by the term "confidence level," and may lead readers to incorrect conclusions.

For a given model, a frequentist analysis—the type of analysis that leads to confidence intervals—yields a range of parameter values for which the observed data satisfy predefined conditions: For a limit-setting analysis, the data are in the tail of the expected distribution. According to the frequentist construction, primarily developed by Jerzy Neyman, the experimenter is to repeat the experiment many times and glean the true parameter values from the distribution of produced intervals. No statement can be made from a single experiment about how likely the parameter values are, and to say, or even to suggest, that certain parameter values are "excluded" is logically incorrect unless there is a zero probability of producing the observed result with a particular parameter value. The correct statement is "For the parameter range [here specify the parameter range for which the data satisfy the probability requirement], the observed data satisfy [here define the criteria the data are supposed to fulfill]."

That phrasing will seem clumsy, but it is important that results be stated correctly. Implying that the frequentist analysis somehow allows a conclusion about which parameter values are probable or improbable is a logical error—one that unfortunately is pervasive, even in physics. A related error led the American Statistical Association to issue a warning last year about the use and interpretation of *p*-values in statistical hypothesis testing (see https://www.amstat.org/asa/files/pdfs/P-ValueStatement.pdf). I think physicists should get it right!

Allen Caldwell
(caldwell@mpp.mpg.de)
Max Planck Institute for Physics
Munich

Historical note on 2016 Physics Nobel

The coverage of the 2016 Nobel Prize in Physics (PHYSICS TODAY, December 2016, page 14) was enjoyable, particularly because my colleague David Thouless shared in the prize. The piece states, correctly, that in the 1930s "Rudolf Peierls argued convincingly that in [two-dimensional] materials, the thermal motions of atoms would prevent long-range order from being established." However, the case Peierls made in his 1935 article[1] was a variant of a 1930 argument by Felix Bloch[2] that thermally excited magnons would prevent the establishment of long-range order in two-dimensional Heisenberg magnets.

References

1. R. E. Peierls, *Ann. Inst. Henri Poincare* **5**, 177 (1935).
2. F. Bloch, *Z. Phys.* **61**, 206 (1930).

Michael Schick
(schick@phys.washington.edu)
University of Washington
Seattle

Call him Doctor Cooper

I always enjoy reading PHYSICS TODAY. However, there is a fatal mistake in "The image of scientists in *The Big Bang Theory*" by Margaret Weitekamp (January 2017, page 42). The caption for figure 1 reads "Hanging with Mr Cooper."

No. He is Dr Cooper. He is very sensitive about it.

As the author correctly described, Sheldon, Leonard, and Raj often make fun of Howard, who doesn't have a PhD. Sheldon is proud of his doctoral degree, and he never allows anybody to call him Mr Cooper.

This is funny for me because I also feel strange if someone calls me Mr Katori. People may call me Teppei or Dr Katori, but not Mr Katori, please.

Teppei Katori
(t.katori@qmul.ac.uk)
Queen Mary University of London
London, England

Correction

July 2017, page 8—Reference 1 for Charles Day's "From the editor" should read as follows:

1. S. Watanabe et al., *Nature* **515**, 228 (2014). PT