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A festschrift to honor Professor Garrett Birkhoff on his 80th birthday

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Garret Birkhoff turned 80 on January 10, 1991. This milestone was celebrated by his many students, friends, and colleagues with a day that started with a program of talks on Scientific Computation at Harvard University (on June 28, 1992), and ended with a Banquet at the nearby JFK School of Government. The timing had been planned in conjunction with the Third IMACS International Conference on Computational Acoustics, held at Harvard, that preceded this event.

Professor Garrett Birkhoff is a much honored and world-recognized mathematician whose many books and research papers have an almost unbelievable span of topics which range from lattice theory, modern algebra, and hydrodynamics to nuclear reactor theory, acoustics, numerical solution of partial differential equations, and scientific computation. In addition, he has inspired and influenced the lives and careers of his fifty Ph.D. students and countless collaborators and friends.

The pages that follow contain most of the papers that were presented during this program of presentations, with a few additions by colleagues who have wanted to bring their contribution in homage to the remarkable career that has been that of Garrett Birkhoff.

His personal attachment to students and colleagues have left an indelible mark on generations of mathematicians. For this we shall be forever grateful.