

Review of: "Inequalities for m-Divisible Distributions"

Isra Al-Shbeil¹

¹ University of Jordan

Potential competing interests: No potential competing interests to declare.

Weaknesses:

1. **Complexity:** Some proofs and derivations are highly technical and may be difficult for readers without a strong background in mathematical statistics.
2. **Limited Examples:** The paper could benefit from more examples or applications to illustrate the practical implications of the theorems.
3. **References :** References are not updated!
4. **using the right symbol:** for 2 elements or less we should use {} instead of ()

Suggestions for Improvement:

1. **Additional Examples:** Including more examples or case studies to demonstrate the application of the theorems would enhance the paper's accessibility.
2. **Clarification of Proofs:** Simplifying or providing more detailed explanations for some of the more complex proofs could help readers better understand the results.

Based on the content of the article "Inequalities for m-Divisible Distributions" by Lev B. Klebanov and Ashot V. Kakosyan, here are some related works that should be cited to provide a comprehensive background and context:

Kolmogorov Representation Formula: This formula is mentioned in the context of proving inequalities for characteristic functions. A relevant reference is:

- Kolmogorov, A. N. (1933). *Foundations of the Theory of Probability*. Chelsea Publishing Company.

Lévy-Khinchin Representation: This representation is used in the proof of Theorem 1.6. A relevant reference is:

- Lévy, P. (1937). *Théorie de l'addition des variables aléatoires* Gauthier-Villars.

Properties of Infinitely Divisible Distributions: The paper discusses properties of infinitely divisible distributions, which are well-studied in the literature. A relevant reference is:

- Lukacs, E. (1970). *Characteristic Functions*. Griffin, London.

Decomposition of Random Variables and Vectors This work is cited in the paper and provides foundational knowledge

on the topic:

- Linnik, Ju. V., & Ostrovskii, I. V. (1972). *Decomposition of Random Variables and Vectors*. Nauka. English Translation, American Mathematical Society, Providence, Rhode Island, 1977.

Qualitative Criteria of Convergence of Probability Measures: This work by one of the authors provides additional context and background:

- Kakosyan, A. V., Klebanov, L. B., & Rachev, S. T. (1988). *Qualitative Criteria of Convergence of Probability Measures*. Ayastan, Yerevan (in Russian).

Recent Work on Inequalities for m-Divisible Distributions: A more recent paper that discusses similar topics and proposes statistical tests for infinite divisibility:

- Klebanov, L. B., Kakosyan, A. V., & Volchenkova, I. V. (2019). *Inequalities for m-Divisible Distributions and Testing of Infinite Divisibility*. [arXiv:1904.07604 \[math.PR\]](https://arxiv.org/abs/1904.07604)¹.

Including these references will provide a well-rounded context for the paper and acknowledge the foundational and contemporary work in the field.

I recommend the article for publication, contingent upon major revisions.