

D r . S U P R I Y O K U M A R D A S

Department of Geology, Presidency University
86/1 College Street, Kolkata 700073, West Bengal, India
email: sdas.geol@presiuniv.ac.in; Alternate e-mail: das.supriyo.kumar@gmail.com

HIGHER EDUCATION

| | | |
|------|---|---|
| 2007 | Ph.D. in Biogeochemistry | Stockholm University |
| 2006 | Licentiate (M.Phil.) in Biogeochemistry | Stockholm University |
| 2003 | M.Tech. in Applied Geology | Indian Institute of Technology (IIT) Roorkee |
| 2000 | B.Sc. Geology (Honours) | Presidency College, University of Calcutta |

ACADEMIC POSITIONS

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|--------------------|--|
| June, 2013-present | *UGC-Assistant Professor, Department of Geology, Presidency University |
| 2011-2012 | Guest Researcher, School of Natural Sciences, Linnaeus University |
| 2010-2011 | Researcher, School of Science and Technology, Örebro University |
| 2008-2010 | Post Doctoral Research Fellow, Department of Geographical and Earth Sciences, University of Glasgow |
| 2008 (3 months) | Visiting Researcher, Royal Netherlands Institute for Sea Research |
| 2008 (3 months) | Post Doctoral Researcher, Stockholm University |
| 2005-2007 | Project Assistant (part time), Stockholm University |

SCHOLARSHIPS AND FELLOWSHIPS

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|------|---|
| 2008 | Post Doctoral Fellowship, Vetenskapsrådet (768,500 SEK) |
| 2007 | EAOG Travel Scholarship (5000 €) |
| 2007 | British Council Researcher Exchange Programme (RXP) award (5000£) |
| 2007 | Goldschmidt Conference Student Travel Grant (500 €) |
| 2006 | K & A WallenBergs Stiftelse (5,000 SEK) |
| 2005 | C.F. Liljevalch J:ors stipendiefond (12,000 SEK) |
| 2002 | Junior Research Fellowship (CSIR-UGC), Government of India |

CONTESTED GRANTS (Project Manager/ Principle Investigator)

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|-----------|---|
| 2014 | UGC Start-up grant, UGC (0.6 million INR) |
| 2013 | Department of Science and Technology, Govt. of India (2.6 million INR) |
| 2012 | Swedish Foundation for International Cooperation in Research and Higher Education (STINT) (61,000 SEK) |
| 2011 | Helge Ax:Son Johnsons Stiftelse and Swedish Research Council Formas (45,000 SEK) |
| 2010-2011 | Swedish Research Council (Vetenskapsrådet; 813,000 SEK) |
| 2007 | Helge Ax:Son Johnsons Stiftelse (40,000 SEK) |
| 2003-2007 | Stockholm Marine Research Centre (SMF; 50,000 SEK) |

* Recruited under University Grants Commission's Faculty Recharge Programme (www.ugcfrp.ac.in) through a rigorous national level competitive selection process.

TEACHING**Presidency University**

Spring 2014

Petroleum geology (PG)**Coal geology (PG)****Earth's surface processes (UG; Weathering, erosion, mass wasting, sedimentation; bedrock, regolith, soil, soil profile. Erosion, transportation and deposition)****Organic geochemistry (PG)****Biogeochemistry (PG; Chemical weathering, dissolution, redox processes; Eh-pH diagrams, geochemistry of stable isotopes)****Paleoclimatology**

Autumn 2013

Coal geology (UG)**Environmental geology (PG)****Early Earth-Atmosphere and Life (UG; Contribution)**

Spring 2013

Coal geology (PG)**Earth's surface processes (UG)****Organic geochemistry (PG)****Biogeochemistry (PG)****Study of sedimentary rocks under microscope (UG; Contribution)****University of Glasgow**

2009-2010

Employability Level 1 and 2 (UG)

2009

Environmental Biogeochemistry (UG; Contribution)**Stockholm University**

2005-2007

Geology Laboratory Instructor (UG)

2005-2007

Biogeochemistry (UG; contribution)**Environmental Geochemistry (UG; Contribution)****STUDENT EXCURSION AND FIELD WORK**

2013 Organised and led first year postgraduate student excursion to the Central Institute of Mining & Fuel Research (CIMFR) and coalmine under Jamadoba Group of Collieries in Dhanbad, Jharkhand.

