

Because my telescoping actuator isn't the traditional 2-3 axis cutting/drawing tool, I decided to create my own error budget spreadsheets. The errors in my designs are dominated by geometric and gravity-based errors (rather than material stiffness considerations), and so these spreadsheets focus on how the accuracy of the structure (which is predominantly an actuator) is affected by slight deviations in the critical dimensions. The two relevant spreadsheets, "Gould_PUPS_6_Error_Budget_Screw.xlsx" and "Gould_PUPS_6_Error_Budget_Scissor.xlsx" outline these effects for the two designs I am currently directing my focus on (the single screw actuator with an outer shell and the scissor-based actuator).