

### **The proportional likelihood ratio order and applications**

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#### **ABSTRACT**

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We introduce a new stochastic order between continuous random variables called the PLR (proportional likelihood ratio) order, which is closely related to the likelihood ratio order. The PLR order can be used to characterize random variables, the logarithms of which have a logconcave density function. A sufficient condition for the Lorenz ordering of truncated distributions is also obtained as an application.

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