

Podcast Name: *ACM ByteCast*  
Episode: Episode 2 - Don Knuth

The *ACM ByteCast* podcast is a series from the Association for Computing Machinery, which is the world's largest education and scientific computing society. The podcast features conversations with researchers, practitioners, and innovators at the intersection of computing research and practice about their experiences, lessons learned, and visions for the future of computing. In this episode, host Rashmi Mohan interviews Don Knuth. At 82 years of age, Don has seen tremendous developments in computing technologies throughout his life. He was a young adult when computers first came out, and his opportunities to explore a newly developed computer and its software led him to add a love of computers to his other loves: teaching, writing, and mathematics. He brought his loves together as a computer scientist, professor, mentor, and author - even continuing in much of this work through his retirement years.

In addition to loving computer technology, Don had a great natural aptitude for it. He's found through his years in the field that approximately 2% of people have an inborn proclivity toward programming, and that the capacity is easy to recognize in others and challenging (if not impossible) to teach. You can't necessarily teach anyone any skill, he thinks, simply given his own inability to develop facility with geometry! That being said, Don does believe in the ability to sharpen skills through teaching and mentoring, and he has committed much of his time and energy to seeing other programmers develop their abilities. He introduced literate programming to the world of computer science, worked to make classroom structures more conducive to active learning, and spent years as a professor striving for the "lightbulb moment" when a student grasped an exciting new concept being taught. Even today in his retirement, he focuses a lot of effort on mentoring relationships and gives occasional lectures, including his [Stanford Christmas lectures](#).

Don wears many hats, as Rashmi points out, and one of them is the hat of an author. Don has been working on [The Art of Computer Programming](#) in several volumes since 1962. In December of 2019, [Volume 4, Fascicle 5](#) was released; it focuses on Don's "Dancing Links" technique, and is especially notable for its use of puzzles to conceptualize its ideas. Through his work as an author, Don has also made a name for himself in the world of digital books. As seems to be a pattern for him, he noticed a problem that he could resolve, and took it upon himself to do so; in this case, he noticed that digital book formatting was far from ideal, and used his computing skills to improve it. Another major interest for Don is music, which he considers a main avocation in his life. Don has played various instruments, and in recent years, he even composed a piece for pipe organ and multimedia entitled, "[Fantasia Apocalyptica](#)."

Links:

Learn more about [Don Knuth](#).

Learn more about the Association for Computing Machinery's Practitioners' Board at [acm.org](#).

Learn more about the ACM ByteCast at [acm.org/bytecast](#).