In one episode from 1975, the rock band Kraftwerk played their new single “Autobahn” on entirely electric drums and keyboards. By then, electric keyboards were hardly a novelty. Del Shannon’s 1961 hit “Runaway” featured a memorably shrill keyboard solo played by Max Crook on a clavioline. But electric drums were new, at least to me. I remember watching one of Kraftwerk’s characteristically robotic-looking members, Wolfgang Flür, keeping time by tapping beer-mat-sized electronic pads.

I’ve remained a fan of Kraftwerk’s oeuvre ever since, but I continue to be disappointed by one aspect of their music. Even though the band members program their instruments—presumably with complete artistic freedom—their rhythms, harmonies, and melodies sound conventional. Granted, the path to commercial success doesn’t lie through the avant-garde. Still, I wish they’d push more on the boundaries of musical form.

Which brings me to the curious career of Conlon Nancarrow. Born in Texarkana, Arkansas, in 1912, Nancarrow studied music and would perhaps have had a career in classical composition like that of his near contemporary, Elliott Carter. But in the 1930s, Nancarrow became a communist and fought in the Spanish Civil War. Unwilling to renounce his political convictions—the price, apparently, of his living and working freely in the US—Nancarrow moved in 1940 to Mexico, where he spent the rest of his life.

Nancarrow composed music for what is, in effect, a musical computer: the player piano. Using a punching machine, he’d create piano rolls of music whose speed and rhythmic complexity lay beyond the technical ability of human pianists. One characteristic feature of his music is the simultaneous unfolding of two or more different and gradually changing tempi: Study No. 37 is a 12-part canon, in which the 12 tempi are proportional to the pitches of a chromatic scale’s notes; Study No. 40 has two tempi in the ratio of $e/\pi$.

Nancarrow’s compositions remind us why we use computers in science and engineering—to accomplish feats of calculation that are beyond the power of our brains. But mere brute-force number crunching, while important, isn’t what computational science is all about. Implementing a Monte Carlo method, a fast Fourier transform, or other algorithm to solve a problem is satisfying. Devising a brand new algorithm is harder and more satisfying still.

My formal education in programming was confined to a short course on Fortran 77 in graduate school. The course didn’t include anything about how we might go about devising a new algorithm, just how to program other peoples’. Of course, the number of new, innovative algorithms is small, which suggests that inventing them is neither easy nor imperative. Still, just as music schools teach students how to compose original music, maybe computational science departments should teach students how to devise original algorithms.

Charles Day is the Web editor at Physics Today. This column’s title alludes to “It’s More Fun to Compute,” the last track on Kraftwerk’s 1981 album Computer World.