**I. INTRODUCTION**

Electrostatic discharge (ESD) is the release of static electricity when two objects come into contact. Some common examples of ESD are:

* The shock we receive when we walk across a carpet and touch a metal doorknob.
* The static electricity we feel after drying clothes in a clothes dryer.
* A lightning bolt.

While most ESD events are harmless, it can be an expensive problem in many industrial environments.