

## PERSONAL PROFILE

**Dr. Purbajyoti Phukon**

Assistant Professor (Since November 2019)

Department of Earth Science

Assam University, Silchar

Ph no: +919957803837

Email: [purba.phukan205@gmail.com](mailto:purba.phukan205@gmail.com)



On the bank of River Danube, Austria

### Research Interests

My research specialization pertains to metamorphic petrology and continental tectonics, with a special focus on the tectono-metamorphic evolution of the Himalayan orogenic belt. Aims of my research include understanding the growth of Himalayan orogen; metamorphism, deformation and exhumation of deep-seated rocks; evolution of shear zones. I work on microstructures, petrochronology of accessory mineral phases (e.g., zircon, monazite, xenotime, etc.), metamorphism, and ductile deformational patterns of crystalline rocks of the Himalayan orogen. I am keenly interested in phase equilibria modeling of anatexis rocks and trace element behaviour of structurally controlled accessory phases. I use integrated field, microstructure, paleo stress-strain, and anisotropy of magnetic susceptibility studies to evaluate rock deformations.

### Education Qualifications

- PhD in Geology, Banaras Hindu University, Varanasi and Wadia Institute of Himalayan Geology, Dehradun
- Master of Science in Applied Geology, Dibrugarh University, Assam.
- Bachelor of Science in Geology, Sibsagar College, Dibrugarh University, Assam.

**Teaching responsibility for M.Sc. students:** Metamorphic Petrology, Structural Geology and Plate Tectonics.

### Research Projects:

SI No.	Project and sponsored agency	Amount (in Rs)	Status
1.	Indian Himalayan Central University Consortium (IHCUC) project of Niti Aayog sponsored by <b>Ministry of Education and University Grants Commission, India. (Co-PI)</b>	<b>14,00,000.00</b>	Ongoing (Since May, 2020)

2.	SRG project titled “Characterizing dynamics of melting in anatectic zones of Greater Himalayan Sequence, Arunachal Himalaya, India: an integrated appraisal on deformation, phase equilibrium modelling and petrochronology” sponsored by <b>Science and Engineering Board Research</b> , DST, New Delhi (SRG grant). ( <i>PI</i> )	<b>31,43,400.00</b>	Ongoing  (Since December, 2021)
----	---	---------------------	---------------------------------------

### Publications:

1. Kalita, P., **Phukon, P\***., Goswami, T.K., Imayama, T., Srivastava, H.B., 2022. Chemical mass transport during deformation and metamorphism: Insights from the Main Central Thrust and its footwall of Western Arunachal Himalaya, NE India. *Lithos*, Volumes 416–417,2022, 106641, ISSN 0024-4937, <https://doi.org/10.1016/j.lithos.2022.106641>.
2. Kalita, P., Goswami, T.K., **Phukon, P.**, 2021. Deformation temperature, differential stress, and strain rate variation across the Bomdila Gneiss, western Arunachal Himalaya, India. *International Journal of Earth Science*, **111**, 607–622. <https://doi.org/10.1007/s00531-021-02132-7>.
3. **Phukon, P.**, Sen, K., Singh, P.C., Sen, A. Srivastava, H.B.,& Singhal, S. 2019. Characterizing anatexis in the GreaterHimalayan Crystallines in terms of pressure, temperature, time and deformation: IntegratedField, metamorphic and chronological study from Kali River Valley, Kumaun Himalaya (NWIndia). *Lithos*, v. 344-345, p. 22-50.
4. **Phukon, P.**, Sen, A., Sen, K., &Srivastava, H.B., 2019 Variation in the mechanism of dynamic recrystallization and differential stress across the Chiplakot Crystalline Belt, Kali River Valley, Kumaun Himalaya: Implication for exhumation of basement rocks in a ‘critical taper wedge’ setting. *Himalayan Geology*, v. 40, p. 169-181.
5. **Phukon, P.**, Sen, K., Srivastava, H.B., Singhal, S. & Sen, A. 2018. U- Pb geochronology and geochemistry from the Kumaun Himalaya, NW India, reveal Paleoproterozoic arc magmatism related to formation of the Columbia supercontinent: *Geological Society of America Bulletin*, v. 130 (7-8), p. 1164-1176,doi: 10.1130/B31866.1.
6. Sen, A., Sen, K., Srivastava, H. B., Singhal, S., **Phukon, P.** 2018. Age and geochemistry of the Paleoproterozoic Bhatwari Gneiss OF Garhwal lesser Himalaya, NW India: implications for the pre-Himalayan magmatic history of the Lesser Himalayan basement rocks. *Journal of the Geological Society of London*, Sp. Publication 481. 21p.

### International Conference Papers:

- **Phukon, P. & Sen, K.**, Crustal anatexis of the Greater Himalayan Crystalline Sequence and its tectonic implications: Insights from Structural, Metamorphic & Chronological Studies along the Kali River Valley, Kumaun Himalaya, India. *EGU, General Assembly, Vienna, 2019*.

- **Phukon, P.**, Sen, K., Srivastava, H.B., Singhal, S. & Sen, A., Paleoproterozoic active volcanic arc setting of the north Indian continental margin: Insights from U-Pb ages and Bulk rock geochemistry from Kumaun Himalaya. *Goldschmidt, 2017 Paris*.

#### **National Conference Papers:**

- **Phukon, P.**, Sen, K., Srivastava, H.B., Integrated field, microstructural, metamorphic and geochronological approach to define the Himalayan Main Central Thrust: An example from the Kali River Valley, Kumaun Himalaya. *5<sup>th</sup> conference and workshop on Rock Deformation and Structures, Delhi University, 2018*.
- **Phukon, P.**, & Sen, A., Lesser Himalayan affinity of Chiplakot Klippe, Kumaun Himalaya, India: Constrained from Zircon U-Pb geochronology and geochemistry. *National Geoscholar Meet, 2017 WIHG, Dehradun, India*.

#### **Awards**

- SERB-DST travel grant to attend EGU General Assembly, 2019.
- Best Paper award of 2018 in Wadia Institute of Himalayan Geology, Dehradun for the research paper entitled “**Phukon et al., 2018**. U- Pb geochronology and geochemistry from the Kumaun Himalaya, NW India, reveal Paleoproterozoic arc magmatism related to formation of the Columbia supercontinent: *Geological Society of America Bulletin*, v. 130 (7-8), p. 1164-1176, doi: 10.1130/B31866.1.
- Young Researcher Award 2020 by Institute of Scholars for the research article entitled “**Phukon et al., 2019**. Characterizing anatexis in the Greater Himalayan Crystallines in terms of pressure, temperature, time and deformation: IntegratedField, metamorphic and chronological study from Kali River Valley, Kumaun Himalaya (NWIndia). *Lithos*, v. 344-345, p. 22-50.

**Other qualification:** Gate and CSIR-NET

**Dr. Purbajyoti Phukon**

Permanent address:

*No 1 Hologuri Village  
PO- Moudumoni, Sepon  
Mahmora  
Dist: Charaideo  
Assam, 785673  
India*