



**Brief Profile**

**Personal Information**

**Name:** Dr. Basavarajappa H.T.

**Address:** Department of Earth Science, Centre for Advanced Studies in Precambrian Geology, University of Mysore, Manasagangotri, Mysore-570 006, Karnataka, India.

**Current Position:** Professor

**Projects completed/ongoing**

- Integrated geological Studies in the Kuppam - Kanyakumari transect across the deep continental crust of South India, DST, (Rs. 21 Lakhs) as a Co-PI from 2001-04.
- Medicinal geology from UoM, UGC (Rs. 10,000/-) as a PI in 2001.
- Structure and Tectonic study using Remote Sensing and GIS around Biligiri-Rangan Hill Ranges, Southern India, UGC (Rs. 10.46 Lakhs) as P.I from 2004-07.
- Study on **CORBAN FLUX** interaction on Atmosphere, Water and Rock by ISRO international Project as a Co-PI (Rs. 30 Lakhs) from 2013-16.
- "Application of Hyperspectral Remote Sensing and GIS on Iron Ore Deposits and Precambrian rocks of Chitradurga district, Karnataka, India" UGC-MRP, New Delhi as a P-I (10.55 lacks) from 2013-16.
- CAS Phase-I, Centre for Advanced studies in Precambrian Geology for a period of 5 years, (1.5 Crore).

**NEW FINDINGS: Contributions to Earth Sciences**

- Finding of **Kollegal Shear Zone** in Mysore and Chamarajanagara dist, Karnataka India.
- Noticed **D1, D2, D3, & D4 deformational episodes** in the study area and **M1, M2, M3 & M4 Metamorphism** (KSZ).
- Later **Dextral & Sinistral** type of shearing events and **many active fault Zones trending N40°W, N45°E and N60°W. Older BILIGIRI-RANGAN Archaean rocks in Karnataka.**
- **Incipient Charnockite** formation in KSZ is structurally controlled latest stage of Metamorphism in M4 +- 550My.
- **M3- Rétrogression .M2- Granulite formation M1-Gneisses formation.**
- Regional P-T is **P=5.5 to 8.0 Kb and T= 560° to 950° C.**
- Fluids present both **High/Low density and saline type.**
- Crustal Thickness is about **30 to 25Km.**
- **Auriferous Quartz Veins** are reported in the study area.
- Gem verity of **Corundum** is reported in the study area.
- **Scapolite bearing Calc Silicates** are reported from the study area.
- Active fault zones are reported at **B.R. Hills temple & Near Hogenakkal** areas.
- **Tectonic Model** has been developed in the study area. An overprint of Southern Granulites Terrain on Dharwar Craton.
- **Very High-Low fluids** are identified and reported at Kollegal Shear Zone.
- **First time:** Fluids from **younger Sedimentary basins** of South Indian terrains are also reported.
- **Latest Incipient un-deformed Charnockite formation PAN AFRICAN TYPE,** structurally controlled +- **550 m.y** have been reported in Kollegal Shear Zone.
- Around 12-14 type of rocks are Igneous, Metamorphic and Metasedimentary rocks also reported in the study area.

## Unique Pub International (UPI)-JET

- Geologically the Biligirirangana terrain confirms to an ancient Achaean terrain and it is also proved a single geomorphic unit.
- Identified the **lineaments are Syngenetic** with the regional structural trend.
- Tectonically Biligirirangana hills can be considered to be the **deformed southern extension** of the Dharwar Craton.
- **Cluster analyses** have been employed to bring out relationship of assorted metamorphic variables.
- Remote Sensing and Geoinformatics are employed in to the study area.
- First time an attempt has been made, paper presented on **Medicinal Geology** in Department of geology, Visakhapatnam Andhra Pradesh from Mysore University.
- Geospatial data acquired on Wastelands studies and its developments in Chamarajanagara and Mysore district.
- Applications of Remote Sensing and GIS on **Mysore city Waste disposal site selection, waste management and Environmental impact on ground water prospecting zones.**

### **Publications**

Journal Publications: **>230**

Books/Book Chapters: **>10**

### **Conferences/Seminars**

Total no. of conference/seminars/workshops attended/presented/chaired: **>110**

### **Editorial Board Memberships**

Reviewer/Editor/Editorial Board Member: **>10**