone Resources.

- Gurmeet Kaur et al. 2018: Vindhyan Sandstone: The crowning glory of architectonic Heritage from India
- Gurmeet Kaur et al. 2018 The late Cretaceous/Paleogene Deccan traps: A Global Heritage Stone province from India
- Sanchit Garg et al. 2018 Makrana marble: A global Heritage Stone Resource from northwest India

Research publications:

Gurmeet Kaur, Singh, S., Parminder Kaur, Garg, S., Fareeduddin, Pandit, M. K., Agrawal, P., Acharya, K. Anuvinder Ahuja (2019): Vindhyan Sandstone: a Crowning Glory of Architectonic Heritage from India. *Geoheritage*, Springer Berlin Heidelberg, 1-13. <https://doi.org/10.1007/s12371-019-00389-8>

Gurmeet Kaur and R H Mitchell (2019): Mineralogy of the baotite-bearing Gundrapalli lamproite, Nalgonda district, Telangana, India, *Mineralogical Magazine*, Cambridge journals, 1-11 (In press). <https://doi.org/10.1180/mgm.2018.169>

Garg, S., Parminder Kaur, Pandit, M., Fareeduddin, **Gurmeet Kaur**, Kamboj, A. and Som Nath Thakur (2019): Makrana Marble: a Popular Heritage Stone Resource from NW India. *Geoheritage*, Springer Berlin Heidelberg, Volume 11(3), pp. 909–925. <https://doi.org/10.1007/s12371-018-00343-0>.

Gurmeet Kaur, Makki, M.F., Avasia, R.K., Bhusari, B., Duraiswami, R., Pandit, M., Fareeduddin, Baskar, R and Kad, S. (2019): The Late Cretaceous-Paleogene Deccan Traps: a Potential Global Heritage Stone Province from India. *Geoheritage*, Springer Berlin Heidelberg, Volume 11(3), pp. 973–989. <https://doi.org/10.1007/s12371-018-00342-1>

Gurmeet Kaur*, Mitchell, R. H. and Suhel Ahmed (2018): Mineralogy of the Vattikod lamproite dykes, Ramadugu Lamproite Field, Nalgonda District, Telangana: A possible expression of ancient subduction-related alkaline magmatism along Eastern Ghats Mobile Belt, India, *Mineralogical Magazine*, DOI: <https://doi.org/10.1180/minmag.2017.081.045>.

Gurmeet Kaur and Mitchell, R. H. (2016): Mineralogy of the P-12 K-Ti-richterite diopside olivine lamproite from Wajrakarur, Andhra Pradesh, India: Implications for subduction-related Mediterranean-type magmatism in eastern India, *Mineralogy and petrology*, Vol. 110, 223-245.

Gurmeet Kaur and Mitchell, R. H. (2013): Mineralogy of P2-West ‘Kimberlite’, Wajrakarur Kimberlite Field, Andhra Pradesh, India: Kimberlite and Lamproite? *Mineralogical Magazine*, Vol. 77 (8), 3175-3196.

Gurmeet Kaur*, Korakoppa, M. M., Fareeduddin and Pruseth, K. L. (2013): Petrology of P-5 and P-13 “kimberlites” from Lattavaram kimberlite cluster, Wajrakarur Kimberlite Field, Andhra Pradesh, India: Reclassification as lamproites. *Proceedings of the 10th International Kimberlite conference*, Springer, Vol. 1, 183-194.

Bhargava, O.N., **Gurmeet Kaur*** and Deb. M (2011). A Paleoproterozoic paleosol horizon in the lesser Himalayas and its regional implications. *Journal of Asian Earth Sciences*, Elsevier, Amsterdam, vol. 42(6), 1371-1380.

Gurmeet Kaur* and Mehta P. K. (2007). Geochemistry and Petrogenesis of Jasrapura granitoid, North Khetri Copper Belt, Rajasthan: Evidence for Island Arc Magmatism. *Jour. Geol Soc. India*, Springer, v 69, 319-330.

Gurmeet Kaur* and Mehta, P. K. (2005). The Gothara Plagiogranite: Evidence for Oceanic Magmatism in a Non-ophiolitic Association; North Khetri Copper Belt, Rajasthan, India. *Journal of Asian Earth Sciences*, Elsevier, Amsterdam, vol. 25, 805-819.

