**RUBBER ISOLATOR BUILDING DESIGN**

**ABSTRACT**

The concept and theory of base isolation system are widely accepted at the present. To accomplish the predicted behaviours of the base-isolated buildings, the design for base isolation system is regarded as the dominant factor of the success of isolated buildings. Although the base isolation design can be fulfilled using Uniform Building Code 1997, conceptual design is yet necessarily analyzing to achieve the optimal and effective values of design. The conceptual design and preliminary design are discussed through analyzing a 100 year-old historical building, Mitchell Hall in Istanbul, Turkey.

During the procedure of design, many issues were raised given that the performance of the isolated building is dependent on the properties of buildings, the isolators and the scale of excitations. Therefore, torsion effect, P-8 effect and finally, the performance of baseisolated buildings subjected to extreme loads and service loads are investigated. Specifically, the implementations of active control system and semi-active control system are studied. The results show that the new devices can highly reduce the response of the building under service loads.