1154-54-1546 **Chaim Even-Zohar*** (chaim@ucdavis.edu), **Joel Hass**, **Nati Linial** and **Tahl Nowik**.
Universal Knot Diagrams.

We study collections of planar curves that yield diagrams for all knots. We say that a sequence of closed immersed planar curves U is universal if every knot can be obtained from all but finitely many curves in U, by some choice of the overcrossing and undercrossing arcs at each crossing point. This definition includes some well-studied cases.

In particular, we show that a very special class called potholder curves carries all knots. This has implications for realizing all knots and links as special types of meanders and braids.

Our work raises quantitative questions about the efficiency of various classes of curves that represent all knots. Another major challenge is to characterize universal families of planar curves by necessary and sufficient conditions. We will discuss these two lines of research. (Received September 16, 2019)