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**Aihua Li\*** ([lia@mail.montclair.edu](mailto:lia@mail.montclair.edu)), Department of Mathematical Science, Montclair State University, 1 Normal Avenue, Montclair, NJ 07043, and **Christian Hyra**. *Interlace Polynomials of Certain Eulerian Graphs*.

Studying the graph polynomial of a considered graph has been an algebraic method to help understand the underground graph. Applications have been found in biology and other areas. In this research, we focus on the interlace polynomial of a special type of Eulerian graph, built from one cycle of size  $n$  and  $n$  triangles. We develop recursive and explicit formulas for the interlace polynomials of such graphs. The explicit formulas can be used to describe the graphs and can be applied to other areas of mathematics and sciences. One particular application is in matrix theory. (Received September 23, 2015)