פתרון תרגיל פייתון

פוטנציאל חשמלי:

סעיפים 5-7:
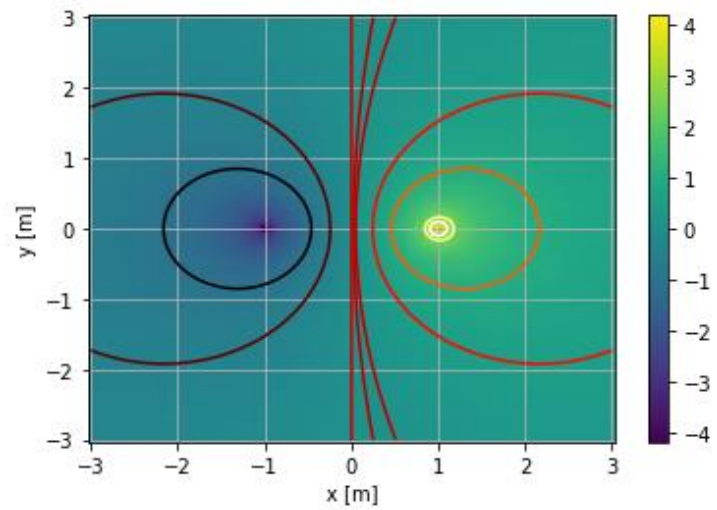
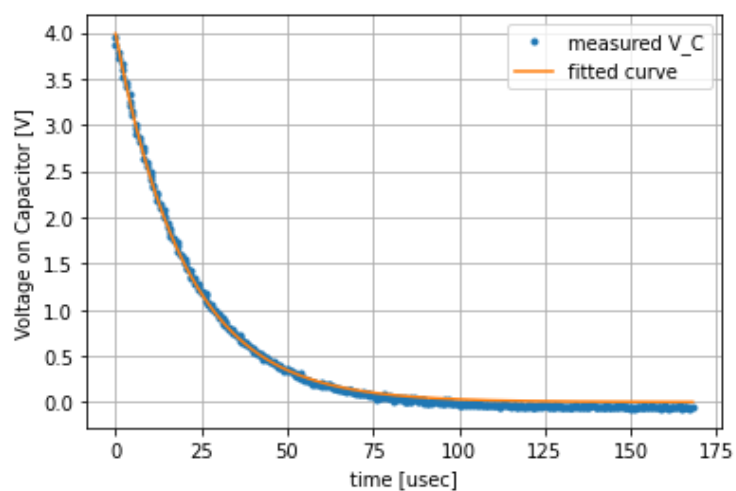

סעיף 8:
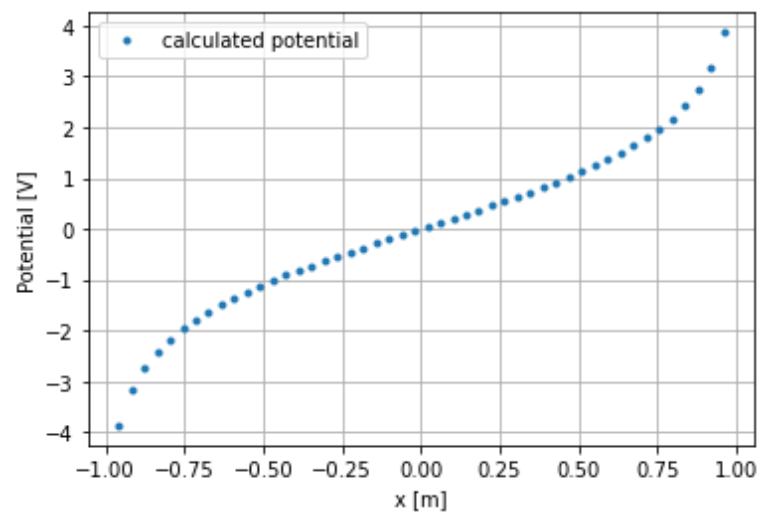
קבל:

סעיף 2: C_theoretical = 4.5e-10 F

סעיף 3: tau_theoretical = 1.73e-5 sec

סעיף 7:

סעיף 11:

V0_fit = 3.99 V

tau_fit = 2.044e-5 sec

סעיף 12:

V0_fit_err = 0.01 V

tau_fit_err = 8e-8 sec

סעיף 15:

Chi2 = 267.5

DoF = 418

סעיף 16:

p-value = ~1

סעיף 17:

