

## Sanjukta Chakravorti

**Designation:** Visiting Scientist (Indian Statistical Institute, An Institute of National Importance, Kolkata)

Former Senior Research Fellow (PhD student), Indian Statistical Institute- An Institute of National Importance, Kolkata.

**Affiliation:** Indian Statistical Institute (Under Ministry of Statistics and Programme Implementation)

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#### Official Address

Geological Studies Unit, Indian Statistical Institute  
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;  <https://scholar.google.com/citations?user=OyfbIn0AAAAJ&hl=en>

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**Foreign:** English; Spanish **Regional:** Bengali (Mother tongue), Hindi (National Language)

### Language Spoken:

**Area of Specialization** of Vertebrate Paleontology, Geological field mapping, Data Analysis, Morphometrics, Phylogeny, Stratigraphy, Gondwanan geology, Paleohistology, Micro-Computed Tomography study, Deformation mechanisms in rocks and retrodeformation in fossils, Paleoclimatic reconstruction

### Educational Qualifications

<b>PhD</b> (Senior Research Fellow) (To submit in December 2020)	<b>Indian Statistical Institute</b> (An Institute of National Importance) Regs: University of Calcutta	<b>Advisor:</b> Prof. Dhurjati Prasad Sengupta (Geological Studies Unit, Indian Statistical Institute) <b>Thesis:</b> Triassic Temnospondyl Amphibians from India: Palaeontology and Stratigraphy	2014- Present
<b>Master of Science (M.Sc.)</b> (Two years)	<b>University of Calcutta</b> (Department of Applied Geology)	<b>Advisor:</b> Prof. Tapas Bhattacharyya (Dept. of Applied Geology, University of Calcutta) <b>M.Sc. Thesis:</b> Deformation of a granitoid body within North Puruliya Shear Zone, near Bero, Puruliya District, West – Bengal. <b>M.Sc. Special colloquium:</b> Non- Endemism of Indian vertebrates since Mesozoic	2012- 2014
<b>Bachelor of Science (B.Sc.)</b> (Three years)	<b>Asutosh College</b> (University of Calcutta)	Geological Mapping in the Archean Bhilwara Supergroup, Rajasthan, India.	2009- 2012

### Teaching Experience

<b>Guest Lecturer for M.Sc. (Asutosh</b>	<b>College;</b>	<b>Lectures on Basics of R programming;</b> Third Semester Masters course (M.Sc.) in Applied Geology; <b>Module:</b> Geostatistics and Data Analysis; Department of Geology,	<b>Batches</b> 2016-2017 2017-2018
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University of Calcutta) Asutosh College

**Paper-setter and Examiner for M.Sc. (Asutosh College; University of Calcutta)** **Module:** Geostatistics and Data Analysis; Department of Applied Geology, M.Sc. 2018

#### Advising

**Master's Thesis: Shradha Das (M.Sc.; University of Calcutta)** **Thesis title:** Taphonomy of the 2015-2017 Metoposauridae in the Aigerapalli bone bed of the Late Triassic Maleri Formation, India.  
**Instructor: Prof. Dhurjati Prasad Sengupta; (Geological Studies Unit, Indian Statistical Institute)**

Summer Intern Poulami Kumar; Department of geology and geophysics; Indian Institute of Technology; Kharagpur 2017

#### Publication Articles

**Chakravorti, S., & Sengupta, D. P. (2019).** Taxonomy, morphometry and morphospace of cranial bones of *Panthsaurus* gen. nov. *maleriensis* from the Late Triassic of India. *Journal of Iberian Geology*, 45(2), 317-340.

Teschner, E. M., **Chakravorti, S.**, Sengupta, D. P., & Konietzko-Meier, D. (2020). Climatic influence on the growth pattern of *Panthsaurus maleriensis* from the Late Triassic of India deduced from paleohistology. *PeerJ*, 8, e9868.

**Chakravorti, S.**, Dias-da-Silva, S., Sengupta, D.P. (2020) New Combination for an Early Triassic Rhytidosteid from Southern Brazil with Comments on Taphonomic Deformation of a Related Indian Taxon; *Journal of Vertebrate Paleontology* (Awaiting second revision)

Sarkar, S., **Chakravorti, S.**, Chaudhary, S.K., Wahi, P., Munshi, P., Sengupta, D.P. (2020). CT powered fractal dimension-based technique to differentiate between coprolites and body fossils, *Biology Letter*, (Communicated)

**Chakravorti, S.**, & Bhattacharyya, T. (2014). Deformation of a granitoid body within North Puruliya Shear Zone, near Bero, Puruliya District, West – Bengal. (A thesis submitted for the partial fulfilment of M. Sc. in Applied Geology of the University of Calcutta)

#### Important Abstracts

**Chakravorti, S. (2016).** “R” The Shape Prospector in Palaeontology. Abstract book Convergence IISER Mohanpur, 26

**Chakravorti, S.** and Sengupta, D.P. (2016). Indian Metoposaurid Amphibians: Morphometry, Taxonomy and Dispersal. “Early Tetrapods Awaken”. XIV Annual Meeting of the European Association of Vertebrate Palaeontologists 6-10 July 2016, Haarlem, The Netherlands Programme and Abstract Book, 96

**Chakravorti, S.** and Sengupta, D.P. (2016). Morphospace and Adaptive Landscape: A Two-Way Ticket to Future Palaeontology. Developments in Geosciences in the Past Decade- Emerging Trends for the Future and Impact on Society and Annual general Meeting of the Geological Society of India, Seminar and Abstract Volume, 105.

