

1106-00-617 **Joyati Debnath*** (jdebnath@winona.edu), 64 White Oak Court, Winona, MN 55987. *Graph Theoretic Applications on Fingerprint Analysis.*

Forensic mathematics has gained importance and popularity over the years among the scientists and professionals. One of them is Fingerprint analysis and graph theoretic application. Fingerprints are commonly used to identify individuals for various purposes. It is known that the early Egyptians, Persians and Chinese used fingerprints to record business transactions. Currently, many graph theoretic algorithms are employed by the forensics to solve crime related events. This project resulted from attending a workshop on Forensics hosted by the Department of Homeland Security (DHS) at Maritime Massachusetts Academy during the summer of 2014. This presentation will focus on how graph theory and fingerprints are connected and the graph theoretic approach of finger print matching will also be discussed. (Received September 03, 2014)