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Dorothy Buck and **Danielle O'Donnol*** (odonnol@indiana.edu). *Unknotting θ -curves and DNA replication.*

Replication is when a single DNA molecule is reproduced to form two new identical DNA molecules. In the middle of replication a more complex structure is formed. When a circular piece of DNA is replicated the intermediate structure is that of a θ -graph. A θ -graph has two vertices and three edges between them. I study embedded graphs and graph embeddings. This talk will focus on my work on unknotting numbers of θ -graphs and understanding DNA replication. (Received February 19, 2018)