R_squared_of_fit = 0.998
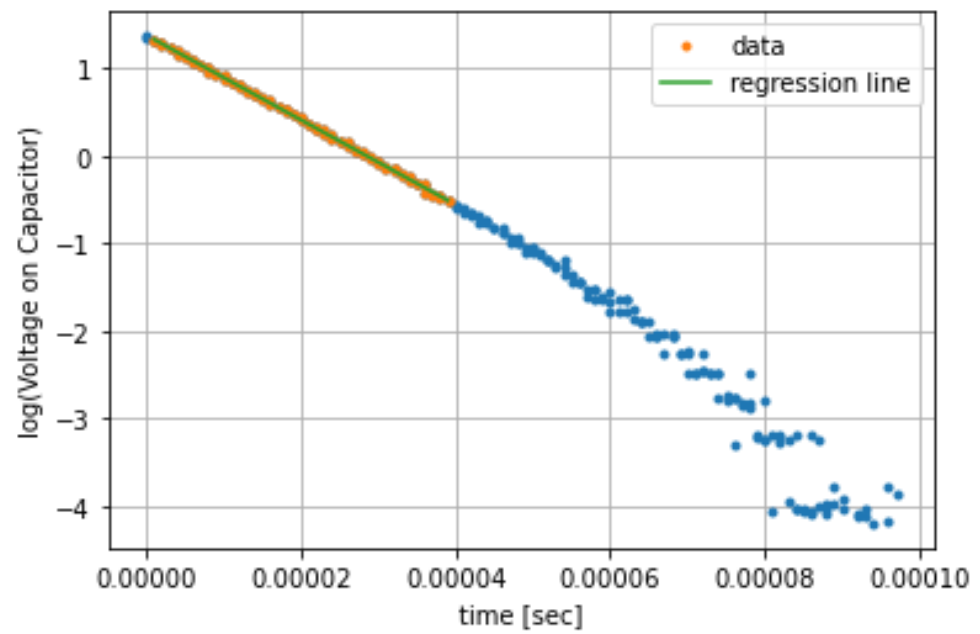
V0_reg = 3.98 V

tau_reg = 2.067e-5 sec

V0_reg_err = 0.02 V

tau_reg_err = 7e-8 sec

R_squared_of_reg = 0.999
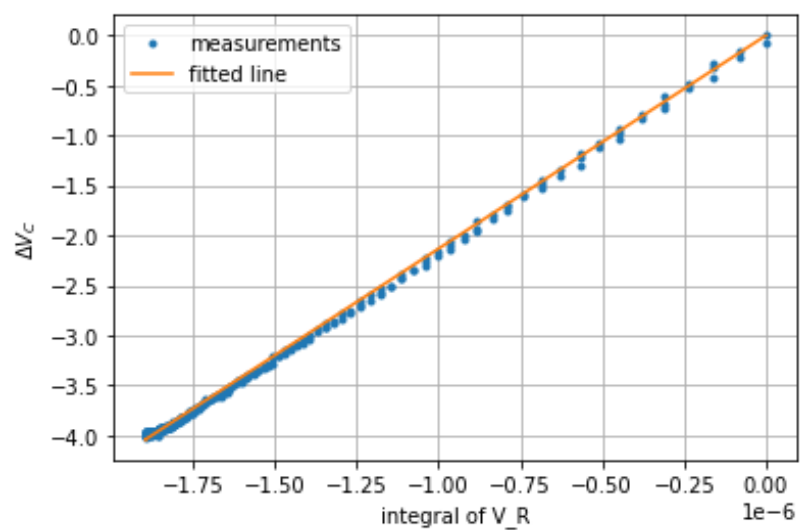
C_meas = 4.8e-10 F

חוק אוהם
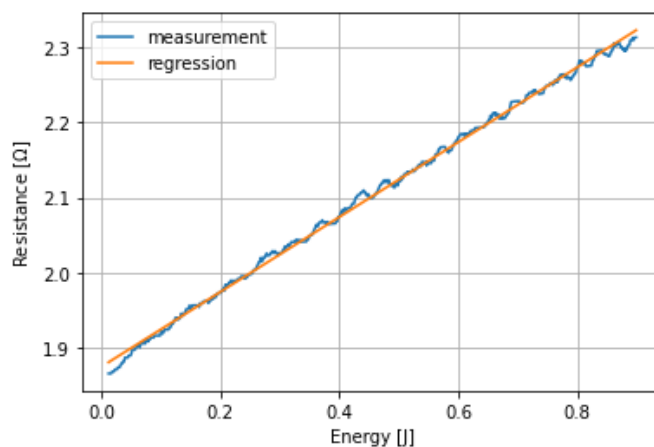
סעיף 12:

סעיף 14:

R0 = 1.88 ohm

Alpha_over_C_heat = 0.26 1/J

השראות:

