## Curriculum vitae (CV)

Name: **Dr. Ravikant Vadlamani**
Date of Birth: 31 October, 1963

### Scientific Interest:

Crustal evolution
Evolution of orogens including Paleoproterozoic accretionary systems Neoproterozoic-Cambrian East African orogenic system in Antarctica and Cenozoic Himalayan collisional system using petrology, geochemistry and chronology
Geochronology (Rb-Sr, Sm-Nd, Lu-Hf, Pb-Pb and U-Pb systematics)
Geochronology of chemogenic sedimentary rocks
Geochemistry of Archean TTG and Greenstone Belts

### Present Position and address (since March 2018):

Professor, Department of Geology & Geophysics, *Indian Institute of Technology, Kharagpur-721302*
(e-mail: vravikant@gg.iitkgp.ac.in; ravikant.vadlamani@gmail.com;
Office: +91 03222-281808; Mobile: +91 9874925825)

Permanent Address: 10-31/A, Temple Alwal, Secunderabad-500010, Telengana, India (+91-40-2797-1310)

### Positions held

1. Associate Professor, Department of Geology & Geophysics, *Indian Institute of Technology,* Kharagpur-721302, June 2014 to March 2018
2. Associate Professor, Department of Earth Sciences, *Indian Institute of Science Education and Research* (IISER) Kolkata, Mohanpur-741252, July 2010 to June 2014.
3. Assistant Professor, *Indian Institute of Technology, Roorkee-247667,* October 2007-July 2010.
4. Geologist (Senior) at the Geochronology and Isotope Geology Division, Kolkata, February 2003 till September 2007
5. Geologist (Junior) in the *Geological Survey of India (Govt. of India)* at Regional Geology Division, Sikkim, Antarctica Division, Faridabad, from June 1988 till February 2003.

### Educational qualifications:

*1. PhD. 2002, CSIR-National Geophysical Research Institute, Hyderabad, India.*
On "Structural, metamorphic and geochronological studies of granulites and associated rocks from Schirmacher Oasis, East Antarctica", Thesis Supervisor: Prof K. Gopalan.
*2. M.Tech (Applied Geology), Indian Institute of Technology, Kharagpur, 1986-1988 (CGPA 8.71).*
*3. M.Sc. (Applied Geology), Indian Institute of Technology, Bombay, 1984-1986 (CPI 8.86).*
*4. B.Sc. (Hons.), Fergusson College, University of Poona, Pune, 1981-1984 (First Class).*
*5. HSC (12 Standard, Maharashtra Board of High Secondary Education, Pune Division)-1981 (77%)-Loyola Junior College, Poona-411007*
*6. SSC (10 Standard, Maharashtra Board of Secondary Education, Pune Division)-1979 (72%)-Loyola High School, Poona-411007*

### Teaching Experience

*IISER Kolkata*

1. ES1201-Earth System Processes, core course for First Year students
2. ES3102-Mineralogy & Geochemistry, Third Year core course

3. ES3202-Igneous and Metamorphic Petrology, Third Year core course and ES3204-Laboratory
4. ES3105-Structural and lithological fieldwork for Third year students
5. ES4201-Precambrian and Phanerozoic Geology, Fourth year core course
6. ES5201-Mountain Building Processes, Fifth year course

*IIT Kharagpur*
7. GG40002 Geoexploration
8. EX41005/GG40225 Earth and Planetary Systems
9. GG20003 Paleontology and Stratigraphy
10. GG30002/GG30214 Stratigraphy (Precambrian geology section)
11. GG21207/GG20005 Introduction to Earth Science
12. GG60015 Isotope Geology and Environment Modelling/Applied Isotope Geology
13. GG50026 Dynamics of the Indian Lithosphere
14. GG29005/GG29209 Introduction to Earth Science *Laboratory course*
15. GG38002 *Geological Fieldwork* (basic structural geology and metamorphism)
16. EX38002 *Geological Fieldwork* (basic structural geology and metamorphism)
17. GG28002 *Geological Fieldwork* (basic lithological mapping)
18. GG58006 *Geological Fieldwork* (sedimentary geology)

## Dissertations Supervised

PhD: 4 (+2)

1. Saju Varghese - Petrogenesis of gold in the Wynad Gold Field, southern India- *awarded in 2015 at IIT Roorkee*
2. Chiranjeeb Chatterjee - Geology and geochemistry of the Vinjamuru domain, Krishna Province, southeastern margin of the Eastern Dharwar craton *awarded in 2017 at IISER Kolkata*.
3. Avishek Adhikari - Geochemistry and geochronolog of the Iron Ore Group greenstone succession, Singhbhum craton *awarded 2024 at IIT Kharagpur (UGC SRF)*
4. Shreya Mukherjee - Petrology and geochronology of the Bhopalpatnam Granulite Belt, Bastar *awarded 2023 at IIT Kharagpur (CSIR SRF)*
5. Ankita Nandi - Geochronology of Paleoarchean TTG and supracrustal components in the Bastar craton *(ongoing, CSIR SRF at IIT Kharagpur)*
6. Rimjhim Singh - *(ongoing, at IIT Roorkee, jointly with Profs S Bajpai and AS Maurya)*

M Tech: 9

1. Piyali Chanda 2010. Strontium isotopic constraints for the age of Eocene marine mammal horizons of Kutch, Gujarat. (IIT Roorkee, with Prof Sunil Bajpai)
2. Monotrisha Dey 2010. Stratigraphic implications of strontium isotopic data from Cambay Shale, Vastan Lignite Mine, Dist. Surat, Gujarat. (IIT Roorkee, with Prof Sunil Bajpai)
3. Ayan Das 2010. Limitations of Strontiun Isotope Stratigraphy: a case study on the marine Late Cretaceous sequences of Peninsular India. (IIT Roorkee, with Prof Sunil Bajpai)
4. Anupam Mandal-Geochemistry and isotopic chemistry of the Kandra igneous complex: implications for active eastern Dharwar cratonic margin tectonics (IIT Kharagpur, 2016)
5. Debadutta Barik-Geochemistry and geochronology of the Chakradharpur and Arkasani granitoids, Singbhum Group (IIT Kharagpur, 2016)

