

## CURRICULUM VITAE

### **DR. ARVIND KUMAR SINGH**

#### **Present Address:**

Scientist-C  
Cretaceous-Cenozoic Ecosystems Group  
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**DOB:** 08-03-1988

**Gender:** Male

**Category:** General

### **EDUCATIONAL QUALIFICATION**

DEGREE	INSTITUTION	YEAR
Ph.D. Sedimentology	University of Delhi	2015
M.Sc. Geology	University of Delhi	2010
B.Sc. (H) Geology	University of Delhi	2008
(XII <sup>th</sup> Standard)	Sainik School Ghorakhal	2005
(X <sup>th</sup> ) Standard	Sainik School Ghorakhal	2003

### **DOCTORAL RESEARCH**

#### **Thesis Title:**

Geology, geochemistry and evaluation of hydrocarbon source rock potential for the argillaceous intervals from the Proterozoic Vindhyan basin

**Guide's Name:** Prof. Partha Pratim Chakraborty

**University:** University of Delhi

**Year of Award:** 2015

### **JRF/NET/JAM-IIT**

Qualified CSIR-JRF (NET) fellowship in December 2009 with all India rank 12 in the subject Earth Sciences.

Qualified JAM-2009 (IIT) with all India rank 56 in subject Geology and Geophysics.

### **RESEARCH INTEREST**

Process based physical sedimentology (Clastic and Carbonate), Sequence Stratigraphy and Basin analysis, Sediment Geochemistry

### **RESEARCH PROJECTS (In-house)**

1. Geological and climatic evolution of Paleogene sequence of Jaisalmer and Barmer basins, Rajasthan, India-based on geochemical and sedimentological studies. (PI).
2. Integrative palynological, magnetostratigraphic, and sedimentological studies of selected Deccan volcano-sedimentary sections of peninsular India: implications for age,

palaeoclimate, palaeobiogeography and evolutionary history of infra- and inter-trappean biotas (Co-PI).

3. Evolution of marine trace metal and carbon inventory during Precambrian: Implications of ocean-atmosphere evolution (Co-PI)

## CAREER PROFILE

<b>June 2020 - Present</b>	<b>Scientist-C</b> , Birbal Sahni Institute of Palaeosciences, Lucknow, India.
<b>April 2017 – June 2020</b>	<b>Scientist-B</b> , Birbal Sahni Institute of Palaeosciences, Lucknow, India.
<b>April 2016-March 2017</b>	<b>Research Associate</b> , Wadia Institute of Himalayan Geology, Dehradun, India.
<b>Sept 2015 – April 2016</b>	<b>Assistant Professor</b> , Department of Geology, University of Delhi, Delhi, India.
<b>April 2011 - March 2015</b>	<b>University Teaching Assistant (UTA)</b> , Department of Geology (CAS), University of Delhi, Delhi, India.
<b>Sept 2012 – Aug 2015</b>	<b>Senior Research Fellow (SRF)</b> , CSIR at Department of Geology (CAS), University of Delhi, Delhi, India.
<b>Sept 2010 – Aug 2012</b>	<b>Junior Research Fellow (JRF)</b> , CSIR at Department of Geology (CAS), University of Delhi, Delhi, India.

## AWARD/FELLOWSHIPS

<b>2019</b>	<b>Birbal Sahni International Deputation Grant</b> , Birbal Sahni Institute of Palaeosciences, Lucknow, India
<b>2018</b>	<b>Volkswagen-Stiftung Travel Fellowship</b> , Volkswagen-Stiftung Grant and University of Konstanz, Konstanz, Germany
<b>2013</b>	<b>Best Poster Presentation</b> , Conference of Sedimentology, Hangzhou, China.
<b>2013</b>	<b>International Travel Scheme (ITS) Fellowship</b> , SERB-DST, New Delhi, India
<b>2012</b>	<b>Senior Research Fellowship (SRF)</b> , CSIR, New Delhi, India.
<b>2011</b>	<b>University Teaching Assistantship (UTA)</b> , University of Delhi, New Delhi, India.
<b>2010</b>	<b>Junior Research Fellowship (JRF)</b> , Council of Scientific and Industrial Research, New Delhi, India (AIR 12)

## PUBLICATIONS

### Research/Review/Chapters

1. **Singh AK**, Anand V, Pandey P, and Chakraborty PP (2013) Nodular features from Proterozoic Sonia Sandstone, Jodhpur Group, Rajasthan: A litho-bio-tectonic perspective. *Journal of Earth System Science*, 122(2) 309-320.
2. Sarkar S, Banerjee S, Samanta P, Chakraborty N, Chakraborty PP, Mukhopadhyay S and **Singh AK** (2014) Microbial mat records in siliciclastic rocks: Examples from Four Indian Proterozoic basins and their modern equivalents in Gulf of Cambay. *Journal of Asian Earth Science*, 91 362-377.

