

## EXERCISE10

- Copy the directory “Exercise10” from /export/home/thf272/ME5013/Fall2014/Exercise10 into your home directory: \$HOME/ME5013/Fall2014/Exercises/InClass.
- Edit the python code in order to calculate average toughness from the stress-strain data (provided the .dat files).

$$Toughness = \frac{Energy}{Volume} = \int_0^{\epsilon_{Fracture}} \sigma d\epsilon \quad (1)$$

Here,  $\epsilon_{Fracture}$  is the strain at failure,  $\sigma$  is stress and  $d\epsilon \approx \Delta\epsilon := \|\epsilon_{i+1} - \epsilon_i\|$ .