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John von Neumann Birthday Centennial

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In celebration of John von Neumann's 100th birthday, a series of four lectures were presented on the evening of February 10, 2003 during the SIAM Conference on Computational Science and Engineering in San Diego. The venue was appropriate because von Neumann spent much of the later part of his life, in the 1950's, as an unofficial ambassador for computational science. He was then the only senior American scientist who had experience with the new computers (digital, electronic, and programmable) and a vision of their future importance. No doubt he would have relished the chance to attend a meeting such as this.

The first speaker, William Aspray, described the "interesting times" during which computers were invented. His remarks were based on his history [1] of this period in von Neumann's life. We were honored to have John von Neumann's daughter, Marina von Neumann-Whitman, as our second speaker. Other accounts of von Neumann's life can be found in books by two of his colleagues [2] and [3]. Our third speaker, Peter Lax, provided both mathematical and international perspectives on John von Neumann's career. Finally, Pete Stewart spoke about von Neumann's numerical error analysis [4] in the context of later work; this talk did not lend itself to transcription, but readers may consult the historical notes in [5].

Our thanks to all the speakers for a remarkable evening. We are grateful to the DOE Applied Mathematical Sciences (AMS) program for partially supporting these lectures. Thanks are also due to SIAM and William Kolata, to our emcee, Gene Golub, to Paul Saylor for recording and editing, and to Barbara Lytle for the transcriptions. More about von Neumann's work can be learned from the recent American Mathematical Society proceedings [6].

References

[1] W. Aspray. *John von Neumann and the Origins of Modern Computing*. The MIT Press, Cambridge, Massachusetts, 1990.

[2] H. H. Goldstine. *The Computer from Pascal to von Neumann*. Princeton University Press, Princeton, New Jersey, 1972.

[3] S. M. Ulam. *Adventures of a Mathematician*. Charles Scribner's Sons, New York, New York, 1976.

[4] J. von Neumann and H. H. Goldstine. Numerical inverting of matrices of high order. *Bulletin of the American Mathematical Society*, 53(11):1021–1099, November 1947. Reprinted in [7, v. 5, pp. 479–557].

[5] G. W. Stewart. *Matrix Algorithms 1: Basic Decompositions*. Society for Industrial and Applied Mathematics (SIAM), Philadelphia, Pennsylvania, 1998.

[6] J. Glimm, J. Impagliazzo, and I. Singer, editors. *The Legacy of John von Neumann*, volume 50 of *Proceedings of Symposia in Pure Mathematics*. American Mathematical Society, Providence, Rhode Island, 1990.

[7] A. H. Taub, editor. *John von Neumann Collected Works*. Macmillan, New York, 1963.