As the press widely noted at the time, Merkel's assumption of the chancellor's office in 2005 represented a string of firsts. Of Germany's eight postwar chancellors, Merkel is the first to have been born and raised in East Germany, the first woman, and the first physicist.

I remember being interested in Merkel's physics background, but evidently I wasn't interested enough to find out what kind of physicist she is—until 2 December 2010. That morning, as on other mornings, I was looking on Wikipedia for anniversaries to observe on Physics Today's Facebook page. I chose the anniversary of the opening of Leipzig University in 1409 and noted that Merkel, the physicist chancellor, was an alumna.

Merkel's Wikipedia entry says that she earned her doctorate in quantum chemistry. Out of curiosity, I looked her up on Google Scholar. The only first-author article I found was from 1987; it bore the title “Nonempirical Parameter Estimate for the Statistical Adiabatic Theory of Unimolecular Fragmentation.” Here's the abstract's first sentence:

For the C–H bond fission in CH$_3$, the reaction path, the potential profile and the frequencies of the normal modes perpendicular to the reaction path are calculated by means of ab initio quantum chemical approaches (UHF, second-order Møller–Plesset perturbation theory).

Even if you didn't know that quantum chemistry is deeply computational, the phrases “ab initio” and “perturbation theory” would reveal that Merkel was a computational scientist.

Has that background helped her govern Germany? I'm not sure. During her two chancellorships, Germany's scientific enterprise has continued to flourish. According to Thomson Reuters (see www.sciencewatch.com/dr/sci/11/oct2-11_1), in the period between 2006 and 2010 the country accounted for a stunning 10.35 percent of the world's physics articles and 7.64 percent of the world's chemistry articles (to pick the subjects closest to Merkel's former avocation).

On the other hand, Merkel's government perhaps too rashly abandoned nuclear power in the wake of the disaster in March 2011 at Japan's Fukushima Daiichi plant. To be fair, popular opinion in Germany had turned so far against nuclear power that a democratic leader could hardly ignore it.

The severest test that Merkel has faced so far is the Eurozone crisis. One year after I looked her up on Google Scholar, in a 2 December 2011 speech before the German parliament, she said of the crisis:

There is no possibility for a quick fix. There is not one last shot, as some say before every summit. This is not my language, nor my thinking. There are no easy and fast decisions. The debt crisis is a process. It will take years.

It's not hard to see in these words the echo of a past career performing long and detailed calculations on a computer.

Reference


Charles Day is the online editor at Physics Today. Echo is a nine-week-old Airedale terrier.

Selected articles and columns from IEEE Computer Society publications are also available for free at http://ComputingNow.computer.org.