

# About the geometry of milling paths

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In this paper we investigate two problems in generating optimal milling paths. One of them is to ensure even abrasion of the machining tool, which requires keeping the angle between tool axis and surface normal constant during cutting motion. The second problem is to generate a wide machining strip by each toolpath, which reduces the total length of milling paths. This can be done by finding the longest diameter of the contact surface between machining tool and the offset by a prescribed tolerance to the given surface. Our task is to find a compromise between these two requirements. We have restricted the computations to smooth surfaces and ball endmill.

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