

## *Guest Editorial*

It is a matter of honour to have been associated with the Indian Society for Rock Mechanics and Tunnelling Technology (ISRMTT). In pursuit of my main field of operations in water resources sector, I had great many opportunities to travel and adore the marvels of nature where natural rock engineering presents itself on edifice of thrilling scenes of nature. The balancing of rocky boulders on one another over centuries in East Africa, cutting of wall like rocky faces of mountain passes by fierce winds, carving into shapes resembling beautiful cornices of palatial buildings in Central Afghanistan, the Great Canyons, the Niagara Falls and the Victoria Falls speak of nature's articulated display of the mechanics of rocks and natural forces. The statue of Lord Buddha in Bamiyan, Afghanistan has several unsupported halls at different levels of knee, waist, chest and head of the statue within the clay mountain where the Buddhist monks used to retire and led a sheltered normal life inside the caverns for months together for safety against inclement blizzards and snowfall outside as also against invaders from Central Asia.

During the last century the human intervention started through gainful exploitation of mountains for building tunnels for shortening distances and providing safe and secret passages for exit routes, shorter penstock length for hydro power generation etc. These laid the foundation for understanding and further study of rock mechanics which later led to reduced steel thicknesses to economical levels by sharing the hydro-dynamics forces with the rock masses. Presently, this science is gaining extensive uses in providing underground passages, shelter rooms during air raids, rail/road tunnels, underground hydro-power stations and locating sound foundations for large and high dams.

The role of hydro-power in India shall increase in the coming years as the present mix of peaking power to base load is less than 20% which needs to be stepped upto about 40%. With most of the easy, feasible sites for setting up of hydro-power stations having been exploited, further development of hydro-power poses many a challenge to rock-mechanics engineers. Various issues, will no doubt, get highlighted in the Journal of Rock Mechanics and Tunnelling Technology which should serve the technocrats by way of mass communication of R&D and innovative works in the field and sharing of specific local experiences of tackling the problems as encountered and understanding more and more of the natural forces of the rock masses.

I wish the journal all success in achieving the objectives and fostering a better understanding of the rock mass behaviour by human interventions.

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