998-51-217 **Robert Huff*** (`rohuff@indiana.edu`), 3400 South Sare Road, Apt. 722, Bloomington, IN 47401.
Minimal capillary graphs over convex quadrilaterals. Preliminary report.

Here, we describe a seven dimensional space of minimal capillary graphs over convex quadrilaterals. Each surface in the space is determined by three interior angles and by four contact angles prescribed on the edges of a quadrilateral. Included in this space are graphs with contact angles of 0 or π on one, two, three, or four edges of the quadrilateral and continuous contact curves over the remaining edges (The graph is infinite over an edge with a contact angle of 0 or π). Also included in this space are graphs that are infinite over an edge with contact angle $\gamma \neq 0, \pi$. In terms of capillary graphs over wedge domains, such graphs give solutions to the local capillary wedge problem with contact angle data $(\gamma_1, \gamma_2) \in \partial \mathcal{D}_1^{\pm}$. (Received February 27, 2004)

1