**Chakravorti, S. (2017).** A New Method for Understanding the Morphological Limitations of the Short-Faced Temnospondyl Forms. Abstract book of 4th Young Natural History Scientist Meeting (YNHM), Paris, 146

**Chakravorti, S.** and Sengupta, D.P. (2017). Shape Analysis of Extinct Amphibian Skulls Using R. Second National Geo – Research Scholars Meet, 2017; Wadia Institute of Himalayan Geology, Dehradun. Abstract Volume, 54

**Chakravorti, S. & Sengupta, D. P. (2018).** Indian Trematosaurid Amphibians: A Tale of Two Forms. Abstract book of the XVI Annual Meeting of the European Association of Vertebrate Palaeontology, Caparica, Portugal, 42.

**Chakravorti, S. (2019).** Life from Land to Water: A Triassic Rendezvous of Indian Temnospondyls. Programme and abstract book of the 11th North American Paleontological convention, Riverside,

California, 95.

**Chakravorti, S.** and Sengupta, D.P. (2019). Stromatolite? First Report on Biologic Trace Organisms Preserved on an early Triassic Temnospondyl Substrate. Programme and abstract book of the 11th North American Paleontological convention, Riverside, California, 95.

**Chakravorti, S.** (2020). Putative erythrocyte structures reveal for the first time the effect of pyritization on protein preservation in 250 million years old fossil amphibian from the Panchet Formation. 80th Annual meeting of the Society of Vertebrate Palaeontology.

Chakraborty, S.; **Chakravorti, S.** and Sengupta, D.P. (2020). Preliminary taphonomic observations on larger benthic foraminifera of Fulra Limestone, Kutch Basin, India. TaphCon.

#### **Awards and Achievements**

<b>Junior Research Fellowship</b> Awarded by: <b>Indian Statistical Institute</b>	Competitive fellowship based on merit.	2014
<b>Best Poster</b> Awarded by: <b>Indian Institutes of Science, Education and Research (IISER), Mohanpur</b>	Poster: R- The Shape Prospector in Palaeontology	2016
<b>The Annual Meeting Grant (AMG) which succeeds the Raymonde Rivoallan Fund (RRF) and the Student Travel Grant (STG)</b> Awarded by: <b>The European Association of Vertebrate Palaeontology</b>	Competitive international grant awarded on the basis of merit of abstract submitted for the Annual meeting of the European Association of Vertebrate Paleontology (EAVP), Caparica	2018
<b>North American Paleontological Convention (NAPC) student travel grant</b>	Competitive grant awarded on the basis of the abstracts submitted for the conference	2019
<b>Jackson School of Geosciences Student Member Travel Grant</b> Awarded by: <b>Society of Vertebrate Paleontology (SVP)</b>	Competitive grant based on merit.	2020
<b>Engagement Grant for Palaeontological Outreach</b> Awarded by : <b>The Palaeontological Association</b>	Highly competitive grant based on merit of proposal for palaeontological outreach	2020

#### **Invited Lectures/Conference Presentations**

<b>Indian Metoposaurid Amphibians: Morphometry, Taxonomy and Dispersal</b>	XIV Annual Meeting of the European Association of Vertebrate Palaeontology, Haarlem, Netherlands Symposium: "Early Tetrapods Awaken"	2016
<b>Lecture on Morphospace and Adaptive Landscape: A Two-Way Ticket to Future Palaeontology</b>	Annual General Meeting of the Geological Society of India Symposium: Developments in Geosciences in the Past Decade- Emerging Trends for the Future and Impact on Society	2016
<b>Shape Analysis of Extinct Amphibian Skulls Using R.</b>	Second National Geo – Research Scholars Meet, 2017; Wadia Institute of Himalayan Geology, Dehradun	2017
<b>Temnospondyl Amphibians of India: A Triassic Rendezvous</b>	University of Bonn, Germany	2018
<b>Indian Trematosaurid Amphibians: A Tale of Two Forms</b>	XIV Annual Meeting of the European Association of Vertebrate Palaeontology, Caparica, Portugal	2018
<b>Lecture on Life from Land to Water– A Triassic Rendezvous of Indian Temnospondyls</b>	11th North American Paleontological Convention (NAPC), 2019, University of California, Riverside	2019
<b>Putative erythrocyte structures reveal for the first</b>	80th Annual meeting of the Society of	2020

time the effect of pyritization on protein preservation in 250 million years old fossil amphibian from the Panchet Formation

Vertebrate Palaeontology.

