

## **BOOK REVIEW**

### **Tribology in Geology and Archaeology**

**Author:** Robert G. Bednarik (Convener, President and Editor, International Federation of Rock Art Organisations (IFRAO), Australia)

Tribology, the science of interacting surfaces in relative motion, has traditionally focussed on its technological applications, such as the issues of machine fatigue, the cost of friction in mechanical engineering and similar aspects of great economic importance. However, the present book on *Tribology in Geology and Archaeology* has presented the pioneering work of the author on the new fields of archaeotribology and tribology of rock art research which were never thought of before.

This book explores the geological applications of tribology in some detail, before introducing the entirely new sub-disciplines of archaeotribology and the tribology of rock art. The various geological, archaeological, and rock art applications are then correlated through the detailed description of a tribological phenomenon of the natural world that was only discovered most recently, kinetic energy metamorphosis (KEM). This newly discovered phenomenon was first observed as a by-product of rock art production by the author in 2015, but it was subsequently recognized as a wide spread physical process whose effects are much more common in both geology and archaeology. This must be the first time that rock art research has led to discovering a previously disregarded, unexplained, or misconstrued phenomenon in geology, usually it is the study of rock art that draws heavily on the knowledge of geology.

Therefore, this volume advocates an extended scope for a science traditionally focused on aspects of friction, wear, and lubrication of machines. This enhances the importance of tribology, while at the same time enriching the disciplines that have never been considered to have potential connections with tribology. The book not only illuminates the holistic interdisciplinary character of natural processes, but also presents the need to view tribology as a science connected to many other fields. It also paves the way especially for the future direction of research in rock art science. The book, therefore, succeeds in demonstrating that, ultimately, all disciplines are interconnected in the magnificent web of science, in which all fields of scientific inquiry must play a role. The book is not only worth reading but also motivates the reader for deep inquiry for understanding the cause and effect of a phenomenon. I, therefore, strongly recommend it for the libraries and the readers indulged in scientific inquiry for understanding the natural and anthropogenic phenomena.

**Professor Giriraj Kumar**

Rock Art Science and Indian Culture

Secretary General, Rock Art Society of India