6. Sandipan Mitra Structure and geochronology of the mylonitic rocks comprising the Terrane Boundary Shear Zone between the Eastern Ghats Belt and the Bastar craton (IIT Kharagpur, 2017)
7. Jobin, M.J. Petrology and geochemistry of the L6 Komar Gaon ordinary chondritic meteorite (IIT Kharagpur, 2017)
8. Pranil Basu. Geochemistry of the Bengpal Group metavolcanic rocks, southern segment of Bastar craton, south-central India. (IIT Kharagpur, 2023)
9. Abhishek Pandey. Geochemistry and petrogenesis of the Bengpal Group metavolcanic rocks, southern segment of Bastar craton, south-central India. (IIT Kharagpur, 2024)

M Sc: 42

1. Prashant Kumar Dubey 2008. Geochemistry of hot spring waters. (IIT Roorkee, with Prof GJ Chakrapani)
2. Arahana Rohan David John 2009. Preliminary $^{87}Sr/^{86}Sr$ analysis of selected fossil taxa from the Tertiary of Gujarat. (IIT Roorkee, with Prof Sunil Bajpai)
3. Chiranjeeb Chatterjee 2011. Geochemistry of metavolcanic rocks around Vinjamuru, Nellore district, Andhra Pradesh. (IISER Kolkata)
4. Shakil Hashmi 2012. Geochemistry and petrogenesis of porphyritic granite from the SE margin of the Eastern Dharwar Craton. (IISER Kolkata)
5. Mayank Gupta 2012. Geochemistry and petrogenesis of mafic and ultramafic rocks around Kandra, Nellore district, Andhra Pradesh. (IISER Kolkata)
6. Anvesh Reddy 2013. Geochemistry and petrogenesis of mafic and ultramafic rocks of the Singhbhum craton, East Singhbhum district, Jharkhand. (IISER Kolkata)
7. Om Prakash Kaptan 2014. Polycyclic Precambrian-aged metamorphism in the rocks of the Krishna Province, SE margin of the Eastern Dharwar craton (co-supervised with Prof Somnath Dasgupta). (IISER Kolkata)

*From IIT Kharagpur*

8. Nishant V Meshram 2015. Petrology and geochemistry of granites of the Bastar craton, Orissa.
9. Vivek Kumar 2016. Geochemistry and petrology of the Shyok Volcanics and Pangong Tso migmatite, Ladakh Transhimalaya.
10. Kuldeep Kumar 2016. Geochemistry and petrology of ultramafic cumulates in mafic NE-SW trending dyke swarm in Singhbhum craton
11. Rabishankar Hembram 2016. Petrography of the Chakradharpur granite and the Arkasani granite
12. Shivkant Rajwad 2016. Geochemistry of the Eastern Ghats Belt-Bastar craton contact deformation zone
13. Mohit Kedia 2016. Geochemistry of cherts of the Eastern Iron Ore Group, Singhbhum craton, Orissa
14. Abhishek Kumar 2016. Petrography and textures of Tso Morari ultra high pressure retrograde P-T-t-d path
15. Dilip Kumar Kisku 2017. Geochemistry of the Chakradharpur granitoids, Singhbhum orogen.
16. Suprateem Chakraborty 2017. Petrology of ultramafic components within Singhbhum dyke swarms and its implications.
17. Rahul Kumar 2017. Geochemistry of chert of the western-IOG, Singhbhum craton
18. A. Sharmila. 2017. Isotope programs for data reduction of spiked and double spiked samples.
19. Kumar Shubham. 2017. Geochemistry and tectonic setting of the Jagannathpur metalavas, Singhbhum craton.

