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## Editorial: Twenty Years of JRMTT

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It is a matter of great pleasure for me to share some of my thoughts with the Rock Mechanics fraternity on the occasion of twenty years of regular publication of Journal of Rock Mechanics Tunnelling Technology (JRMTT) founded by ISRMTT in the year 1992. Fortunately, I have been associated with this Journal since its inception in 1993.

The first issue of Volume 1 of this bi-annual Journal was launched in January 1995 and now 41<sup>st</sup> issue of JRMTT, Volume 21, No. 1 is in your hands. This Journal has been publishing research works through research papers/technical notes including some interesting case histories pertaining to Rock Mechanics, uses of Underground Space, Tunnelling Technology and Mining Sciences besides providing some pleasure domes under the title “Blissful Thoughts”, “Pioneers” and “News and Views”. The Journal has now fully established through continuous contribution of useful technical papers by the researcher, academicians and practicing engineers. Our effort is to publish more papers related to prediction of realistic behaviour of structurally weak and soft rock mass as in the Himalayas which is not only weathering sensitive but also seismo-tectonically active region of the earth planet.

Study on rock mass behaviour provide an attractive field of research because of unforeseen challenges faced by geotechnical engineers, while working in very difficult geological challenges such as in Himalayas and other unexplored region. There is much to be learned from case records or empirical theories on rock mass classification and shear strength characteristics developed during last few decades. The subject is of great importance to the civil and mining engineers, scientists and academicians.

The Himalayas are the gracious gift of God, whose splendour and hypnotic beauty attract people from every corner of the globe. For researcher of Geotechnical Engineering, Rock Mechanics and Mining Sciences, the Himalayas provides the best field laboratory in the world where the experience and knowledge of Rock Mechanics and Tunnelling Technology (the theme of the Journal) gathered elsewhere in the worlds can be testified and established with greater confidence. An added advantage for rock engineers and geologists working in the hilly region is that they can enrich their beauty and make them more hospitable place to enjoy solitude and peace.

In the words of Dr. V. M. Sharma, an eminent engineer and a member of editorial board of JRMTT, “It is difficult to think of India, more so of Rock Mechanics in India without the great Himalayas. On the one hand, it provides an enormous source of renewable energy, and on the other, it poses some of the most difficult challenges to the Rock Engineer”.

Prof. J. A. Hudson (Editor-in-Chief, Int. J. Rock Mech. Min. Science & Geomech. Abstract, 1994) once mentioned in his Editorial the importance of Rock Mechanics activities in India with these words, “To those of us who appreciate the romance and passion of Rock

Mechanics, there can be no more exciting work than building structures in the Himalayas with the huge scales, the tectonic activity and the weatherability of the rocks ..... Having travelled on just a few of the roads in the foothills of the Himalayas, I have experienced the romance of this work carried out at great heights, low temperatures and in adverse conditions.....”

India has been blessed with many precious gifts by mother nature, which essentially include ancient yoga, classical music, ancient divine dreams, practice of herbal bio-chemical medicine (responsible to reduce entropy of the body mind and spirit) and of course Himalayas. Generally the hills inspire the creativity of not only an artist but also an engineer. The creative people often visit Himalayas to pay their obeisance to the natural splendour of the mountains that keeps their creative impulses on a high. Nature acts as a great source of energy when it comes to inspiring their creativity.

We take an opportunity to acknowledge the major contributions of Indian engineers and geologist during last few decades, which include:

- Construction of water conductor system with plain cement concrete for major hydro electric projects in complex geological conditions in Himalayas.
- Accomplishment of tunnelling in highly squeezing rock conditions.
- Prediction of major rock burst.
- Construction and commissioning of Delhi Metro and Konkan Rail Line with 88 tunnels, some in soft to very soft ground.
- Collection of field data and its analysis by Indian researchers, which have been appreciated worldwide.
- Publication of approximately 100 Indian Standard code of practice on rock engineering.

Besides above major contributions, following five text books on Rock Mechanics and Tunnelling Technology have been published, authored by Prof. Bhawani Singh and Dr. R. K. Goel.

- Rock Mass Classification – A Practical Approach in Civil Engineering, Published by Elsevier, 1999
- Software for Engineering Control of Landslide and Tunnelling Hazards, Published by A.A. Balkema (Swets & Zeitlinger), 2002
- Tunnelling in Weak Rocks, Published by Elsevier Ltd., 2006
- Engineering Rock Mass Classification – Tunnelling, Foundations and Landslides, Published by Elsevier, 2011
- Underground Infrastructures – Planning, Design and Construction (along with Prof. Jian Zhao as one of the co-authors), Published by Elsevier, 2012

I on behalf of entire Editorial Board and my own behalf congratulate Prof. Singh and Dr. Goel for their monumental contributions to the subject of Rock Mechanics and Tunnelling Technology.

Further Dr. Goel, the Editor of JRMTT, deserves our heartfelt appreciation for his up-gradation from Associate Editor to Editor of an International Journal namely, ‘Tunnelling and Underground Space Technology’ published by Elsevier.

The potential of dedicated researchers, practicing engineers and the esteemed readers have constantly inspired us to nourish this Journal for over last two decades. I look forward to constructive criticism, suggestion and contribution from Rock Mechanics fraternity so as to improve the quality of Journal and bring it out to their expectations.

**- Dr. Subhash Mitra**  
*Chief Editor, JRMTT*