

COMPARISON BETWEEN CUBIC TRIGONOMETRIC B-SPLINE AND CUBIC TRIGONOMETRIC NU-SPLINE ON 'WAU BULAN' DESIGN

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ABSTRACT

The Wau Bulan, a traditional Malaysian kite, is known for its intricate and captivating design. In this study, comparison between two spline techniques, which are Cubic Trigonometric B-spline and Cubic Trigonometric Nu-spline, in the context of designing the Wau Bulan pattern in a 2-dimensional shape. Theoretical foundations and mathematical formulations of both spline methods are presented, emphasizing their applicability in representing smooth and visually. The results of this study reveal the strengths and limitations of each spline technique in capturing the unique features of the Wau Bulan design. The Cubic Trigonometric B-spline demonstrates excellent control and flexibility, allowing designers to precisely manipulate the curves and maintain the essence of the pattern. While Cubic Trigonometric Nu-spline show the smoothness and the ability to accurately capture the characteristics inherent in the Wau Bulan design. This study compares two methods to find the best method for the designer use it in the future. This study explores the impact of different control point and shape parameter, on the qualities of producing the design. The findings of this research provide valuable insights into the application of Cubic Trigonometry B-spline and Cubic Trigonometric Nu-spline techniques in the two-dimensional design of the Wau Bulan. Designers can use this knowledge to choose the best method based on their design goals and requirements such as to ensure the creation of visually captivating. For this study cubic trigonometric Nu-spline is the best method for designing Wau Bulan two-dimensional shape.

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