1115-57-364 **Abhijit Champanerkar*** (abhijit@math.csi.cuny.edu), Department of Mathematics, College of Staten Island. CUNY, 2800 Victory Blvd, Staten Island, NY 10314, **Ilya Kofman** (ikofman@math.csi.cuny.edu), Department of Mathematics, College of Staten Island. CUNY, 2800 Victory Blvd, Staten Island, NY 10027, and **Jessica Purcell** (jessica.purcell@monash.edu). *Determinant density spectrum and biperiodic alternating links.*

The determinant density of an alternating link $K$ is $2\pi \log(det(K))/c(K)$, where $det(K)$ is the determinant and $c(K)$ is the crossing number of $K$. The determinant density spectrum is the set of all limit points of determinant densities. We prove that for any sequence of links approaching a fixed biperiodic alternating link, the determinant density is related to the Mahler measure of a 2-variable polynomial, arising from the toroidal dimer model on an associated biperiodic graph. Thus, we explicitly realize points in the determinant density spectrum. (Received September 22, 2015)