Moshe Cohen* (moshe@math.lsu.edu), Department of Mathematics, Louisiana State University, 303 Lockett Hall, Baton Rouge, LA 70803, and Oliver Dasbach and Heather M. Russell. New twisted dimer model for the twisted Alexander polynomial. Preliminary report.

One can “twist” the Alexander polynomial by incorporating information coming from representations of the fundamental group of a link complement. One familiar representation is encoded by knot colorings. We generalize the dimer model for the Alexander polynomial to a twisted version with a more complicated structure and discuss properties of the polynomials that arise in this context. (Received September 22, 2009)