20. Vinoy D'Souza. 2018. Petrology and geochemistry of ultramafic-mafic cumulates of dyke swarm in Singhbhum.
21. Rajeev Rajak. 2018. Geochemistry of multiple dyke swarm sets in Singhbhum craton and their correlation.
22. D Narayan Rao. 2018. Sm-Nd isotopic systematics on a MC-ICPMS without the use of spikes.
23. Nischay 2018. Setting up of Pb-Pb isotopic systematics and analysis using a MC-ICPMS.
24. Mita Utaman, 2019. Orbital simulation of planets like Saturn, Jupiter and Earth to study their orbital evolution (co-Supervised with Prof S. Bharadwaj, Department of Physics, IIT Kharagpur)
25. Somesh Gupta, 2019. Mantle metasomatism of the Singhbhum craton SCLM: evidence from Sr and Nd iotope compositions of Neoarchean and Paleoproterozoic dyke swarm sets.
26. Inayath Noon 2020. Petrography of the lower ultramafic-mafic zone rocks, Nidar ophiolite, SE Ladakh.
27. Vikas, J. 2020. Petrography of the selected eclogitic pods, Tso Morari dome, SE Ladakh
28. Tanush Chandra, K. 2022. Rubidium-Strontium isotopic study an Archean migmatite around Bijapur, Chhattisgarh
29. Vamshi, G. 2022. Rubidium-Strontium isotopic study of biotite from Paleoarchean trondhjemite around Markampara, Chhattisgarh
30. Raghuvaran D. 2022. Preliminary zircon Uranium-Lead chronology of Paleoarchean granite around Dalli-Rajhara, Balod district, Chhattisgarh
31. Venkata Sai Krishna, Gani. 2022. Measurement of Nd model ages of selected granitoid rocks in the Bastar Craton, Chhattisgarh
32. Dwimu Mushahary. 2022. Preliminary Zircon U-Pb chronology of granodiorite from the Bastar craton, Sukma district, Chhattisgarh.
33. Kirti Vardhan 2023. Determining the numerical age of the Karai Formation using Strontium Isotope Stratigraphy (SIS), Cauvery basin
34. Pradyneel Dharmadhikari 2023. Determining the numerical age of the Dalmiapuram Formation using Strontium Isotope Stratigraphy (SIS), Cauvery basin
35. Sameer Gautam 2023. Determining the Pb-model age of galena and chalcopyrite from Mouriya VMS mineralization, Betul Belt, central India
36. Sumanth Reddy 2023. Determining Sr and Nd isotopic composition of phlogopite and olivine from Cretaceous lamprophyre, Raniganj coal basin, to characterize mantle source metasomatism
37. Ved Vinayak Chaudhary 2023. Determining Sr and Nd isotopic composition of Bushe chemostratigraphic unit Cretaceous Deccan Basalt around Pune, Maharashtra, to characterize mantle source composition
38. Thanmai Munagala. 2024. Unravelling the chronological age of the Dalmiapuram Formation through Strontium Isotope Stratigraphy (SIS): a stratigraphic analysis if interformational relations.
39. Arupalli Ram Mohan Gowd. 2024. Strontium Isotope Stratigraphy of the Karai Formation, Cauvery Basin.
40. Aniruddh Solanki. Review and compilation of dyke paleomagnetic data to reconstruct Indic cratons during 2.0-1.7 Ga.
41. Aditya. Review and compilation of dyke paleomagnetic data to reconstruct Indic cratons during 2.37-2.0 Ga.
42. Prakruti Dehariya. Review and compilation of dyke paleomagnetic data to reconstruct Indic cratons during 1.4-0.0.77 Ga.

## Research Projects, Collaborations, Technical Committee member and outreach

1. Participated in *four Indian Scientific Expeditions to Antarctica* (1991-92, 94-95, 96-97 and 2003-04). Many related aspects of petrological, isotopic and geochemical studies are still being carried out.
2. Visiting Scientist, 2001, Instrumentation Centre, Micromass, Manchester, UK.
3. Visiting Scientist, 2001, Isotope Geology Centre, Southampton Oceanographic Centre, Southampton, UK.
4. Visiting Scientist, 2006-2007, Institute of Geochronology, University of Brasilia, Brazil under *Indian National Science Academy (INSA)* Scientists Bilateral Exchange Program.
5. Managed the *DST National Facility on Isotope Geology and Geochronology* at IIT Roorkee for three years (2007-2010)
6. Collaborative work "On the stratigraphical subdivision and correlation of the early Precambrian of China and Asia"(No. 1212010611802 ) with the Geological Survey of China and *Chinese Academy of Geological Sciences-Beijing SHRIMP Center* for correlation between early Precambrian of the Indian, North China and Siberian cratons (October, 2010).
7. Visiting Scientist, 2012, Institute of Geology & Geophysics, State Key Laboratory for Lithospheric Evolution, *Chinese Academy of Sciences (CAS). Ongoing* collaboration with Profs Jiamin Wang and Fuyuan Wu, IGG, CAS
8. *Member, National Working Group* of International Geological Correlation Program Project-502 on Global correlation and timing of Volcanic-hosted massive sulfide (VHMS) ore deposits (IGCP-502).

*Funded Research Projects*

9. *Co-investigator*, DST Project on "Lode gold mineralization in the Southern Granulite Terrain" with IIT Roorkee (2010-2014, completed).
10. *Principal-investigator*, CSIR Project on "Constraining tectonic setting of the Paleoproterozoic Krishna Province metaigneous rocks: implications for the geodynamic history of the active Eastern Dharwar cratonic margin" (2013-2017, completed,)
11. *Principal-investigator*, ISIRD Project, IIT Kharagpur on "How and when did one of the earliest terrestrial secondary crusts form: an approach utilizing Sr, Nd and Hf isotopic geochemistry from Archean mafic rocks in the Singhbhum craton" (2015-2018, completed)
12. *Principal Investigator*, MoES Project "Inferring Paleoarchean crustal evolution of the Bastar craton from granitoids and their supracrustal enclaves using geochemistry and U-Pb, Sm- Nd and Lu-Hf geochronology" [Co-PI Prof MK Bera] *ongoing*
13. *Co-Principal Investigator*, MoES Project "Unrevealing the true magnitude of the Paleocene- Eocene Carbon Isotope Excursion from Equatorial marginal marine carbonate succession of NE India" [with PI Prof MK Bera] *ongoing*
14. *Principal Investigator*, CSIR project "Constraining the Paleoproterozoic convergent tectonic history of the Eastern Dharwar- Bastar cratonic margin: Sm-Nd and Lu-Hf geochronology of the Bhopalpatnam and Karimnagar granulite-facies rocks" *Rs 18 lakh) ongoing*
15. *Co-PI* STARS-MHRD *"*Does the Ediacaran Shuram Excursion represent a globally synchronized diagenetic event?"- Rs 99 lakhs) [with PI Prof MK Bera]. *Ongoing*

*Committee Member*

16. *Committee Member*-Ministry of Earth Sciences (MoES) Project Assessment and Monitoring Committee (PAMC)-Geosciences (term 2017-2020 and 2020-2023)
17. *Research Advisory Committee (RAC) Member* of the DST-Birbal Sahni Institute of Paleosciences (BSIP), Lucknow (term 2014-2018)
18. *Eastern Region, Exploration and Research Advisory Committee (ERAC) Member* of the DAE-Atomic Minerals Directorate (AMD), ER (term 2018-2021)
19. *Committee Member*-Technical Committee, MoES-Inter University Accelerator Center (IUAC) - National Geochronology Facility, New Delhi.
20. *Coordinator-Science Program, 36 IGC,* with Prof PP Chakraborty (Delhi University), on *Theme No.3 "Proterozoic Earth and the Boring Billion",* slated to be held in March 2020, New Delhi.
21. *APEX, Exploration and Research Advisory Committee (ERAC) Member* of the DAE-Atomic Minerals Directorate (AMD), AMD (term 2021-2024)
22. *Committee Member*-Board of Examiners for Scientists and JRF, MoES-Inter University Accelerator Center (IUAC) - National Geochronology Facility, New Delhi.

