Dardo Oscar Guaraglia, Jorge Lorenzo Pousa

Introduction to Modern Instrumentation

for Hydraulics and Environmental Sciences

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To my wife, daughters and son
To my parents
(Dardo Oscar Guaraglia)
To my mother María, in memoriam
To Nelly, in memoriam
(Jorge Lorenzo Pousa)
I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the matter may be.

William Thomson, 1st Baron Kelvin (1824 - 1907) (Lord Kelvin)

Although this may seem a paradox, all exact science is dominated by the idea of approximation. When a man tells you that he knows the exact truth about anything, you are safe in inferring that he is an inexact man. Every careful measurement in science is always given with the probable error ... every observer admits that he is likely wrong, and knows about how much wrong he is likely to be.