SUPERVISION

Spring 2014

Santanu Ghogh (PG) and Trisha Das (UG), Presidency University
Satabdi Mishra (PhD Candidate; registered at Indian School of Mines, Dhanbad)

Autumn 2012

Visiting graduate students (Danica Mitrovic and Natasa Djokovic) under STINT Initiation grant

Spring 2009

Postgraduate and undergraduate students in Communicating Science- 1 (Mentored Project)

2009-2010

Two UG students in ES L4 projects, one visiting intern and one visiting graduate student at University of Glasgow.

ADMINISTRATIVE DUTIES

1. Paper setter and Examiner of PG courses at Presidency University (2014).

PRESENT RESEARCH PROJECTS

1. Influence of Climate Change on Freshwater Lake -a Study in Lake Loktak, Manipur: Biomarker and stable isotope based reconstruction of paleoclimate and paleoecological conditions.
2. Reconstruction of Paleocene-Eocene paleoclimate and paleoecological conditions using lignite and associated deposits from Panandhra lignite mine, in Kutch, Gujarat, India.
3. Development of Early Farming and Its link to Holocene Paleoenvironment at Middle Ganga Plain, India.
4. Petrographical and Organo-geochemical studies of Coal and Shale of Raniganj Coal Basin, West Bengal.

RECENT PUBLICATIONS**Peer-reviewed Articles**

1. **Das SK**, Bendle J and Routh J (2012) Evaluating branched tetraether lipid-based paleotemperature proxies in an urban, hyper-eutrophic and polluted lake in South Africa. *Organic Geochemistry* 53: 45-51.
2. **Das SK** and Chakrapani GJ (2011) Assessment of trace metal toxicity in soils of Raniganj Coalfield, India. *Environmental Monitoring and Assessment* 177: 63–71.
3. **Das SK**, Routh J and Roychoudhury AN (2009) Biomarker evidence of macrophyte and plankton community changes in Zeekoevlei, a shallow lake in South Africa. *Journal of Paleolimnology* 41: 507-521.
4. **Das SK**, Routh J, Roychoudhury AN, Klump JV and Ranjan RK (2009) Phosphorus dynamics in shallow eutrophic lakes: an example from Zeekoevlei, South Africa. *Hydrobiologia* 619: 55-66.
5. **Das SK**, Routh J and Roychoudhury AN (2008) Sources and historic changes in polycyclic aromatic hydrocarbon input in a shallow lake, Zeekoevlei, South Africa. *Organic Geochemistry* 39: 1109-1112.
6. **Das SK**, Routh J, Roychoudhury AN and Klump JV (2008) Major and trace element geochemistry in Zeekoevlei, South Africa: A lacustrine record of present and past processes. *Applied Geochemistry* 23: 2496-2511.
7. **Das SK**, Routh J, Roychoudhury AN and Klump JV (2008) Elemental (C, N, H and P) and stable isotope ($\delta^{15}\text{N}$ and $\delta^{13}\text{C}$) signatures in sediments from Zeekoevlei, South Africa: a record of human intervention in the lake. *Journal of Paleolimnology* 39: 349-360.

Under review:

1. **Das SK**, Routh J, Roychoudhury AN, Veldhuis MJW and Hassan Ismail (2014) Application of pigment biomarkers and dissolved trace elements to understand primary production in southern Benguela Upwelling zone (St. Helena Bay) (Continental Shelf Research).
2. **Das SK**, Routh J and Roychoudhury AN (2014) Biogeochemistry of shallow lake sediments: a case study from Verlorenvlei, South Africa (Current Science).

In preparation:

1. **Das SK**, Ekblad A, Stojanović K, Mikusinska A, Gaillard-Lemdahl MJ, Mitrović D, Cui Q (2014) Holocene Stable Isotope Record From Stavsåkra Peat (Sweden).

Non-peer-reviewed Articles

1. **Das SK**, Ghosh S, Gangopadhyay K (2014) Major element oxides in archaeological potteries (Fine ware) from coastal India: Preliminary Results. IAG Working Group on Geoarchaeology Newsletter 15.
2. **Das SK** (2009) Sedimentary archive of palaeolimnological record from lakes of Western Cape, South Africa. SIL News 54 (Invited author).

