

# Louis Clark Vanuxem Lecture: A Worldview through the Computational Lens

## **Abstract**

From Google to Genomics, the notion of an algorithm underlies much of the “computational universe” we live in today. The algorithm is the fundamental object of study in theoretical computer science. The power and limits of efficient algorithms hold the key to such diverse questions as “What can we know about the world?”, “What is intelligence?”, and “Can poker be played over the telephone?”. The three lectures will cover the following related topics:

I: Algorithm: A common language for nature, man, and computer.

II: Time, space, and the cosmology of computational problems.

III: Cryptography: Secrets, lies, knowledge, and trust.