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 Author: [ADVANCED](#) | Volume Page
 Keyword: |

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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[\[PDF \(1554K\)\]](#) [\[References\]](#)

Designing Yarn Path on a Mold for Knot Formation

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Abstract: Making knot is important work in the textile industry. Now, devices which make knots such as knotters and splicers are spread. However these devices cannot make all knots used in the textile industry, thus workers still make knots by their hand in some textile mills. These mills, therefore, demand to make knots automatically.

In this study, we used a set of parts which is called a mold to make various knots. Tracks corresponding to each knot must be carved on the surface of a mold. However experience by practice is needed to design a mold, thus a logical design process is demanded for anyone to design tracks. We used the knot theory and the Dowker notation to adapt the mold for each knot, then we tried to move and/or compose tracks in order to obtain the appropriate path.

Key Words: [Knot](#), [Mold](#), [Path](#), [Knot theory](#), [Dowker notation](#)

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