Journal of
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Tool Wear Prediction in Manufacturing

Guest Editor:

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Deadline for manuscript submissions:
closed (30 November 2020)

Message from the Guest Editor

In both metal cutting and metal forming, controlling the tool wear rate is critical as it affects part geometry, surface, and subsurface integrity. Furthermore, the selection of process parameters, thin film tool coatings and cutting environment, especially for materials with high strain hardening sensitivity and low thermal properties, is dependent on striking a balance between tool wear rate and productivity. At the present moment, the majority of the models could predict wear rate at the flank face region only. Unfortunately, few have the ability to predict the crater wear rate. The tool wear rate predicted by analytical or empirical models is triggered by either mechanical or thermal loadings and at the steady-state wear rate region. Limited published models have the ability to predict the transition between transient and steady-state wear rate. However, this limitation could be overcome using finite element (F.E.) methods. In F.E., the accuracy is controlled by both material's empirical constant and friction models with a coefficient of friction that is dependent on temperature...

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Message from the Editor-in-Chief

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