In memory of Giorgio Careri

Fabio Bruni

Received: 11 December 2011 / Accepted: 14 December 2011 /
Published online: 13 January 2012
© Springer Science+Business Media B.V. 2012

To remember Professor Giorgio Careri is a real privilege and also a challenge, as it is not easy to harness such a personality within the few lines of a short note.

First of all, I consider this opportunity as an honor, as I still sense the gifts I received from Giorgio, during the many years we spent together. At first, I had my ears wide open to listen, as any young student would have done; at last I learned to discuss and argue, sometimes even fiercely, about experiments and data interpretation. My professional life has been largely shaped by Giorgio Careri, and I am deeply indebted to him. It is a responsibility, as many in our scientific community look at me as Giorgio's "scientific son", or at least

F. Bruni (✉)

Dipartimento di Fisica "E. Amaldi", Università di Roma Tre via della vasca navale, 84-00146, Rome, Italy
e-mail: bruni@fis.uniroma3.it

one of the last of his many scientific children. I am not special, but in discussions with colleagues even today, I can still feel the hidden question, “What did Giorgio think about this?” They pose this question to me in the hope that that I should be able to draw from my long exposure to Giorgio to provide an answer.

Giorgio’s behavior during a typical workday was full of silent teaching, of wordless examples, of an attitude and approach to science, and, I would add, to life as well, that was and still is totally contagious. He has been for me, and I am sure for many others as well, a mentor and a great teacher.

Of all this, the “days of percolation” (these are the days when Giorgio Careri had the intuition to apply percolation theory to describe the onset of biological function) are a very good example. He arrived in his office at 8:00 am. To keep everything under control, his office was not really separated from the lab, as they were two small side-by-side rooms with a common entrance. This is already a sign of “struggle”, as he had absolutely no ability with computers and the modern apparatus we had in the lab, but still he wanted to know what was going on. I usually arrived a bit later, and we sat down planning the experiment to do that day. The experiment consisted of measuring the dielectric properties of a hydrated protein sample over a wide range of frequencies and as a function of water content. This was continuously changing, as the sample was placed on a balance pan and exposed to a flux of dry gas. We had the balance connected to a computer, yet he insisted in writing down in the lab notebook each single weight value at constant time intervals, say 1 min. Why? Because he spent hours afterwards looking at this apparently meaningless long list of numbers, looking for something strange, like a “transition”, or a discontinuity that would have impaired our experiment. I already mentioned struggle; now it is the turn of dedication and passion.

The experiment on the hydration studies went on for many hours. After lunch, he sat in his chair to think. In other words, he took a little nap. The afternoon proceeded with me writing numbers and making some preliminary analysis, and Giorgio supervising all this. Usually the experiment lasted about 18 h, this could mean 4:00 a.m.! Well, at times I was supposed to take my scooter, a very old Lambretta, and drive to Giorgio’s house to bring him the results of the experiment. This was very important, as in this way he had time to think about it and decide for the next experiment on the following day, actually just a few hours later. The real bottleneck was my old scooter, not really reliable. Giorgio was seriously thinking about buying me a new scooter with the lab budget to keep the scientific

Careris’ desk in his study (*left*), with the notable absence of a computer, connected by a door to the laboratory (*right*) with instruments for measuring dielectric response as a function of temperature.

activity going! At any rate, the next morning it would start all over again. It was hard work and full of tension, but excitement and expectations were tangible. The interpretation of the hydration results in terms of percolation models has stood the test of time.

Beside physics I could feel, each single day we spent working together, his affection and care, like that of a loving father.

There are many lessons that Giorgio Careri left us. I should not underestimate the last one: the dignity with which he faced his last and sick years. His curiosity and tenacious bond to life until the very last minute tell us a lot about this great man.

Fabio Bruni, Rome