

## **Problem Statement**

Microopen Medical specializes in the printing of critical functional materials, such as conductive electrodes, on medical devices. Hemostasis Probes are a product produced by Microopen Medical, which are made from alumina ceramic printed with a gold-filled cermet conductive ink. In the Hemostasis Probe Cell, the current manufacturing process requires operators to use a small tool to perform a touch-up procedure on the printed components to ensure conductivity. This procedure requires a high degree of precision and is performed in a repetitive pattern where the operator adopts a number of potentially harmful postures during the process; this presents several ergonomic risk factors for the operator.

The objective of this project is to design and develop an improved workstation that eliminates or at least reduces the ergonomic risk factors for the operator, while meeting all the visualization and mechanical motion demands of the manufacturing process. The expected end result will include all design documents for the new design, a working prototype, a time study of the current and new process, as well as a technical paper and poster presented at ImagineRIT. The new system design will pose no significant changes to the current printing instrument or critical dimensions/features on the system components.