

1039-16-54

B. A. Sethuraman* (al.sethuraman@csun.edu), Department of Mathematics, California State University Northridge, Northridge, CA 91330. *Lattices in Division Algebras and Wireless Communication.*

Within the last five years, division algebras have emerged as the perfect tool for coding for wireless communication with multiple antennas. The code for these applications consists of elements coming from suitable lattices inside division algebras. We will describe these recent applications of lattices, and discuss some questions that naturally arise in this context. (Received March 02, 2008)