1041-01-76 **Glen R Van Brummelen*** (gvb@questu.ca), Quest University, 3200 University Boulevard, Garabaldi Heights, BC V8B ON8, Canada. *Trigonometry on the Edge: Interpolating Your Way to Medieval Astronomical Success.*

As odd as it may sound, interpolation was a branch of trigonometry during the medieval period in India and Islam. It led a peculiar life on the fringes of mathematical astronomy, not really considered on a par with geometrical procedures especially in Islam. Some of the best astronomers (al-Bîrûnîand al-Kâshîamong them) made serious mistakes when trying to generate second-order schemes, but others (including Brahmagupta and Ibn Yûnus) came up with ingenious arguments that led to equivalents of modern approaches. Of course it is a historical error to think of medieval second-order interpolation as passing a parabola through a set of points on a Cartesian grid; we will attempt to come to grips with how several medieval authors thought about it. (Received August 04, 2008)