**Prof. Amer Zerek**

**Title: Understanding Climate Change and the Role of Electronics in Mitigation**

**Abstract**

The role of electronics in climate change mitigation is a central focus of this study highlights their contribution to renewable energy generation through efficient capture, conversion, and distribution of solar, wind, hydropower, geothermal, tidal, and wave energy. Electronics also enable energy storage solutions, energy efficiency improvements in various sectors, the development of smart grids, and the integration of renewable energy sources into the grid. Additionally, electronics facilitate intelligent energy management systems, the electrification of transportation, and the optimization of energy consumption in buildings, industrial processes, and data centers.

Also it underscores the critical role of electronics in addressing climate change and promoting sustainable development. By leveraging electronic technologies, societies can reduce greenhouse gas emissions, enhance energy efficiency, and transition to low-carbon and climate-resilient economies, thereby mitigating the adverse effects of climate change and fostering a more sustainable future.