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A Brief Study about Nonparametric Adherence Tests

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Abstract : The statistical study has become indispensable for various fields of knowledge. Not any different, in Geotechnics the study of probabilistic and statistical methods has gained power considering its use in characterizing the uncertainties inherent in soil properties. One of the situations where engineers are constantly faced is the definition of a probability distribution that represents significantly the sampled data. To be able to discard bad distributions, goodness-of-fit tests are necessary. In this paper, three non-parametric goodness-of-fit tests are applied to a data set computationally generated to test the goodness-of-fit of them to a series of known distributions. It is shown that the use of normal distribution does not always provide satisfactory results regarding physical and behavioral representation of the modeled parameters.

Keywords : Kolmogorov-Smirnov test, Anderson-Darling test, Cramer-Von-Mises test, nonparametric adherence tests
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