Gurmeet Kaur* and Mehta, P. K. (2004). Petrology and geochemistry of three granitoid bodies of north Khetri Copper Belt, Rajasthan-A Preliminary Report. Jour. Geol. Soc. India, Springer, v 64, 353-360.

E Resource:

Chapter in E-Book: Earth processes and Resources

Deb, M. and **Gurmeet Kaur (2008)**. Metallogeny. (National Science Digital Library), Council of Scientific and Industrial Research, New Delhi. 1-52. To cite or link to this item: <http://nsdl.niscair.res.in/123456789/567>

E-PG pathshala (Ministry of Human Resource and Development)

Gurmeet Kaur and Shashi Kad (2018). Geological time scale and geologic processes.

Unit writer for Post-Graduate Diploma in Environmental and Occupational Health (PGDEOH) courses, Indira Gandhi National Open University (IGNOU), New Delhi:

Co-Convener, EGU, Vienna, Austria (April 2019)

Co-convened a session ERE7.2/EOS11.2 in EGU-2019 at Vienna, Austria on the theme 'Heritage Stones: construction and restoration materials for sustainable development'

Co-Convening a session on Heriatge stones, 36th IGC, Delhi, India (March 2020)

Organising two field trips to Architectonic heritage sites and Historic quarries of north India at the 36th IGC, Delhi, India in March 2020.

Letter of Motivation and my vision for the HSS in the Next four years

The natural stones have immensely contributed to the magnificent architectonic heritage built across the globe reflecting their unique cultural ethos over different time frames. The IUGS – HSS initiative is a right step forward in promoting culturally important natural stones used in built architectonic heritage. The designation of a stone which has played a pivotal role in the cultural evolution of any civilization as a Global Heritage Stone Resource (GHSR) is a great way to promote stones globally on a common platform. The GHSR's designation has profound impact in the fields of geology, archaeology, engineering geology, architecture, historical quarries, present day functional quarries, conservation and restoration of architectonic heritage.

I passionately feel connected to the cause of promoting GHSR's within and outside the geological realm where people from field of archaeology, conservation architecture, engineering geology, cultural studies and also people interested in natural stones without having formal degrees in geology can be involved with the existing natural stone heritage of their country. These stones if fulfill the GHSR criteria laid down by HSS can be subsequently proposed for designation of GHSR's. The joining hands of people from diverse fields will also take care of awareness, protection, conservation and restoration of the architectonic heritage of their respective nation.

Since 2017, I hold the position of Vice-Chair representing south Asia in the IUGS Subcommittee on Heritage Stones. This wonderful opportunity has given me a platform to contribute to the Heritage Stone Subcommittee and I am currently engaged in promoting heritage stones of India. I have involved people from different fields such as archaeology, architecture, mining, cultural studies besides the geologists in the various heritage stone projects I am currently working on. I am passionate about heritage stones and their architectonic and cultural connect. I am working to get recognition for heritage stones from around the world and spread awareness about the same.

For future, the global linkage of active groups of people involved in promoting heritage stones of their country can be integrated through Heritage Stone Subcommittee and a broad database can be created. The models/case studies of restoration of architectonic heritage and

historic quarries can be shared amongst different nations with a common goal to safeguard our natural stones and architectonic heritage for the future generation of the world.

Some of my achievements in the field of Heritage stones

1. Have published three papers on heritage stones of India in an International reputed journal **Geoheritage** (details given in my CV).
2. Attended the first stone workshop at Salamanca and presented three posters on heritage stones from India.
3. Coordinated review of four GHSR proposals, out of which three have been ratified as GHSR's from the IUGS executive.
4. Co-convended a session on heritage stones at EGU, Vienna in April 2019. Presented three posters and one talk alongwith my team mates.
5. Our proposal of Makrana marble for designation of GHSR has been recently ratified by IUGS and thus Makrana marble becomes the first GHSR from Asia. It is a great achievement for me and my team currently working on many heritage stones of India.
6. I am also collaborating with people from Brazil and Spain for some of the Indian heritage stones and soon we will publish our collaborative research on these stones.
7. I am going to edit a special volume on heritage stones for Episodes with two of my colleagues and HSS board members from Brazil and Spain to be published in December 2020.
8. Co-convencing a session on Heritage Stones in In the 36th International Geological Congress scheduled to be held in March 2020 in Delhi, India.
9. Organizing two field trips to architectonic heritage sites and historic quarries during the 36th IGC in Delhi, India in March 2020.