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# V. Godinez, A. Pollock, M. Gonzalez, S. Momeni, R. Gostautas, R. Fustos, B. Newlin, D. Inman, J. Farmer, S. Priya, P. Ziehl, J. Caicedo, B. Zarate, L. Yu, Giurgiutiu, A. Nanni

# Self Powered Wireless Sensor Network for Structural Brige Health Prognosis: Achievement in the First Two Years

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In this paper, recent advances achieved on the development of a new system capable of continuously monitoring the structural health of steel and concrete bridges using wireless sensors are presented. This system will be able to harvest its own power from structural vibration and wind energy and, based on the data collected and on embedded algorithms, assess and predict the health of the structure. In order to reach this objective, this five-year project includes a series of tasks that encompass a variety of developments such as developing an ultra low power AE system, energy harvester hardware and especial sensors for passive and active acoustic wave detection. Thorough studies on acoustic emission produced by corrosion on reinforced concrete and by crack propagation on steel components, and the development of models that correlate AE data with component remaining life are also part of the project activities. This project is funded by the National Institute of Standards and Technology (N1ST) through its Technology Innovation Program (TIP) under grant # 70NANB9H007.

**Ключевые слова:**

**Содержание.**

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