Special Issue Reprint

New Advances in Distribution Theory and Its Applications

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This Special Issue covers recent developments in distribution theory where the proliferation of 'new' distributions—often derived through standardized techniques—has led to the development of models that prioritize mathematical elegance and rigor over interpretability. While these models may exhibit increased complexity, they often fail to provide meaningful insights or flexibility beyond existing distributions in the literature.

The Special Issue aims to reinvigorate the field by highlighting contributions that emphasize both the flexibility of statistical models and the clarity of their parameter interpretations. It focuses on developing distribution models grounded in specific mechanisms or characteristics related to real-world contexts, as well as frameworks that advance families of distribution functions. The contributions herein introduce reparameterizations to enhance model interpretability, explore regression models using key characteristics or indicators, and offer original applications with real data.

Through this collection, the Special Issue seeks to foster deeper insights into statistical distribution theory, ensuring that new models remain practical and interpretable while advancing the flexibility and utility of existing frameworks.

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