Institut für Werkzeugmaschinen und Betriebswissenschaften (*iwb*)
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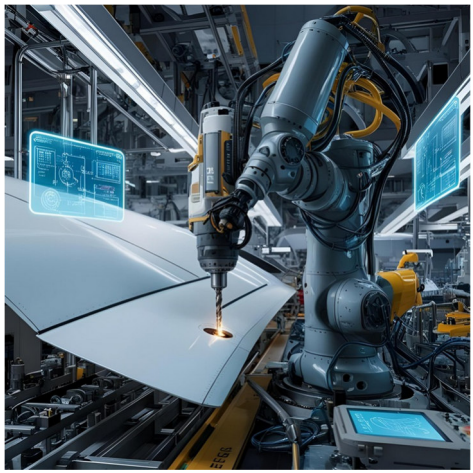
IDP: Simulation of vibration-assisted drilling

Background
In aircraft production, rivets are mainly used for the assembly of structural components. For this purpose, drill holes must first be drilled through multi-layer material packages, usually using industrial robots. Due to the different material properties, vibration-assisted drilling is used for this drilling process. Here, the otherwise linear movement of the drill is superimposed by a sinusoidal oscillation.



Objective
To better estimate the parameters used for drilling, a prototype of an animation of the movement of the drill's cutting edges is to be implemented. Similar approaches are described in literature, the integration of own ideas is possible. The addition of a very simple user interface would be a nice add-on.

Requirements
Programming skills ideally in Python, however other languages are possible too. Initiative and a structured way of working, reliability and commitment.

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