*Scientific Outreach*

23. *Invited Speaker* Department of Earth Sciences, IIT Kanpur (2015), IIT (ISM) Dhanbad (2017), Centre for Earth Sciences, IISc Bangalore (2017).
24. *INSA Science* Popular Talk for school children at IIT Kharagpur on Antarctic Science on Science Day (February 28, 2016).

## Scientific Publications

Complete list of refereed publications – *papers till 2004 have focus on structural geology and metamorphic petrology, whereas thereafter, most of the work focuses on the applications of geochronology and isotope geochemistry to geological problems*

49. Singh, A., Gaurav Kumar, Singh, C., Ravi Kumar, M., Uthaman, M., Vadlamani, R., Dutta, A., Saikia, D., Dubey, A.K. Evidence for an imbricated lower crust and its role in accommodating crustal shortening in Sikkim Himalaya (under RR review in Tectonics [AGU, 2023TC008044].
48. Singh, R., Vadlamani, R., Bajpai, S., Maurya, A. Strontium isotope stratigraphy of marine Oligocene-Miocene sedimentary successions of Kutch Basin, Western India. *Geological Journal*. DOI: 10.1002/gj.4961.
47. Nandi, A., Mukherjee, S., Sorcar, N., Vadlamani, R., 2023. Relict Mesoarchean (2.99–2.94 Ga) metamorphism overprinted by late Neoarchean tectonothermal event (s) from the Sukma Group supracrustal rocks, Bastar craton, India: Evidence from new Lu-Hf and Sm-Nd garnet isochron and Th-U-total Pb monazite ages. *Precambrian Research*. 390, 107056.
46. Nandi, A., Kumar, T.V., Babu, E.V.S.S.K., Vadlamani, R., 2023. Uranium-Pb ages of detrital zircon from the Mesoarchean Sukma and Neoarchean Bengpal supracrustal groups: Evidence for unconformable stratigraphic relations and implications for Precambrian stratigraphy of the Bastar Craton, southcentral India. *Journal of Asian Earth Sciences*. 251, 105671.
45. Mukherjee, S., Vadlamani, R., 2023. Early Mesoproterozoic (1.72-1.68 Ga) convergence between Bastar and Eastern Dharwar cratons along the Bhopalpatnam orogen, southcentral India and implication for paleogeography of supercontinent Columbia. *Precambrian Research*, 393, 107086
44. Sruthi P. S., Samanta, A., BouDagher-Fadel, M., Mukherjee, S., Vadlamani, R., Bera, M.K. 2022. Increasing primary productivity in the oligotrophic tethyan coastal ocean during the Paleocene-

Eocene warming episode. *Global and Planetary Change.* https://doi.org/10.1016/j.gloplacha.2022.103898

43. Mukherjee, S., Adhikari, A., Nicoli, G., Vadlamani, R. 2022. Neoarchean (~2.73–2.70 Ga) accretionary history of the eastern Dharwar Craton, India: Lu-Hf and Sm-Nd garnet geochronologic constraints from the Karimnagar granulite-facies supracrustal enclaves. *Precambrian Research* 375, 106657
42. Adhikari, A., Vadlamani, R. 2022. Petrogenesis of the Mesoarchean (~3.05 Ga) mafic volcanics from the western Iron Ore Group volcano-sedimentary succession, Singhbhum craton, eastern India: Constraints from geochemical modelling and Sm-Nd geochronology. *Lithos*, 412-413, 106596
41. Adhikari, A., Nandi, A., Mukherjee, S., Vadlamani, R. 2021. Petrogenesis of Neoarchean (2.80–2.75 Ga) Jagannathpur volcanics and the Ghatgaon and Keshargaria dyke swarms, Singhbhum craton, eastern India: Geochemical, Sr–Nd isotopic and Sm–Nd geochronologic constraints for interaction of enriched-DMM derived magma with metasomatised subcontinental lithospheric mantle. *Lithos* 400-401, 106373.
40. Adhikari, A., Mukherjee, S., Vadlamani, R. 2021. A plume - mantle interaction model for the petrogenesis of komatiite - komatiitic basalt - basalt - basaltic andesite volcanism from the Paleoarchean (3.57–3.31 Ga) Iron Ore Group greenstone belts, Singhbhum craton, India: Constraints from trace element geochemistry and Sm–Nd geochronology. *Lithos* 398-399, 106315.
39. Vadlamani, R., Chalapathi Rao, N.V. 2020. Archean Evolution of the Bastar Craton-present Status. *Proceedings Indian National Science Academy* 86(1), 81-86. DOI: 10.16943/ptinsa/2020/49809
38. Vadlamani, R., Pant, N.C. 2020. Precambrian/Early Paleozoic Orogenic Rocks in the Himalaya - Remnants of the Leading Edge of the Indian Plate. *Proceedings Indian National Science Academy* 86(1) 167-173. DOI: 10.16943/ptinsa/2020/49836
37. Mukherjee, S., Adhikari, A., Vadlamani, R. 2019. Constraining the Paleoproterozoic (~1.7Ga) collisional orogenesis between the Eastern Dharwar and Bastar cratons: new Sm-Nd garnet isochron and Th-U-total Pb monazite chemical ages from the Bhopalpatnam orogen, central India. *Lithos* 350-351, 105247.
36. Vadlamani, R., 2019. Cambrian garnet Sm-Nd isotopic ages from the polydeformed Bolangir anorthosite complex, Eastern Ghats Belt, India: implications for intraplate orogeny coeval with Kuunga orogeny during Gondwana assembly. *Journal of Geology* 127, 437-456.
35. Vadlamani, R., Bühn, Bernard, Pimentel, M.M. 2018. Zircon U-Pb age constraints for Tonian-early Cryogenian deposition of metasedimentary rocks from the Schirmacher Oasis, East Antarctica: implications for correlations across the Mozambique Ocean. *Polar Science*. https://doi.org/10.1016/j.polar.2018.07.004
34. Sreenivasan, S.P., Bera, M., Samanta, A., Vadlamani, R. 2018. Paleocene-Eocene carbon isotopic excursion (CIE) from the shallow-marine-carbonate sequence of Northeast India: Implication to the CIE magnitude and geometry. *Journal of Earth System Science*, 105, 127. doi.org/10.1007/s12010-018-1018-0
33. Pant, N.C., Roy, S., Ravikant, V., Ravindra, R. 2017. Recent contributions to Antarctic Geology-an Indian perspective. *Proceedings Indian National Science Academy* 83(2), 269-278.