3. Srivastava P, Sinha R, Deep V, **Singh AK** and Upreti, N (2018) Micromorphology and sequence stratigraphy of the interfluve paleosols from Ganga plains: A record of alluvial cyclicity and paleoclimate during the late quaternary *Journal of Sedimentary Research*, 88 105-128.
4. **Singh AK**, Chakraborty PP and Sarkar S (2018) Redox structure of Vindhyan hydrosphere: clues from TOC, transition metal (Mo, Cr) concentrations and stable isotope ( $\delta^{13}\text{C}$ ) chemistry. *Current Science*, 115(7) 1334-1341.
5. **Singh AK** and Chakraborty PP (2020) Shales of Paleo-Mesoproterozoic Vindhyan basin, Central India: Insight on sedimentation dynamics in Proterozoic shelf. *Geological Magazine* (Accepted; <https://doi.org/10.1017/S0016756820001168>).
6. Singh AA and **Singh AK** (2020) Climatic controls on water resources and its management: challenges and prospects of sustainable development in Indian perspective. In: *Water conservation in the era of global climate change*. (eds B Thokchom, P Qiu & P Singh), Elsevier, USA (ISBN :9780128202005; Accepted).
7. Singh SP, **Singh AK**, Arif M, Prasad V and Naik AS (2020) Magnetostratigraphy and Sedimentology of Deccan intertrappean succession from Sagar, central India: insights on age, palaeoenvironment and end-Cretaceous marine incursion. *Geological Journal* (Under review)

#### General/Popular articles

1. Arvind K Singh (2016) Water: An elixir of life or soon to be a mirage (in focus). *Drishtikon*, Wadia Institute of Himalayan Geology, vol. 05/2016, 2.

#### **INVITED TALKS**

1. Delivered an invited lecture on “Sediment dynamics and basin tectonics evolution of Vindhyan basin” as guest faculty in the *E-TRAINING* titled “*COURSE ON SEDIMENTARY MAPPING TECHNIQUES IN VINDHYANS*” organized by RTD, Geological Survey of India (GSI), Northern Region, Lucknow, October 13-21, 2020.
2. Delivered an invited talk on ‘Biotic response to Earth’s climate: Past, present and future trends’ in *NATIONAL CONFERNCE ON RECENT ADVANCES AND CURRENT TRENDS IN BIOLOGICAL SCIENCES* organized by M.S. College, Motihari, B.R.A. Bihar University, November 11-12, 2019.

#### **PRESENTATIONS IN SEMINARS/CONFERENCES/SYMPOSIA**

1. Poster: ‘Palaeoenvironment and provenance characteristics of Paleogene sediments of Jaisalmer basin, Rajasthan, India’ in 27th Indian Colloquium on Micropaleontology and Stratigraphy (ICMS), Department of Geology, Institute of Science, Banaras Hindu University, Varanasi, 04 -06 November, 2019.
2. Oral: ‘Provenance, redox structure, and hydrocarbon propensity of shale intervals from Proterozoic Vindhyan basin: clues from geochemistry (major, trace and REE), TOC and stable isotope ( $\delta^{13}\text{C}$ ) chemistry’ in 34th convention, Indian Association of Sedimentologists (IAS), Sant Gadge Baba Amravati University, Amravati, 19-21 December, 2017.

3. Oral: 'Process based facies analysis and geochemical investigation of shale intervals from late paleo-mesoproterozoic Vindhyan basin: implication towards depositional motif, paleoweathering, provenance and ocean redox state' in National Geo-research scholar meet, Wadia Institute of Himalayan Geology, Dehradun, 01-04 June, 2016.
4. Poster: 'Shale geochemistry from Proterozoic Vindhyan basin, central India: Implications towards basin tectonics and palaeo-weathering' in 5th Conference of Sedimentology, Hangzhou, China, 17-22 October, 2013.
5. Poster: 'Initiation of Paleoproterozoic Gwalior basin in a rift mode: evidences from siliciclastic par formation' in 28th Convention of Indian Association of Sedimentologists, Jawaharlal Nehru University, New Delhi, 24 -26 November, 2011.
6. Poster: 'Fluvio-Tidal Sedimentation in Neoproterozoic Girbakh formation, Marwar Group: evidences for a paleo-estuarine system?' in 28th Convention of Indian Association of Sedimentologists, Jawaharlal Nehru University, New Delhi, 24 -26 November, 2011.

