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**Benjamin H DeMeo\*** (bd2@williams.edu). *Arc Presentations and Grid Diagrams of Multi-Crossing Knots.*

An arc presentation places a knot in a set of half-planes radiating from a central axis so that each half-plane contains a single arc. The grid diagram of a knot, obtained directly from the arc presentation, presents the knot as a set of vertical and horizontal lines lying on an  $n \times n$  grid, where  $n$  is the number of pages in the arc presentation. We introduce arc presentations and grid diagrams, and discuss further implications in the field of multi-crossing projections and petal projections of knots. (Received September 25, 2012)