סעיף 5:
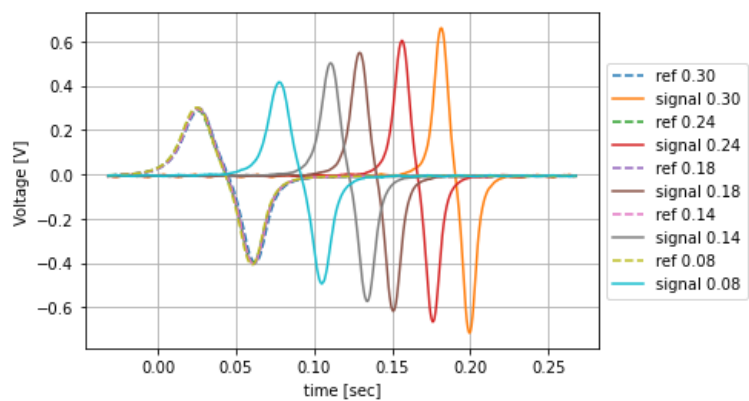
סעיף 7:
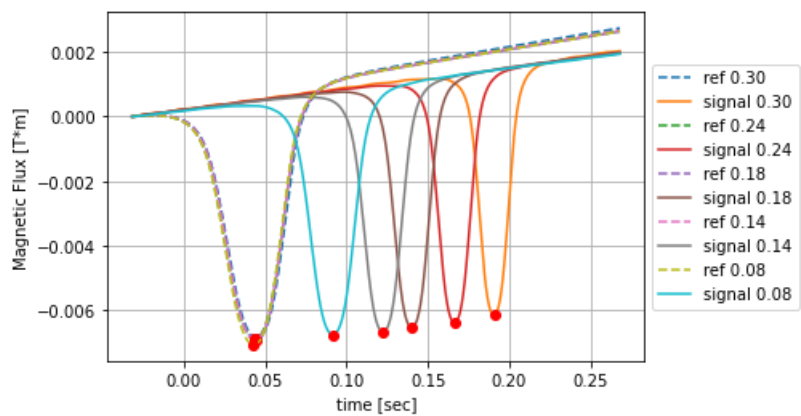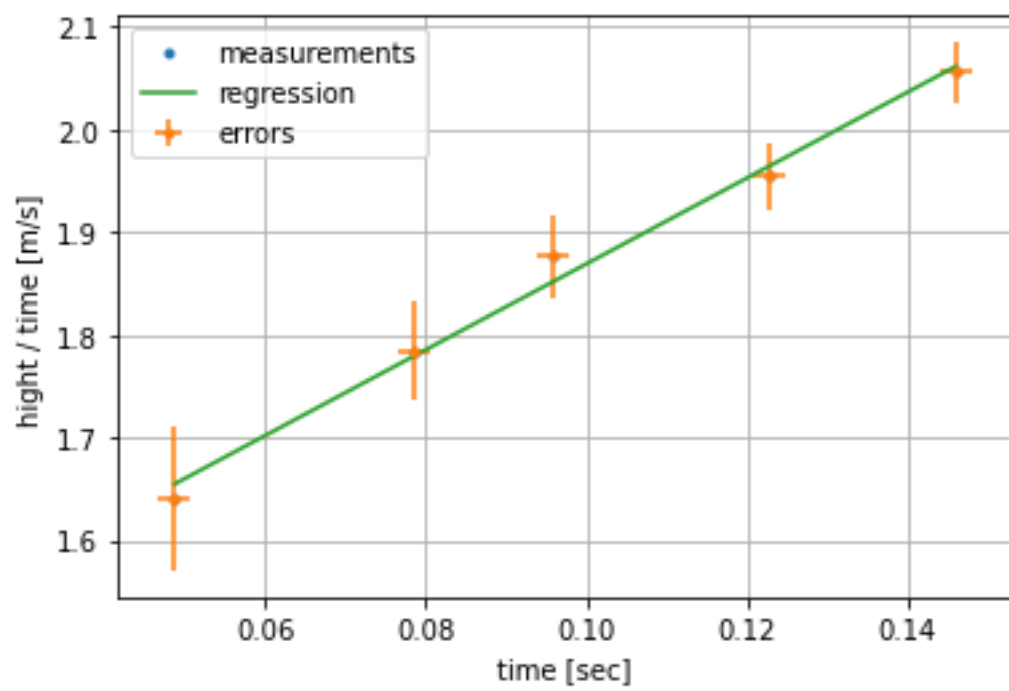
v0=1.45 m/sec

a = 8.36 m/sec^2

R_squared_reg = 0.99

Chi_squared = 0.518

Dof=3

p-vaule = 0.915