### **PROFESSIONAL TRAINING/WORKSHOPS/E-TRAININGS**

1. Participated in short e-training course on the topic '*BASICS OF STRUCTURAL GEOLOGY*' conducted by Training Institute (TI), Geological Survey of India, Hyderabad, September 07<sup>th</sup> – 09<sup>th</sup>, 2020.
2. Short Course on '*SEDIMENTARY PROVENANCE ANALYSIS*' held at Centre of Geosciences, Georg-August University, Gottingen, Germany, September 02<sup>nd</sup> – 06<sup>th</sup>, 2019.
3. Short Course on '*STABLE ISOTOPES IN ANCIENT AND CONTEMPORARY ENVIRONMENTS. WHAT WE CAN LEARN FROM PAST AND FUTURE?*' held at Limnological Institute, University of Konstanz, Germany, April 15<sup>th</sup> - 19<sup>th</sup>, 2018.
4. '*YOUNG SCIENTIST CONCLAVE-INDIA INTERNATIONAL SCIENCE FESTIVAL*' held at Indira Gandhi Pratisthan, Lucknow, India, October 05<sup>th</sup> – 08<sup>th</sup>, 2018.
5. Four weeks training programme on '*GROUND WATER MONITORING, SURVEY, EXPLORATION, INFILTRATION TEST AND DATA ANALYSIS*' at Central Ground Water Board (CGWB), New Delhi, India, May 24<sup>th</sup> – June 21<sup>st</sup>, 2010.
6. Four weeks training programme on '*SUSTAINABLE GROUNDWATER DEVELOPMENT FOR DRINKING & AGRICULTURAL SECTORS IN REMOTE AND HARD CORE AREAS*' at Groundwater Replenishment Group (Resource person: Dr. D. Muralidharan), National Geophysical Research Institute (NGRI), Hyderabad, India, June 1<sup>st</sup> – 29<sup>th</sup>, 2009.

### **TECHNICAL EXPERIENCE**

#### *Total Organic Carbon (TOC) Analyzer and Solid Sample Module (SSM) combustion unit:*

Worked extensively on TOC analyser clubbed with solid sample module at Chemical Sedimentology Lab, Department of Geology, D.U. Extensive experience in instrument operation from standardization to sample analysis to its routine maintenance. I have analysed large number of Proterozoic shale samples from Vindhyan basin along with carbonates, fossiliferous sandstone and lignite samples as well.

Has an extensive field experience of Proterozoic and Paleogene sedimentary basins of India including Vindhyan, Cuddapah, Marwar, Gwalior, Lesser Himalayas, Jaisalmer, Barmer and Deccan traps.

## WEBINARS ATTENDED

1. National webinar on the topic “National E-event on Environmental Awareness” conducted by Department of Chemistry, B. R. A. Bihar University, Muzaffarpur, Bihar, June 05, 2020.
2. Participated in national webinar on the topic “Was the Mars Ever Habitable for Life ?” conducted by Department of Earth Sciences and Environment, Manav Rachna International Institute of Research and Studies, Faridabad, Haryana, July 11, 2020.
3. Attended national webinar on the topic “Prophylactic Role of Medicinal for Human Health Perspective in Current Scenario” Department of Botany, Marwari College, L. N. Mithila University, Darbhanga, Bihar, July 30, 2020.

## ACADEMIC PROJECT

2009 – 2010	M.Sc. dissertation titled “Paleopedology of the paleosols from Mawar cliff section, Ganga-Yamuna Interfluve”, under the guidance of Prof. Pankaj Srivastava, Department of Geology, University of Delhi, New Delhi.
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## ADMINISTRATIVE RESPONSIBILITIES

2020	<b>Organizing Secretary</b> , INSA-Vikram Sarabhai distinguished award lecture-cum-field workshop at BSIP, Lucknow. Keynote Speaker: Prof. Nicholas Christie-Blick, Lamont Doherty Earth Observatory, University of Columbia, New York, USA.
2020	BSIP Monthly research activities report and correspondence committee to DST, New Delhi, India.
2019	<b>Organizing Secretary</b> , International Association of Sedimentologists (IAS) special Lecture Tour at BSIP, Lucknow. Keynote Speaker: Prof. Christopher Fielding, Coffman chair of Sedimentology, University of Nebraska-Lincoln, USA.
2016	Member of organizing team, I <sup>st</sup> National Geo-research Scholars' meet-2016, Wadia Institute of Himalayan Geology, Dehradun, UK.
2016	Member of organizing team, India International Science Festival 2016, Wadia Institute of Himalayan Geology, Dehradun, UK, India.
2017	Member of Organizing team, Republic day cultural event, 'Udbhav-2017', Wadia Institute of Himalayan Geology, Dehradun, UK, India.
2017	Member of Media coverage and press release committee at Birbal Sahni Institute of Palaeosciences, Lucknow, India

## MEMBERSHIP OF PROFESSIONAL SOCIETIES

2014 – 2015	Student Member, International Association of Sedimentologists.
2017 – Present	Sponsored Member, International Association of Sedimentologists.
2017 – Present	Life time Member, Himalayan Geology, Wadia Institute of Himalayan Geology.
2019 – Present	Life time Member, Indian Science Congress Association (ISCA).