



**THE PROBABILITY OF A CONFIDENCE INTERVAL BASED
ON MINIMAL ESTIMATES OF THE MEAN AND THE
STANDARD DEVIATION**

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Abstract

Using two measurements, we produce an estimate of the mean and the sample standard deviation. We construct a confidence interval with these parameters and compute the probability of the confidence interval by using the cumulative distribution function and averaging over the parameters. The probability is in the form of an integral that we compare to a computer simulation.

Keywords and phrases: confidence interval, standard deviation, probability, mean.

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