

1056-Z1-1712      **Satish C. Bhatnagar\*** (bhatnaga@unlv.nevada.edu), 4505 Maryland Pkwy South,  
Mathematical Sciences, University of Nevada Las Vegas, Las Vegas, NV 89154-4020. *New  
Materials on History of Mathematics.*

Generally, historical research material is in the form of books, journals and manuscripts. Any search for, 2000-4000 years old manuscripts is out of question. With growing research in ethno-mathematics, a body of work has come out on the non-European roots of mathematics. For instance, India has a long tradition of using writing materials, like bhojpatra, palm leaves, bamboo stripes, and even barks of special trees. Inscriptions on copper plates were used for official deeds and proclamations.

New mindsets have to decipher science and mathematics from magnificent ancient Hindu temples that have survived in south of India, and Southeast Asia. Ancient monuments are the books of knowledge. The measurements of various lengths, angles, directions of sun light, and planetary positions can shed light on every aspect of ancient society.

Besides monuments, the ancient potteries, textiles, coins, clay seals, and terracottas are also sources for history of mathematics. On the surface, 'crude' mathematics may be in geometrical patterns, but the sophisticated one lies hidden, say, in the chemical composition needed to develop these artifacts. Ultimately, it is tied with the existence of necessary and sufficient conditions for the development of mathematics in a society. (Received September 22, 2009)