1167-20-87   **Asiyeh Rafieipour*** (`ar444818@ohio.edu`), **Sergio R. Lopez-Permouth** (`lopez@ohio.edu`) and **Isaac Owusu Mensa** (`io103314@ohio.edu`). *A Characterization of Unit group of the Monoid Structure on the the Set of all Binary Operations over a Fixed Set.*

Given a set S, we consider an operation $\lhd$ on the set $\mathcal{M}(S)$ where

$$\mathcal{M}(S) = \{* \,|\, *\ \ \text{is}\ \ \text{a}\ \ \text{binary}\ \ \text{operation}\ \ \text{on}\ S\}$$

such that $(\mathcal{M}(S), \lhd)$ is a monoid. We consider several properties of this monoid, in particular, we fully characterize its group of units.

This talk reports some results from a paper with S.R. López-Permouth and Isaac Owusu Mensah that is currently under consideration for publication. (Received February 18, 2021)