

# **An Environmental Impact Evaluation Model Generated by Compound Probability Distributions**

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## **Abstract**

The problem of empirically identifying the underlying distribution of a parameter in a compound distribution has not been satisfactorily addressed in the fields of environmental effect and frailty modeling. We introduce Particle Swarm Optimization as a method to generate an approximate distribution by minimizing the error of the associated marginal distribution. We demonstrate the correctness of our approach via Monte Carlo methods.