Participation, Presentation and contribution to symposia

1. **Das SK**, Nautiyal CM, Tripathi S, Basumatary SK, Ghosh R, Thakur B, Singh MC, Kushwaha RS (2014) Palaeoclimate Reconstruction Using Lake Loktak Sediment: A Progress Report. National Conference on QUATERNARY CLIMATE CHANGE: NEW APPROACHES AND EMERGING CHALLENGES BSIP, Lucknow, India.
2. **Das SK** (2014) Application of Organic Geochemistry in Archaeology. Symposium on Science-Technology and Cultural Heritage Interface (SANDHI) at IIT Kharagpur (Invited Lecture).
3. **Das SK**, Kushwaha RAS (2013) Biomarker: a novel tool in Earth Sciences. 30th Convention of Indian Association of Sedimentologists, Imphal, India.
4. **Das SK**, Ekblad A, Stojanović K, Mikusinska A, Gaillard-Lemdahl MJ, Mitrović D, Cui Q (2013) Holocene Stable Isotope Record From Stavsåkra Peat (Sweden). 6th International Meeting on Organic Geochemistry (IMOG) Tenerife, Spain.
5. Mitrović D, Đoković N, Stojanović K, **Das SK** (2013) Preliminary organic geochemical study of lignites from Smederevsko Pomoravlje field, Kostolac Basin, Serbia. 65th Meeting of International Committee for Coal and Organic Petrology (ICCP), Sosnowiec, Poland.
6. **Das SK**, Bendle J and Routh J (2011) Branched tetraether lipid derived air temperature and soil pH in lake sediments from Zeekoevlei, South Africa. 25th International Meeting on Organic Geochemistry, Interlaken, Switzerland.
7. Bendle JA, Mossen H, Jamieson R, **Das SK**, Quillmann U, Jennings A, Andrews J, Howe J, Cage AJ, Austin WEA (2010) Biomarker reconstructions of marine and terrestrial climate signals from marginal marine environments: new results from high-resolution archives. AGU Fall meeting, San Francisco, USA.
8. **Das SK**, Bendle JA, Snowball I, Seki O, Zillén Snowball L and Stanton T (2009) Biomarkers from varved lake sediments: evidence for the 8.2 ka climate event in Sweden. AGU Fall meeting, San Francisco, USA.
9. **Das SK**, Routh J and Roychoudhury AN (2009) 1000-year sedimentary record of cyanobacterial fluctuation in Verlorenvlei, South Africa. 19th V.M. Goldschmidt conference, Davos, Switzerland.
10. **Das SK**, Routh J, Roychoudhury AN and Veldhuis MJW (2009) Primary productivity in near shore waters, a pigment biomarker evidence from Western Cape Province, South Africa. 24th International Meeting on Organic Geochemistry, Bremen, Germany.
11. **Das SK**, Routh J and Roychoudhury AN (2008) Elemental geochemistry in Verlorenvlei, South Africa. 33rd International Geological Congress, Oslo, Norway.
12. **Das SK**, Routh J and Roychoudhury AN (2007) Human intervention in an Urban Lake Zeekoevlei, South Africa. 23rd International Meeting on Organic Geochemistry, Torquay, UK.
13. **Das SK**, Routh J and Roychoudhury AN (2007) Phosphorus sedimentation and release processes in a shallow hyper-eutrophic lake, Zeekoevlei in South Africa. 3. 17th Annual V.M. Goldschmidt conference, Cologne, Germany.

14. **Das SK**, Routh J and Roychoudhury AN (2005) Trace metals in water column and sediments from Zeekoevlei, South Africa. 15th Annual VM Goldschmidt Conference, Moscow, Idaho, USA.
15. **Das SK**, Routh J and Roychoudhury AN (2005) Geochemical Study of sediments from Lake Zeekoevlei, South Africa. 8th International conference on the Biogeochemistry of Trace Elements, Adelaide, Australia.