32. Chatterjee, C., Vadlamani, R, Kaptan, O.P. 2016. Paleoproterozoic Cordilleran-style accretion along the south eastern margin of the Eastern Dharwar craton: evidence from the Vinjamuru arc terrane of the Krishna orogen, India. *Lithos* 10.1016/j.lithos.2016.08.0151.
31. Sahoo, A.K., Krishnamurthi, R., Ravikant, V., Pruseth, K.L., Narayanan, M., Varghese, S., Pradeepkumar, T. 2015. Genetic aspects of gold mineralization in the Southern Granulite Terrain, India. *Ore Geology Reviews*; doi.org/10/1016/j.oregeorev.2015.07.019
30. Vadlamani, R., Wu, F-Y., Ji, W-Q. 2015. Detrital zircon U-Pb age and Hf isotopic composition from foreland sediments of the Assam Basin, NE India: constraints on sediment provenance and tectonics of the Eastern Himalaya. *Journal of Asian Earth Sciences* 111, 254-267.
29. Chalapathi Rao, N.V., Srivastava, R.K., Sinha, A.K., Ravikant, V. 2014. Petrogenesis of Kerguelen mantle plume-linked Early Cretaceous ultrapotassic lamprophyres.with affinities to lamproites from the Gondwana sedimentary basins, Damodar Valley, Eastern India. *Earth Science Reviews* 136, 96-120.
28. Vadlamani, R., Hashmi, S., Chatterjee, C., Ji, W-Q., Wu, F-Y. 2014. Initiation of the intra–cratonic Cuddapah basin: evidence from Paleoproterozoic (1995 Ma) anorogenic porphyritic granite in Eastern Dharwar Craton basement. *Journal of Asian Earth Sciences,* 79, 235-245.
27. Ravikant, V*.,* Kröner, A, Vasudevan, D., Wendt, I., Tobschall, H., Chatterjee, C. 2013. Zircon evaporation ages and geochemistry of metamorphosed volcanic rocks from the Vinjamuru domain, Krishna Province: evidence for 1.78 Ga convergent tectonics along the southeastern margin of the Eastern Dharwar Craton. *Geological Journal* 48: 293–309. DOI: 10.1002/gj.2441.
26. Vadlamani R., Wu, F-Y., Ji, W-Q. 2011. U-Pb and Hf isotopic constraints of detrital zircon from the Himalayan foreland Subathu sub-basin on the Tertiary of the Himalaya. *Earth and Planetary Science Letters*, 304(3-4):356-368
25. Ravikant, V., Golani, P.R., Dharwadkar, A., Ravindra, R. 2011. Petrology and geochemistry of the Grubergebirge anorthosite and marginal rocks, central Dronning Maud Land: further characterization of the Late Neoproterozoic magmatic event in East Antarctica. *Journal of the Geological Society of India*, 78(1):7-18
24. Ravikant, V., Golani, P.R. 2011. Rb-Sr direct dating of pyrite from the Pipela VMS Zn-Cu prospect, Rajasthan, NW India. *Journal of the Geological Society of India,* 77(2):149-159.
23. Clementz, M.T., Bajpai, S., Ravikant, V., Thewissen, J.G.M., Singh, I.B., Prasad, V., Sarvanan, S. 2011. Early Eocene warming events and the timing of terrestrial faunal exchange between India and Asia. *Geology*, 39(1):15-18.
22. Bera, M.K., Sarkar, A., Chakraborty, P.P., Ravikant, V., Choudhury, A.K. 2010. Forced regressive shoreface sandstone from Himalayan foreland: implications to early Himalayan tectonic evolution. *Sedimentary Geology*, 229(4):268-281.
21. Pruseth, K.L., Ravikant*, V.,* Varghese, S., Krishnamurthi, R. 2009. Mantle-derived carbonate fluid alteration and gold mineralization in Southern Granulite Terrain, Wynad, India. In: Srivastava, R.K. (Ed.) *Dyke Swarms: Keys to Geodynamic Interpretation, Springer* [Proceedings of the 6 International Dyke Conference], Chapter 8.
20. Ravikant, V., Bajpai, S. 2010. Strontium isotope evidence for the age of Eocene fossil whales of Kutch, western India. *Geological Magazine*. 137 (3), 73-77.
19. Dubey, P., Ravikant., V., Chakrapani, G.J. 2010. Strontium isotopic composition in selected hot water springs in the northwestern Himalaya. *Himalayan Geology* 31(1), 19- 22.
18. Ravikant, V. 2010. Palaeoproterozoic (~1.9 Ga) extension and rifting along the eastern margin of the Eastern Dharwar Craton, SE India: new Sm-Nd isochron age constraints from anorogenic mafic magmatism in the Neoarchean Nellore greenstone belt. *Journal of Asian Earth Sciences,* 37(1): 67-81.