### Skills and Experience

Museum study & Research visits to study fossil collections and Comparative Anatomy in various laboratories

Field Expertise

Teylers Museum, Haarlem, Netherlands, 2016

Structural and lithological mapping at the North Purulia Shear Zone, West- Bengal, India

Muséum national d'histoire naturelle (MNHN), Paris, 2017

Fossil excavation and mapping sand-mud alternation and lithological study in four major Indian Gondwana basins viz:

- In Northern part of the Pranhita- Godavari basin, South-Central India
- Eastern and western parts of Satpura Gondwana basin, Central India
- Damodar Gondwana basin, Eastern India
- Rewa Basin in central India

University of Warsaw, Poland, Department of geology, Palaeo-biology laboratory and collection, 2018

Excavation and geological field work in the Paleogene and the Neogene succession on the marine Kutch Formation.

Institute of Palaeobiology, Polish Academy of Sciences, Warsaw, Poland, 2018

Field work for vertebrate fossils in Late Triassic Krasiejow, Poland

Museum of Evolution, Warsaw, Poland, 2018

Excavation in Pleistocene MAASVLAKTE II Mammoth rich beds, Rotterdam, Netherlands

University of Opole, Poland. Department of Geology, 2018

Analytical Skills

University of Bonn, Palaeobiology Research Lab, 2018

- Comparative Anatomy
- Paleohistology
- Micro-computed Tomography
- R-based morphometry, statistics and data analysis
- Parsimony and Bayesian phylogeny
- Scanning Electron Microscopy (SEM),
- Energy-dispersive X-ray spectroscopy
- Dry and wet preparation of fossils

Department of Earth Science , Faculdade de Ciências e Tecnologia, Caparica, Portugal

Museum of the Geological Survey of India, 2014,2016,2017,2018,2019

Geology Museum, Indian Statistical Institute, Kolkata. 2014-present

### Public Outreaches

Deep Time Biodiversity of Bengal

Outreach Programme at the Indian Statistical Institute

2020

Organising regular museum visits

Geology Museum of the Indian Statistical Institute

2014-present

### Association with organisations of distinction

Society of Vertebrate Palaeontology (SVP)

Palaeontological Association (PalAss)

European Association of Vertebrate Palaeontologists (EAVP)

Paleontological society (Paleosoc)

## Special Trainings and Courses Passed

<b>Post – graduate course on Mapping Trait Evolution</b>	Organized by: Transmitting Science, Institut Catala de Paleontologia M. Crusafont Instructor: Dr. Jeroen B.Smaers (Stony Brook University, USA)	2018
<b>Morphometrics and Its Applications in Palaeontology</b>	Organized by: Geological Studies Unit, Indian Statistical Institute, Kolkata Instructor: Prof. Nigel Hughes, University of California, Riverside	2018
<b>R-Programming For Behavioural Data Examination For Post – Graduate and Researchers</b>	Organized by: Psychology Research Unit, Indian Statistical Institute, Kolkata Instructors: Multiple instructors	2018
<b>Multivariate data Analysis</b>	Organized by Indian Association for Productivity, Quality and Reliability (IAPQR)	2017
<b>Post-graduate course on Geometric Morphometrics in R</b>	Organized by Transmitting Science, Institut Catala de Paleontologia M. Crusafont and the Council of Piera, Piera, Barcelona, Spain Instructor: Dr. Julien Claude Institut des Sciences de l'Evolution de Montpellier, ISEM, France	2017
<b>Basic Statistical Methods and R Programming</b>	Organised by Agricultural and Ecological Research Unit, Indian Statistical Institute, Kolkata Instructors: Multiple instructors	2015
<b>Adobe Photoshop: A Basic Course</b>	Organized by Reprography and Photography Unit, Indian Statistical Institute, Kolkata	2015
<b>Methods of Recognition and Study of Paleosols in Sedimentary Successions</b>	Organized by: Geological Studies Unit, Indian Statistical Institute, Kolkata Instructor: Prof. Georgio Basilici, University of Campinas, Brazil, November 2014	2014
<b>Multivariate Statistics and Data Analysis</b>	Organized by Indian Statistical Institute (PhD course work) Instructor: Prof. Indranil Mukhopadhyay, Human Genetics Unit, Indian Statistical Institute, (ISI, Kolkata)	2014
<b>R –Programming for PhD course</b>	Organized by: Indian Statistical Institute (PhD course work) Instructor: Prof. Sabyasachi Bhattacharya, Agricultural and Ecological Research Unit, ISI, Kolkata	2014
<b>Advanced Sedimentology for PhD course</b>	Organized by: Geological Studies Unit, Indian Statistical Institute, Kolkata Instructor: Prof. Sarbani Patranabis Deb, Dr. Amlan Banerjee (Geological Studies Unit, Indian Statistical Institute, Kolkata)	2014
<b>Advanced Structural geology for PhD course</b>	Organized by: Geological Studies Unit, Indian Statistical Institute, Kolkata Instructor: Prof. Dilip Saha (Geological Studies Unit, Indian Statistical Institute, Kolkata)	2014
<b>Advanced Palaeontology for PhD course</b>	Organized by: Geological Studies Unit, Indian Statistical Institute, Kolkata Instructor: Prof. Dhurjati Prasad Sengupta, Geological Studies Unit, Indian Statistical Institute, Kolkata	