In the summer 1976 four mathematicians came from the US to sleepy Southampton: Ken Cooke, Nancy Kopell, John Guckenheimer and Jerry Marsden—the latter, of course, a Canadian, but to a British postdoc with degrees in engineering, almost as exotic. The occasion was a conference organized by David Rand and Brian Griffiths. A year or so before that meeting I’d begun corresponding with Jerry. I was trying to extend ideas on invariant manifolds and bifurcations from finite-dimensional systems to PDEs. Someone (David Rand, David Chillingworth?) had told me that Jerry was writing or editing a book that might be helpful. I wrote to him, and a few weeks later a massive package arrived from Berkeley: 500 or 600 pages of photocopies of “The Hopf Bifurcation and its Applications,” by Jerry, his student Marge McCracken, and a host of other exotic Americans.

At this point a little perspective might help. In the mid '70s British university budgets were very tight: we were normally limited to 25 photocopies at a time; also, communication was by airmail, packages took longer, and we couldn't afford international phone calls.

So, I began to read and ask questions (by airmail), and Jerry began to answer them (by airmail), and pretty soon he suggested that we collaborate. We were fortunate to find some lovely problems in classical and continuum mechanics and to be able to use recent work on codimension 2 bifurcations of Floris Takens (another master of nonlinear dynamics, lost long before his time). We even found evocative titles: *Bifurcations to divergence and flutter in flow-induced oscillations; A partial differential equation.*
with infinitely many periodic orbits: Chaotic oscillations of a forced beam. Jerry was an ideal collaborator and teacher. As a graduate student at Princeton, he and Ralph Abraham had published Foundations of Mechanics: a unusual monograph that includes portraits of the founders themselves, including recent ones such as Kolmogorov, and those still among us then: Arnold, Moser and Smale. I understood for the first time that deep mathematics was done by real people, and that at least one of them was Jerry’s colleague.

Our collaboration gathered speed during Jerry’s semester with John Ball at Heriot–Watt in early 1977, and David Chillingworth and I invited him back to Southampton that May to give a series of lectures on bifurcation theory, solutions of the Navier–Stokes equations, and problems in nonlinear elasticity: all topics that were to result in multiple papers and books. Later in the year, it having become clear that an engineer trying to do mathematics was unemployable in the UK, I moved a little closer to the action. Without Jerry’s encouragement, his letter of recommendation, and a fluttery and divergent job talk, I doubt that Cornell would have taken a chance and made this possible.

We participated in two important conferences on nonlinear dynamics sponsored by the New York Academy of Sciences in 1977 and 1979, and Jerry arranged for and funded a visit to Berkeley in the Spring semester of 1981. It was there, between writing 3 joint papers (Or was it 4? It was hard to keep up with Jerry.), while looking out at the Golden Gate Bridge from Paul Chernoff’s office in Evans Hall, worlds away from the academic politics of Ithaca, that I agreed to become Director of Cornell’s Center for Applied Mathematics. So I also have Jerry to thank for an intermittent, but, it seems, recurrent administrative career. Ah well, he also introduced me and my family to Muir Woods and other natural beauties of the Bay area.

We worked together through the 1980s, as Jerry built his German connections with Juergen Scheurle and others at Oberwohlfach conferences (more hikes, beers and Black Forest cakes), and we were able to attract Jerry to Cornell for 18 months or so before he returned to California’s weather and skies. Thereafter, our scientific interests began to diverge, but we remained in close touch, hiring each other’s former students, and serving on editorial boards of journals and at Springer Verlag. We continued to meet frequently at the US Math Institutes in Berkeley and Minnesota, and, of course, at the Fields Institute, at first in Waterloo (with Jerry as Founding Director) and then in Toronto. I also had the pleasure, or perhaps the daunting responsibility, of reviewing and communicating some of Jerry’s massive papers on geometric dynamics to the Archive for Rational Mechanics and Analysis. Subsequently, as editor of the Journal of Nonlinear Science, I leaned heavily on his wisdom and advice, and after he took over in 2005, I was glad to help a little in return, especially last spring and summer, as he tragically declined.

I can’t thank Jerry now for all he taught me over 35 years, face to face, in letters, by email, through his many books and papers, and by personal example. And I’m merely one among the hundreds of students,
postdocs, collaborators and colleagues whose lives he touched and changed, and of many more whose questions he answered, whose work he encouraged. How did he make time to write all those words and elegant equations, to paint those evocative geometric pictures and compose his painstakingly-detailed letters of recommendation? How did he become such an inspiring teacher and friend?

We miss you, Jerry, but you’ve left a large community, in the US, Europe, and beyond. We’re struggling to fill some of the suddenly-empty spaces you inhabited and defined, and we’ll be reading and working out your ideas for years to come. Alas, now we have to do it without your help.

Philip Holmes, Princeton, NJ