17. Ravikant, V. 2009. Tectono-metamorphic events recorded in high-grade rocks from Filchnerfjella: further evidence for Pan-African reworking of the Grenville-aged crust in central Dronning Maud Land, East Antarctica. *Indian Journal of Geosciences*, 63(2): 1-12.
16. Ravikant, V., Wu, F-Y., Ji, W-Q. 2009. Zircon U–Pb and Hf isotopic constraints on petrogenesis of the Cretaceous–Tertiary granites in eastern Karakoram and Ladakh, India. *Lithos*, 110:153-166.
15. Ravikant, V. 2008. Late Neoproterozoic Orogenesis in the central Dronning Maud Land, East Antarctica: a review of tectonothermal events affecting rocks of the Schirmacher Oasis (~660–580 Ma) and Filchnerfjella (~570–530 Ma). *Geological Survey of India Special Publication No.91, Pan–African event in India and Antarctica*, pp156–170.
14. Ravikant, V., Laux, J. H. and Pimentel, M.M. 2007. Sm-Nd and U-Pb isotopic constraints for crustal evolution during Late Neoproterozic from rocks of the Schirmacher Oasis: geodynamic evolution coeval with the East African Orogeny. In: *Antarctica: A Keystone in a Changing world-Online proceedings of the 10$^{th}$ ISAES*, edited by A,.K. Cooper, C.R. Raymond et al., *USGS Open-File Report 2007-1047*, Short Research Paper 007, 5 p.; doi:10.3133/of2007-1047.srp007.
13. Ravikant, V. 2006. Sm-Nd isotopic evidence for Late Mesoproterozoic metamorphic relics in the East African Orogen from the Schirmacher Oasis, East Antarctica. *Journal of Geology*, 114 (5):615-625.
12. Ravikant, V. 2006. Utility of Rb-Sr geochronology in constraining Miocene and Cretaceous events in the eastern Karakoram, Ladakh, India. *Journal of Asian Earth Sciences*, 27(4):534-543.
11. Ravikant, V., 2005. Metamorphism of mafic and ultramafic enclaves within granulites, Schirmacher Oasis, East Antarctica. *Journal of the Geological Society of India*, 65(3):279-290.
10. Ravikant, V., Bhaskar Rao, Y.J., and Gopalan, K. 2004. Schirmacher Oasis as an extension of the East African Orogen into Antarctica: new Sm-Nd isochron age constraints. *Journal of Geology*, 112:607-616.
9. Ravikant, V., Tapan Pal and Dipankar Das. 2004. Chromite from the Nidar ophiolite and Karzok Complex, Transhimalaya, eastern Ladakh: their magmatic evolution. *Journal of Asian Earth Sciences,* 24:177-184.
8. Ravikant, V. 2003. Metamorphic conditions from the Taglang La Formation, Tso Morari complex, SE Ladakh: general inferences for the tectonics of the NW Indian continental margin. In: Anand Mohan (Ed.) Milestones in Petrology, *Memoir of the Geological Society of India*, Paper No.19, pp. 409-425.
7. Ravikant, V., Guha, D. 2002. Report of post-collisional ultrapotassic lamprophyre dyke from the Ladakh batholith, NW Himalaya. *Journal of the Geological Society of India*, vol 59 (5), pp. 473-476
6. Ravikant, V. 1998. Preliminary thermal modelling of the massif anorthosite-charnockitic gneiss interface from Gruber Mountains, central Dronning Maud Land, East Antarctica. *Journal of the Geological Society of India*, vol 51(9), pp.287-300.
5. Ravikant, V., Kundu, A. 1998. Reaction textures of retrograde pressure-temperature-deformation paths from granulites of Schirmacher Hills, East Antarctica. *Journal of the Geological Society of India*, vol 51(3), pp.305-314.
4. Ravikant, V., Bejarniya, B.R., Mukerji, S., Kaul, M.K. 1997. Late Proterozoic granitic orthogneiss from North Payer-Weyprecht Mountains, East Antarctica: their tectonometamorphic history and regional correlation. *In: C.A. Ricci (Ed.) The Antarctic Region: Geological Evolution and Processes, Siena, Italy.* pp. 55-63.
3. Ravikant, V. 1993. A note on the structural pattern and gneiss-metasedimentary relations in the Central Crystalline Complex (Higher Himalaya) of East Sikkim, Eastern Himalaya. *Journal of Himalayan Geology*, vol 4(2), pp. 131-141.

2. Bhattacharyya, D.S., Ghosal, A., and Ravikant, V. 1990. Chhotanagpur granite gneiss in relation to the schistose rocks around Murhu, Ranchi district, Bihar: a structural approach. *Proceedings of the Indian Academy of Sciences (Earth and Planet. Sci.),* K. Naha, S. K. Ghosh, and D. Mukhopadhyay (Guest Eds.) Special Issue on Structure and Tectonics: the Indian scene, vol 99, pp. 269-277.
1. Ravikant, V. 1996. Comments on "Geochemistry of polyphase gneisses from Schirmacher Oasis, by S.M. Hussain and V. Divakar Rao", Journal of the Geological Society of India, vol 47(3), pp.302-312". *Journal of the Geological Society of India,* vol 48 (11) pp. 598-601.