INVITED PRESENTATIONS (excluding conferences)

- 2012 University of Belgrade, Serbia
- 2012 University of Calcutta, India
- 2012 University of Cincinnati, USA
- 2011 Royal Netherlands Institute for Sea Research (NIOZ)
- 2011 Manipur University, Department of Earth Sciences, India
- 2011 Manipal Institute of Technology, India
- 2011 Karlstad University, Sweden
- 2010 Trinity College Dublin, Ireland

SAMPLING CAMPAIGNS AND CRUISE PARTICIPATION

1. Invited to participate as an Organic Geochemist in the International Ocean Discovery Program (IODP) Bengal Fan Expedition 354 in spring 2015.
2. Sampled 1.5 metre long sediment cores from Lake Loktak (Imphal, India) using an improvised split spoon sampler.
3. Sampled lignite and associated Paleocene-Eocene deposits at Pranandhra Lignite mine in Kutch, Gujarat, India.
4. Sampled Neoproterozoic successions in northern India (Jammu and Kashmir, Himachal Pradesh and Uttarakhand) in collaboration with Max Planck Institute of Biogeochemistry.
5. Sediment and water sampling from Lake Zeekoevlei, Lake Verlorenvlei, Olifant and Berg Rivers, and St Helena Bay in South Africa in 2004 by using a small boat and with the help of divers.
6. Participated in FRS Africana research cruise in 2004 in collaboration with Marine and Coastal Management (MCM) for collecting water samples using CTD from St. Helena Bay for nutrient and biomarker analysis in particulate organic matter.

PROFESSIONAL TRAINING

- GC-MS Software Operation, Agilent Technologies, London, UK
- MS office 2003, Photoshop CS4 (University of Glasgow)
- Various data processing and statistical software (PHREEQC, Minitab, XLSTAT)
- Advanced GIS (2002), IIT Roorkee
- Computer programming (C++) (2002), IIT Roorkee
- Petroleum Exploration (2002), ONGC, Ahmadabad, India

INSTRUMENTS OPERATED

LC-MS (Shimadzu), GC-IRMS (Nu Instruments), GC-MS (Agilent, Shimadzu), GC-FID (Shimadzu), HPLC (Waters), TOC analyser (Shimadzu), IC (Dionex), ICP-MS (Perkin-Elmer SCIEX), AAS (Varian).

STAFF DEVELOPMENT COURSE TAKEN***Presidency University***

- Schlumberger Academia Connect Programme 2014 (4 weeks)

University of Glasgow:

- Winning Research Income
- Supervisory Skills for Research Staff
- First Aid and Fire Safety Workshops
- Planning and Managing a Research Project
- Making Presentations at Conferences
- Building Effective Research Collaborations

Stockholm University:

- Media Training, Bert Bolin Centre for Climate research (BBCC)
- University Pedagogy in Theory and Practice, Part 1

PEER REVIEWS

I have acted as a peer reviewer for International Journal of Environmental Analytical Chemistry, Environmental Geochemistry, Journal of Paleolimnology, Journal of Asian Earth Sciences, Marine and Freshwater Research and Health, Journal of Hazardous Materials and Pearson Education.

RECENT AND CURRENT COLLABORATIONS

Prof Alf Ekblad, Örebro University, Sweden

Dr. Christian Hallmann, Max Planck Institute for Biogeochemistry

Dr. Ksenija Stojanović, University of Belgrade, Serbia

Prof. Marie-José Gaillard, Linnaeus University, Sweden

Directorate of the U.P. State Archaeology, India

Dr Kaushik Ganguly, University of Calcutta

PROFESSIONAL ACTIVITIES & HONOURS

Member: European Association of Organic Geochemists (2014-), Society of Sedimentary Geology (2013-present), Society of Petroleum Engineers (2014-), International Paleolimnology Association (2010-present), Swedish Association of Scientists (2005-2012), Geochemical Society (2007-2012), AGU (2009-2012), EGU (2007, 2011), International Medical Geology Association (2006-2010), International association of Geochemistry (2007), International Society for the Biogeochemistry of Trace Elements (2006-07).

Fellow: The Society of Earth Scientists (2010-present).

Qualified University Grants Commission (govt. of India) National Eligibility Test (NET) for Lectureship (2002) and was awarded National Scholarship by Government of India (1995-96; ranked 73 in the merit list).