

The Technion mourns the passing of Professor Emeritus Abraham Lempel and sends heartfelt condolences to his family. Prof. Lempel from the Henry and Marilyn Taub Faculty of Computer Science was one of the authors of the Lempel-Ziv algorithm, which revolutionized data compression and is considered to be one of the most important technological breakthroughs achieved by Israeli researchers.

Prof. Lempel was born in Poland in 1936. He commenced his studies at the Technion in 1959 and finished his Ph.D. 8 years later. He taught electrical engineering and computer science and served as dean of the Henry and Marilyn Taub Faculty of Computer Science from 1981 to 1984. He founded HP Labs Israel, and was put in charge of the global Hewlett Packard research activities in computer science and engineering, and in physics. He was also an IEEE fellow, “for contributions to the theory of data complexity and to the practice of data compression, and to the algebraic analysis and synthesis of digital sequences.”

In 1977, Prof Lempel, together with Professor Jacob Ziv from the Andrew and Erna Viterbi Faculty of Electrical and Computer Engineering, published the first version of the Lempel-Ziv algorithm, and in 1979 – the second version. This algorithm enables lossless data compression. Compression algorithms are now an enabling technology for multiple file formats including GIF (images), PDF (files), MP3 (music), and more, as well as digital cable and satellite television, and many other modern technologies.

Here is a quote from the ACM announcement of the 1998 Paris Kanellakis Theory and Practice Award, one of many awards Prof. Lempel received: “The LZ algorithm can be found in virtually every modern computer. Most workstations run with one or more LZ compression algorithms in its software, hardware or both. We use the LZ algorithm often without being aware of it, archiving files; installing software that is compressed on a disk; backing up hard drives; and going online. These examples are of the practical impact added to the well-recognized theoretical significance of the work of Dr. Lempel and Dr. Ziv.”

“Prof. Emeritus Lempel was an inspiration to all of us,” said Technion president Professor Uri Sivan. “He’s considered one of the greatest researchers who worked in the Technion in the 100 years of its existence. The Lempel-Ziv algorithm contributed to the world an unprecedented technology that enables fast and lossless data transfer. Prof. Lempel exemplified a combination between in-depth basic science and excellent applied research. Few scientists have as much impact as he did on technological progress and on our day-to-day. May his memory be a blessing.”

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In the pictures:

1. Professor Emeritus Abraham Lempel
2. Professor Lempel
3. Prof Lempel, together with Professor Jacob Ziv (left)
4. Prof Lempel, together with Professor Andrew Viterbi

Credit: Technion Spokesperson Department

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