A project report on

PIEZOELECTRIC WIND ENERGY HARVESTING GENERATOR

(Sponsored by KSCST, Bangalore)

Submitted in partial fulfillment
of requirements of eighth semester degree in
Bachelor of Engineering in Electrical and Electronics Engineering
of Visvesvaraya Technological University, Belgaum

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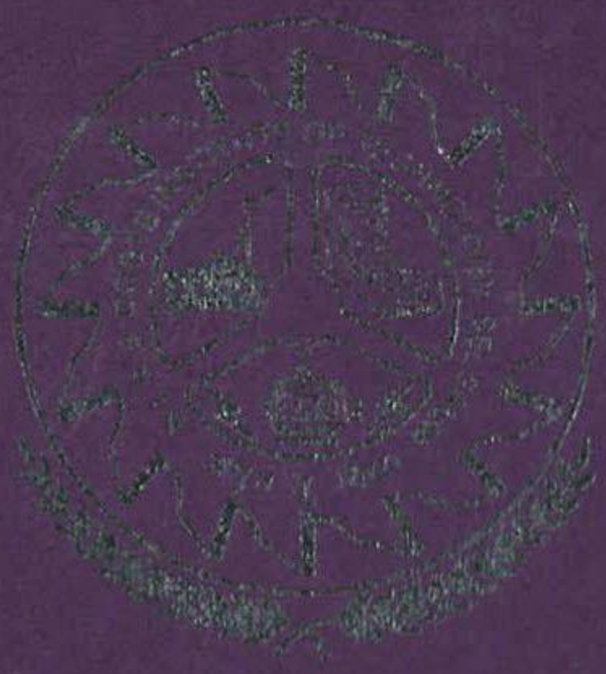

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ABSTRACT

As fossil energy resources deplete, wind energy gains ever more importance. Recently, piezoelectric energy harvesting methods are emerging with the advancements in piezoelectric materials and its storage elements. Piezoelectric materials can be utilized to convert kinetic energy to electrical energy. Utilization of piezoelectric wind harvesting is a rather new means to convert renewable wind energy to electricity. Piezoelectric generators are typically low cost and easy to maintain. This work illustrates an overview of piezoelectric wind harvesting technology. In wind harvesting, piezoelectric material choice is of the first order of importance. Due to their strain rate, robustness is a concern. For optimum energy harvesting efficiency resonant frequency of the selected materials and overall system configuration plays important role.