## Technical Reports, Department of Ocean Development (DOD)- Antarctica Division / National Center for Antarctic and Ocean Research, Government of India

1. *Ravikant, V.,* Dharwadkar, A., Golani, P.R. and Ravindra, R. 2007. Petrology and geochemistry of the Grubergebirge anorthosite and marginal rocks, central Dronning Maud Land: further characterization of the Late Neoproterozoic magmatic event in East Antarctica. (*DOD Tech. Publ. No. 21) 23 Indian Antarctic Expedition.*
2. *Ravikant, V.*, Jayapaul, D. and Asthana, R. 2000. The geology of Filchnerfjella, Orvin Mountains, central Dronning Maud Land, East Antarctica. Scientific Report, *DOD Tech. Publication No.14*, pp. 211-243. *16 Indian Antarctic Expedition.*
3. *V.Ravikant*.1998. Explanatory note to the *Geological Map of the Schirmacher Oasis,* central Dronning Maud Land, East Antarctica (scale 1: 25,000). Published by the Geological Survey of India. (map prepared by *V.Ravikant*)
4. Bejarniya, B.R., *Ravikant, V.*, and Kundu, A.1998. Field structural relations and petrological studies of rocks from Conrad Mountains, central Dronning Maud Land, East Antarctica. Scientific Report, *DOD Tech. Publication No.12,* pp. 127-152. *14 Indian Antarctic Expedition*.
5. Bejarniya, B.R., *Ravikant, V.*, Mukerji, S., Nautiyal, S.C., Oberoi, L.K. and Gill, A.S.1995. Geology of the Payer-Weyprecht Mountains, central Dronning Maud Land, East Antarctica. Scientific Report, *DOD Tech. Publication No.9*, pp. 121-144. *11 Indian Antarctic Expedition.*

## List of Abstracts and posters in Symposia and Seminars

1. Mukherjee, S., R, Vadlamani. 2023. India, part of Columbia or not? Reassessment from new data and insights. Goldschmidt Conference Abstract [id#19562].
2. Nandi, A., Vadlamani, R. Mesoarchean metamorphic relics in metasedimentary Sukma Group, Bastar craton, central India: constraints from detrital zircon U-Pb and combined garnet Lu-Hf and Sm-Nd chronology. Goldschmidt Conference Abstract [id#19614].
3. Adhikari, A., Vadlamani., R. 2019. Paleoarchean (~3.3 Ga) crustal evolution of eastern Iron Ore Group greenstone metavolcanics, Singhbhum craton, India: constraints from trace element, Sr and Sm-Nd isotopes. Abstract *Goldschmidt 2019*, to be held at Barcelona, August, 2019 *(accepted)*
4. Vadlamani, R., Bera, M., Samanta, A., Mukherjee, Adhikari, A., Sarkar, A. 2018. Oxygen, Sr and Nd isotopic evidence from kyanite-eclogite xenoliths (KL-2 pipe, Wajrakarur) for pre 1.1 Ga mantle metasomatism in Eastern Dharwar SCLM. 2018. Abstract *Goldschmidt 2018*, gold2018: abs: 2018003055 held at Boston, August 11-17, 2018.
3. Vadlamani, R., Bühn, Bernard, Pimentel, M.M. 2015. Neoproterozoic basinal development from the Schirmacher Oasis, East Antarctica: evidence from detrital zircon U-Pb ages in high-grade metasedimentary rocks. Abstracts Volume of the *12 International Conference on Antarctic Earth Sciences,* held at Goa, 13-17 July, 2015.
4. Ravikant, V., Chatterjee, C., Ji, -Q., Wu, F-Y. 2013. Neoproterozoic accretion along the southeastern margin of the Eastern Dharwar Craton, India: evidence from zircon U-Pb

ages and their Hf isotopic compositions. *Mineralogical Magazine*, p.2383. DOI:10.1180/minmag.2013.077.5.22. *Goldschmidt 2013*, Abstracts Volume. (25-30 August, 2013, Florence, Italy).

