Interactive modeling
with Log-aesthetic spirals

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Abstract

The Log-aesthetic curves are widely studied for modeling purposes because its monotone curvature function meets highly aesthetic requirements in the industrial design. However, the general formula of the Log-aesthetic curves requires numerical integration, which complicates the controllability in practical use.

Yoshida and Saito have developed an algorithm [1] for interactive control, by searching a Log-aesthetic curve segment specified by the endpoints and tangent vectors. In this paper, the authors derived the curve that arc length may has upper or lower bound to avoid inflection point and cusp. As a result, the given tangents required to meet rigid conditions to obtain the curve segment.

In this presentation we would like to present a new approach to determine extended Log-aesthetic curve segments, including inflexion point and cusp, using the same configuration.

Keywords: Log-aesthetic curve, monotonic curvature, interactive design

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References

[1] Yoshida, N. and Saito, T.: Interactive aesthetic curve segments, *The Visual Computer* 22.9–11 (2006), 896–905