EDITOR'S CHOICE

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Collaborative endeavors between the West and the former Soviet Union are cropping up more and more frequently since the end of the Cold War. Until much is sorted out, there will continue to be some uncertainty in these relationships (perhaps even chaos) and several iterations will be needed before they converge to yield treasures of intellect and commerce. An unsung transgenerational collaboration of sorts that actually preceded the fall of Communism foretold these very attributes. The Russian mathematician Chebyshev (nineteenth-century St. Petersburg) sent his seventh degree polynomial across the years and miles into the computer of Clifford A. Pickover of IBM (twentieth-century Yorktown Heights) who went in search of its zeroes in the complex plane. Halley's iterative method was employed and one found that for certain initial values convergence is slow and chaotic. A graphical manifestation of this behavior using contour plots of level sets of the least upper bound of Halley's map near a root of the polynomial is EDITOR'S CHOICE this month. (The root is actually just off the plot at top center.) A potentially decipherable explanation by Pickover can be found in *Computers in Physics 3* (1989, p. 69), and the full figure appears in his book *Computers, Pattern, Chaos, and Beauty* (St. Martin's Press, New York, 1990). It is clear that these collaborators, never having met, converged on a new way to design crown jewels worthy of the czars.

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