5. Vadlamani, R., Bühn, Bernard, Piementel, M.M. 2013. Age interpretation of detrital zircon in granulite-facies rocks from the Schirmacher Oasis, East Antarctica. Abstracts Volume of the third International conference, *Granulites & Granulites 2013* held at Hyderabad 16-20 January, 2013, p.62.
6. KL Pruseth, *Ravikant*, V., Varghese, S., Krishnamurthi, R. Petrology and age of unusual carbonate-bearing granitoid dykes from southern India: evidence for direct source to gold-pyrite hydrothermal veins of the Wynad gold field. Abstract for *6 International Dyke Conference, BHU, Varanasi (*February, 2010).
7. *Ravikant*, *V.*, Fuyuan Wu. The ~1.9 Ga Kandra differentiated dykes: evidence for a probable Large Igneous Province at the eastern margin of the Eastern Dharwar Craton, SE India. Abstract for *6 International Dyke Conference, BHU, Varanasi* (February, 2010).
8. Neogi, S. and *Ravikant, V.* The Main Central Thrust revisited: new insights from the Sikkim Himalaya. Abstract for the *23 Himalayan-Karakoram-Tibet Workshop*, Leh, Ladakh, India (7-11 August, 2008).
9. *Ravikant, V.*, Laux, J. H. and Pimentel, M.M. 2007. Sm-Nd and U-Pb isotopic constraints for crustal evolution during Late Neoproterozic from rocks of the Schirmacher Oasis: geodynamic evolution coeval with the East African Orogeny: Poster presented at the *10 International Symposium on Antarctic Earth Sciences*, *University of California at Santa Barbara, USA (26-31 August 2007)*
10. *Ravikant, V.* Tectonothermal history recorded in the high-grade rocks from Filchnerfjella: implications for transition between Grenville- and Pan-African-aged mobile belts in central Dronning Maud Land, East Antarctica. Abstract, poster presentation, in the *IX International Symposium on Antarctic Earth Sciences*, *Potsdam, Germany (8-12 September, 2003)*
11. *Ravikant, V.*, Bhaskar Rao, Y.J. and Gopalan, K. 2002. P-T-t history of granulites from the Schirmacher Oasis, East Antarctica. Abstracts volume, *Geochimica et Cosmochimica Acta, v. 66, No.15A, A793.*
12. *Ravikant, V.*, Tapan Pal and Dipankar Das. 2002. Chromite from the Nidar ophiolite and Karzok Complex, Transhimalaya, S.E. Ladakh: comparison of their parental magmas. *Journal of Asian Earth Sciences, vol. 20, p.32.* Abstracts of the *17$^{Th}$ Himalayan-Karakoram-Tibet Workshop, Gangtok, Sikkim, India.*
13. *Ravikant, V.* 2001. Early Pan-African magmatism from Schirmacher Oasis, East Antarctica: inferring an active continental margin tectonic setting by analogy with Cretaceous-Eocene magmatism from the Ladakh arc during the early Himalayan collisional orogeny. Online Abstract in the *IGCP 453 (Uniformitarianism Revisited)* Conference on Collisional Orogens, Lausanne, Switzerland (Eds. B.J. Murphy and J. Duncan Keppie).
14. *Ravikant, V.,* Kundu, A. and D'Souza, M.J. 2001. Multiple Proterozoic metamorphic-magmatic events from central Dronning Maud Land, East Antarctica: inferences on assembly of Rodinia and Gondwana. *Gondwana Research, 4(4): 751-752.* (International Symposium on the Assembly and Breakup of Rodinia and Gondwana, and growth of Asia (ISRGA), *IGCP 411*, Osaka, Japan)
15. *Ravikant, V.* 2000. Contrasting metamorphic conditions from the Taglang La Formation and the ecloitic Tso Morari window, SE Ladakh: Eocene tectonic juxtaposition followed by exposure during development of the North Himalayan Anticlinorium. Abstracts volume, *National Symposium on Milestones in Petrology*, Banaras Hindu University, and Geological Society of India, Varanasi.p.63.
16. *Ravikant, V.*, Bejarniya, B.R., Mukerji, S. and Kaul, M.K. 1995. Late Proterozoic granitic orthogneiss from North Payer-Weyprecht Mountains, East Antarctica: their

tectonometamorphic history and regional correlation. Abstract, poster presentation, *VII International Symposium on Antarctic Earth Sciences, Siena, Italy.*

## Technical Reports, *Geological Survey of India*, Government of India

1. *Ravikant, V.* Geochronological studies on granitoid from the area between Kalimath-Kotma-Chumasi, District Rudraprayag, Uttaranchal (STM/NR/UP&UA/2005/015). GSI Report for the Field Season Program 2005-06.
2. *Ravikant, V.* Geochronological studies on selected lithological components from the area between the Kodaikanal massif and the Palghat-Cauvery shear zone, Dindigul district, Tamil Nadu (STM/SR/TNP/2004/036). GSI Report for the Field Season Program 2004-05
3. Ghosh, J.G. and *Ravikant, V.* Geochronological constraints on the evolution of the Nellore Schist Belt and its basement. GSI Report for the Field Season Program 2001-02, 2002-03 and 2003-2004.
4. *Ravikant, V.* Geochronological studies in central Dronning Maud Land, East Antarctica (RP/CHQ/ANT/1981/001, Service Item)
5. *Ravikant, V.* Geochronological studies on selected lithological components from the Sausar fold belt in parts of Maharashtra and Madhya Pradesh (STM/CR/MH/2000). GSI Report for the Field Season Program 2003-04.
6. *Ravikant, V.* Geochronoloical studies on granitoids from Betul belt, Madhya Pradesh (STM/CR/Mah/2000/003). GSI Report for the Field Season Program 2003-04.
7. Thappa, B.D., *Ravikant, V.,* Bhagwan Singh and Roy, R. (2005). Petrochemistry and geochronological studies of Transhimalayan granitoids from SE Ladakh and Karakoram. GSI Report for the Field Season Program 1998-99, 1999-2000 and 2000-2001.

---

8. Neogi, S., Sarkar, G., *Ravikant, V* and Mukhopadhyay, G.C.1996. Petrological and geochronological studies of the Higher Himalayan Crystallines and granites of Sikkim, India. GSI Report for the Field Season Program 1993-94 and 1994-95 (in part).
9. Jayalal, Mukhopadhyay, G.C. and *Ravikant, V.* 1994. Detailed geological mapping of 'unclassified' Daling Group of rocks in parts of East and North Sikkim for delineation into Rayong Fm. and Gorubathan Fm. GSI Report for the Field Season Program 1992-93.
10. *Ravikant, V.* and Jayalal.1992. Detailed geological mapping of the Central Crystalline Gneiss terrane in parts of East District, Sikkim. GSI Report for the Field Season Program 1990-91.
11. *Ravikant, V*. 1992. Report on the geological mapping of the area from Dzema to Green Lake, North Sikkim GSI Expedition Report for the Field Season Program 1989-90.
12. *Ravikant, V.*, Das, P.K. and Srihari, J. 1992. Detailed geological mapping of 'unclassified' Daling Group of rocks in West Sikkim for delineation into Rayong Fm. and Gorubathan Fm. GSI Report for the Field Season Program 1989-90.

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## Journal Reviewer

Earth and Planetary Science Letters, The Journal of Geology, Lithos, Precambrian Research, Gondwana Research, Geological Society of London, Journal of Asian Earth Sciences, International Journal of Earth Sciences, International Geology Review, Chemie der Erde (*now* Geochemistry), Geological Journal, Journal of Earth System Science, Current Science, Journal of the Geological Society of India