



## Wind Energy Harvester to Power Bridge Health Monitoring Systems

By Krystian Zimowski

LAP Lambert Academic Publishing Okt 2012, 2012. Taschenbuch. Book Condition: Neu. 220x150x12 mm. This item is printed on demand - Print on Demand Neuware - The research reported in this book is part of a project to develop a remote wireless sensing network for monitoring the health of highway bridges. Remote health monitoring that does not require direct human observation has many advantages in terms of cost and increased productivity. However, bridges that cannot be easily connected to the power grid require alternative means of acquiring power. This book describes the design of a wind energy harvester to power a particular component in the sensor network, the wireless router. The work discussed in this book provides a review of relevant literature and development of a detailed analytical modeling of wind turbine behavior. The analytical model provides key information on sizing generators and choosing appropriate wind turbine dimensions to provide the required amount of power. The analytical model also distinguishes the performance of vertical and horizontal axis wind turbines. The model is verified through design and testing of a first generation prototype and benchmarking of a commercially available turbine. Based on these results, the design of the next generation wind harvesting...



[READ ONLINE](#)  
[ 3.27 MB ]

### Reviews

*This type of publication is every thing and taught me to searching ahead and more. It can be rally fascinating through reading through period of time. You can expect to like how the blogger write this pdf.*

-- **Dr. Jillian Champlin IV**

*This ebook may be worth a go through, and superior to other. I could comprehended every thing out of this published e pdf. It is extremely difficult to leave it before concluding, once you begin to read the book.*

-- **Prof. Damien Schuster PhD**