

1014-54-1565

Homeira Pajoohesh* (homeiraaa@yahoo.com), Department of Mathematics, NAC 8133, City College of CUNY, 138'th Street and Convent Ave, New York, NY 10031, **Ralph David Kopperman** (rdkcc@att.net), Department of Mathematics, NAC 8133, City College of CUNY, 138'th Street and Convent Ave, New York, NY 10031, and **Steve Matthews** (sgm@dcs.warwick.ac.uk), Department of Computer Science, University of Warwick, CV4 7AL Coventry, England. *Partial Metrics*.

Partial metrics are metrics except that the distance from a point to itself need not be 0. These are useful in modeling partially defined information, which often appears in computer science. We generalize this notion to study “partial metrics” whose values lie in a space which may be other than the reals. Then each topology arises from a partial metric.

In fact, a partial metric naturally gives rise to two topologies, and given any continuous poset, there is a partial metric on it giving rise to the Scott and lower topologies. As time allows, we study their completions, and their relationship to domain theory. (Received September 28, 2005)