

## The Behavior of Tensile Fabric Membrane Structure

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**Abstract** - Membrane Structures are highly popular in architectural design now a days. There is trend of using membrane structures. It satisfies both attractive architect's design as well as structural design. Due to its light weight, earthquake force is neglected, whereas wind load is critical for the structure. Fabric resists tension and has no compression or bearing. Due to its light weight and stretch property, they can be used on places such as stadiums, large parking etc. Computer aids like Form Finder, Dlubal RFEM and AutoCAD is used for modeling and analysis. A general introduction is presented on material properties, membrane types and design process. A part of dissertation is to the behavior of fabric membrane such as stress-strain distribution and application of wind load on membrane. The study aims to reach the conclusion that, does it is advisable to use fabric membrane as a roof for any residential building.

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**Key Words:** Fabric, Form-Finding, Membrane, Strain, Stress