Association of Measured Data to Geometrical Features

Plática Invitada

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ABSTRACT

Least squares or Chebyshev association of geometrical features, such as straight lines, circles, planes, spheres, cylinders, and cones, plays an important role in geometrical product specification and verification, especially in coordinate metrology and form measurement. Although other association criteria are in principle possible, only these two methods are supported by national and international standards, like ISO 1101 or ASME Y14.5. However, the application of such fitting procedures needs a good knowledge about the underlying mathematical methods, in order to avoid the possibility to obtain unwanted results from the available software packages. Without some basic knowledge it is, for example, difficult to make a decision, which of the two possible methods should be used under certain circumstances, in order to satisfy the requirements of a particular measurement task. The aim of the paper is to give some background information about the two standardized association criteria in a way which claims to be understandable for engineers.

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