



## Frontiers in Geosciences Research Conference

Physical Research Laboratory  
27- 28 September 2021 (online)



### Talks in FGRC-2021:

#### Day 1 (Monday, 27 September 2021)

##### Session 1:

##### **Solid Earth and Earth Surface Processes: 09:40 – 12:35 hrs.**

- **Plenary Talk:** Some interesting research questions in Indian Geology *by* J. S. Ray (NCESS, Thiruvananthapuram)
- Sediment-routing system of the Himalayan rivers *by* Vikrant Jain (IIT Gandhinagar)
- Erosional changes in the Himalaya during last glacial-interglacial cycle *by* Dr. Gyana Ranjan Tripathy (IISER Pune)
- An insight into the subsurface geology of the Andaman Islands using clasts ejected through the mud volcanoes *by* Neeraj Awasthi (VBS Purvanchal Univ, Jaunpur)
- Zoned crystal records of open magma chamber fractionation, mafic recharge, remobilisation of crystal mush zone in LIPs: Insights from the lamprophyres and dolerites of end-Cretaceous (ca. 66 Ma) Phenaimata alkaline igneous complex, NW India *by* Abhinay Sharma (PRL, Ahmedabad)
- Bridgmanite in shock-melt veins of Katol L6 chondrite *by* Kishan Tiwari (IIT Kharagpur)
- Insights into the subduction zone processes and generation of arc magmas in the Barren and Narcondam Islands, Andaman subduction zone: A review *by* Ngangom Romario Meitei (BHU, Varanasi)
- Geochemical Characterization of Meso-Proterozoic Carbonates from Pindwara- AbuRoad Belt, Sirohi District, Rajasthan *by* Riya Dutta (MLSU, Udaipur)
- Noble gas in interior of rocky planets *by* Satvika Jaiswal (Banasthali Vidyapith)

##### Session 2:

##### **Marine and Terrestrial Biogeochemistry: 14:00 – 17:05 hrs.**

- **Plenary Talk:** Biogeochemistry of the Indian Ocean *by* Sunil K. Singh (NIO, Goa)
- The trace metals cycling in the Ganga (Hooghly) River estuary: regional and global perspectives *by* Tarun Dalai (IISER Kolkata)
- Ganges river drying: insights from surface water-groundwater interactions *by* Abhijit Mukherjee (IIT Kharagpur)
- Mobilization of elements during Basalt Weathering *by* Jitendra Pattanaik (Central Univ Punjab, Bhatinda)
- Development of non-traditional isotope systematics for tracing biogeochemical cycles in natural water *by* Sambuddha Misra (IISc, Bangalore)
- Spatial pattern of the isotopic composition of bird feathers from India *by* Shreyas Managave (IISER Pune)



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- Calibration and Validation of a Process-based Model to Simulate the Ecosystem-Atmosphere Carbon, Water and Energy Fluxes at a Subtropical Forest in India *by* Pramit Kumar Deb Burman (IITM, Pune)
- Anomalous  $\delta^{18}\text{O}$  signal in the shell of a giant clam (*Tridacna maxima*) from the Lakshadweep Archipelago, India: Signatures of thermal stress during a coral bleaching event *by* Fousiya AA (IIT Kanpur)
- Seasonal radiocarbon record from a coral of the Andaman Sea *by* Harsh Raj (PRL, Ahmedabad)
- Endolithic cyanobacterium *Chroococcidiopsis* sp. JS7 from Mawsmat Limestone cave, Meghalaya, India *by* Jyoti Singh (IARI, New Delhi)

### Day 2 (Tuesday, 28 September 2021)

#### Session 3:

#### **Paleoclimate and Isotope Hydrology: 09:30 – 12:55 hrs.**

- **Plenary Talk:** Frontiers in hydrology Research *by* R. D. Deshpande (PRL, Ahmedabad)
- Clumped isotope thermometry; exploring theoretical and experimental approaches during analysis of natural carbonates *by* Prosenjit Ghosh (IISc Bangalore)
- Carbon source-sink characteristics of a semi-deciduous forest in northeast India *by* Supriyo Chakraborty (IITM Pune)
- Extreme rainfall deficits were not the cause of recurring colonial era famines of southern Indian semi-arid regions *by* Atreyee Bhattacharya (University of Colorado-Boulder)
- Predicting Arctic sea ice in near future climate using mid-Pliocene records *by* Waliur Rahaman (NCPOR, Goa)
- Soft sediment deformation in the Late Pleistocene-Holocene glacio-fluvial lake in NW Himalaya: evidence of past earthquake along seismically active Kaurik Chango Fault or climate transition? *By* Archana Bohra (NGRI, Hyderabad)
- Prolonged repercussions of ground water overdraft in Chhattisgarh state *by* Mukesh Anand (Central Ground water board, Raipur)
- Observation of changes in local-onset in Indian Summer Monsoon Rainfall *by* Hiteshri Shastri (CHARUSAT, Anand)
- Reducing the stage of groundwater extraction through incentivizing the Recharge *by* Sidhanta Kr. Sahu (Central Ground water board, Raipur)
- Interaction of Indian Summer Monsoon with global climatic events during the Holocene epoch: An Overview *by* Upasana S. Banerji (NCESS, Thiruvananthapuram)
- Isotopic constraints on relative contributions of the Himalayan and Peninsular rivers to the Ganga plain *by* Chinmaya Maharana (JNU, New Delhi)
- Indian Hydrometeorological Processes: Insights from Precipitation Isotopes *by* Harsh Oza (PRL, Ahmedabad)



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### Session 4:

#### **Aerosols, Air Quality and Ocean-Atmosphere Coupling: 14:00 – 16:15 hrs.**

- **Plenary Talk:** Sources, processing and impacts of atmospheric haze over Indo Gangetic Plains (IGP) *by* S. N. Tripathi (IIT Kanpur)
- Natural Aerosols and the Indian Summer Monsoon Rainfall *by* V. Vinoj (IIT Bhubaneswar)
- Atmospheric carbonaceous aerosols and nutrients in the continental outflows: sources, transport and biogeochemical significance *by* B Srinivas (NIO, Goa)
- Bioactive trace metal composition and their fractional solubility in aerosols from the Arabian Sea during the Southwest Monsoon *by* Ashwini Kumar (NIO, Goa)
- Air chemistry in a tropical urban environment of India: A modeling perspective *by* Meghna Soni (PRL, Ahmedabad)
- Green Technology to Mitigate Air Pollution – Real Time Data Based Analysis *by* Ramya C Balan (Device Earth Pvt Ltd, Bengaluru)
- Are fireworks a significant episodic source of brown carbon? *by* Prashant Rawat (IISER Kolkata)