

1086-68-1136 **Moshe Y. Vardi*** (vardi@cs.rice.edu), Rice University MS-132, 6100 Main Street, Houston,
TX 770051892. *Database Queries - Logic and Complexity*.

Mathematical logic emerged during the early part of the 20th Century, out of a foundational investigation of mathematics, as the basic language of mathematics. In 1970 Codd proposed the relational database model, based on mathematical logic: logical structures offer a way to model data, while logical formulas offer a way to express database queries. This proposal gave rise to a multi-billion dollar relational database industry as well as a rich theory of logical query languages.

This talk will offer an overview of how mathematical logic came to provide foundations for one of today's most important technologies, and show how the theory of logical queries offer deep insights into the computational complexity of evaluating relational queries. (Received September 19, 2012)