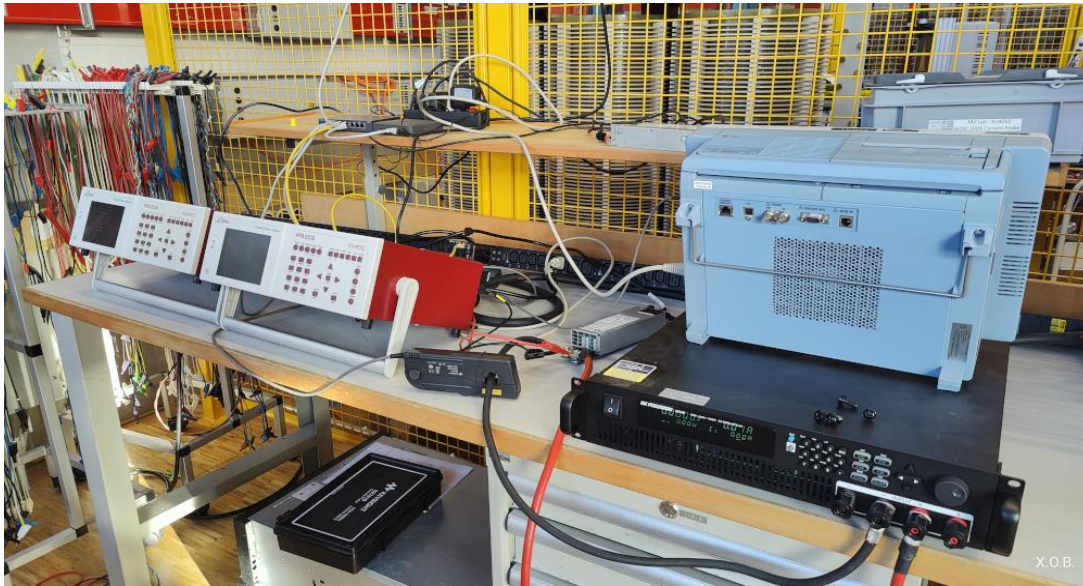


Fan, PSU, & Idle Power in Air-/Direct-Liquid-Cooled Servers

August Ning, Xavier Ouvrard, Babak Falsafi

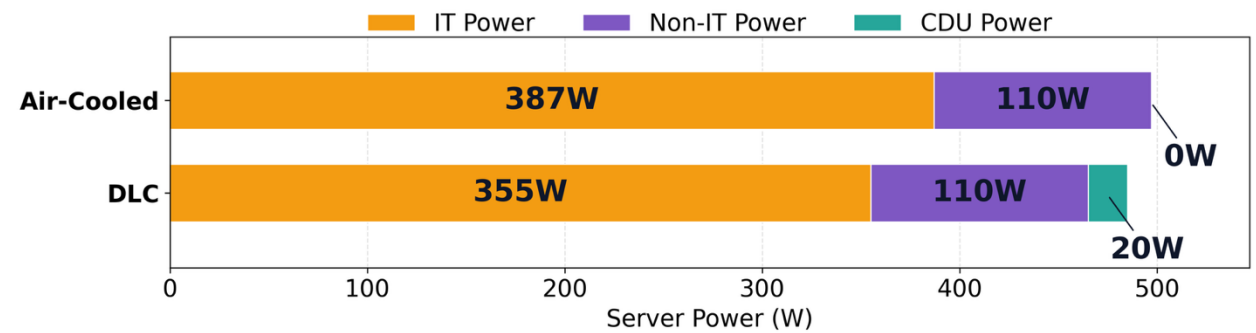
How do we break down and measure server power?

$$E_{IT} = E_{PSU} + E_{Fans} + E_{Idle} + E_{Compute}$$



How do datacenter operating trends affect efficiency metrics like PUE?

$$\text{Power Usage Effectiveness (PUE)} = E_{\text{Total}} / E_{IT}$$



Stop by our poster: methodology, case studies on high ambient temps and DLC!