

Review of: "Symmetric Key generation And Tree Construction in Cryptosystem based on Pythagorean and Reciprocal Pythagorean Triples"

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Potential competing interests: No potential competing interests to declare.

The paper introduces an interesting concept of using Pythagorean and Reciprocal Pythagorean triples for symmetric key generation in a cryptosystem. This approach presents a unique way to generate keys using mathematical properties. The utilization of a Key Distribution Centre for user authentication and secure information exchange adds a layer of security to the key generation process.

The notation and formula provided are clear and concise, making it easier for readers to understand how the key pairs are generated. However, the paper could benefit from further explanations and examples to help readers grasp the concepts more thoroughly.

The references section demonstrates that the author has extensively researched and built upon existing work in the field, which adds credibility to the paper's findings and conclusions.

Overall, the paper presents an intriguing approach to symmetric key generation and exchange, using mathematical concepts from number theory. However, further clarity, examples, and potentially practical implications could enhance the paper's impact and understanding.

Few Suggestions:

Abstract: The abstract succinctly introduces the main focus of the paper: symmetric key generation in a cryptosystem utilizing Pythagorean and Reciprocal Pythagorean triples. It mentions the incorporation of a Key Distribution Centre (KDC) for user authentication and secure information exchange to generate keys. The abstract gives a concise overview of the paper's methodology and its contribution to the field of cryptography. However, it could be improved by providing a bit more context on the significance of Pythagorean triples in cryptography and how the proposed approach differs from existing methods.

Conclusion: The conclusion reiterates the innovative aspect of the proposed system, emphasizing its reliance on a novel mechanism for generating keys using Pythagorean triples. It outlines the formula that uses factors of "x" to calculate "y" and "z" while satisfying the Pythagorean theorem. The conclusion adequately summarizes the key findings of the paper. However, it would be beneficial to include a discussion on the potential implications or applications of this key generation method. This could help readers understand the practical relevance of the presented approach and how it might compare with other key generation techniques.

