Optimum Design Spring 2016 Homework # 3

Homework 3 Rubrics

Memo (5 pt)

(1 pt) The problem background is explained clearly and concisely.

(2 pt) The results of all required analyses are reported (see hw3_memo_deliverables.pdf).

(2 pt) The results are discussed in the required aspects (see hw3_memo_deliverables.pdf)

MA Calculation (5 pt)

(1 pt) The cutter's MA is plotted correctly at the default design configuration.

(2 pt) The cutter's average MA is plotted correctly at the default design configuration.

(1 pt) The length of link 2 and the offset can be changed through a dialog, while the MA and average MA change accordingly.

(see Figure 2 in hw3_dect_part1.pdf)

(1 pt) A annotation box is shown to display the information for the current design point.

(see Figure 1 and Table 1 in hw3_dect_part1.pdf).

Implementation of Search Functions (10 pt)

(1 pt) ei_max.m pass the check of the provided test function.

(1 pt) aei_max.m pass the check of the provided test function.

(1 pt) gs_max.m pass the check of the provided test function.

- (1 pt) The number of iterations is counted and output for each search methods.
- (2 pt) Maximum MA is found using all three methods. Output the information in the annotation box.
- (4 pt) Maximum average MA is found using all three methods. Output the information in the annotation box.

Extra Credits (5 pt)

(1 pt) All files follow the naming rules: m-files and memo file. Send English memo in MS Word, or Chinese memo in PDF.

(See hw3_memo_deliverables.pdf)

- (1 pt) The dialog pops up an error message and requests an re-entry when the user input a link 2 length or offset value that is out of the range.
- (2 pt) The memo is written in English and in good quality.
- (1 pt) CPU time is computed during the searching time period. Output the information in the annotation box.