Foundational research motivated primarily by intellectual curiosity can yield unexpected dividends. A case in point is the design of optimal depth sorting networks, which resulted in the first surprising application of expander graphs. Expanders have subsequently been deployed to many areas such as identifying faulty processors, message distribution, designing error correcting codes, and reducing randomization in algorithms. We illustrate a few of these applications. We also outline a simple design of a sorting network which can be taught in an undergraduate course. The talk is accessible to a general computer scientist.

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