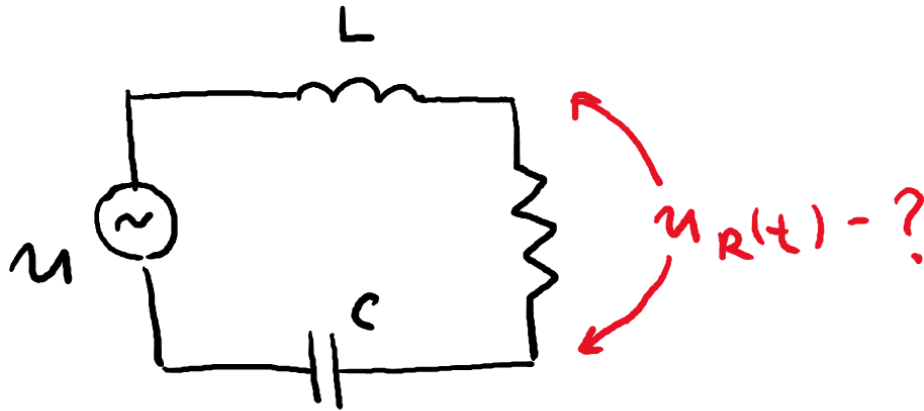Homework 9.

We discussed how to use complex numbers to solve AC current circuits. We found that voltage at the inductor is : $V_L = L\frac{dI}{dt}$, where L is the inductance and I – current through the inductor; current through the capacitor is $I_C = C\frac{dV}{dt}$, where C is the capacitance and V is the voltage at the capacitor. Take a look at the circuit below and try to find the voltage at the resistor as a function of time.

$$u = u_o \cos(\omega t)$$