

Summer 8-3-2012

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Peter Bocek

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Recommended Citation

Bocek, Peter, "Determination of Flow Rate Using Ultrasonic Sensing for Water Quality Monitoring" (2012). *Celebration of Undergraduate Scholarship*. Paper 187.
<http://scholar.valpo.edu/cus/187>

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Determination of Flow Rate Using Ultrasonic Sensing for Water Quality Monitoring

Author: Peter Bocek

Affiliation: Chemistry

To monitor the water quality of a stream or river, one must accurately and continuously measure the flow rate. The goal of this project is to build an inexpensive, accurate, and reliable flow meter that will provide continuous flow rate data. Our meter design operates by using an ultrasonic sensor to determine the height of the stream as it passes over a weir. This height can be directly related to the flow rate of the stream. By combining flow data with other water quality measures (e.g., phosphorous concentration), one can quantitatively characterize the health of the stream.

Information about the Author:

Peter Bocek is a rising junior studying Chemical Engineering at Purdue University. He was drawn to this project because of the potential for chemistry and programming to be integrated with environmental engineering.

Faculty Sponsor: Thomas Goyne

Student Contact: peterbocek@frontier.com