UiO / IFI / PUT
Spring 2025
Questions on Battery Issues
(see the paper indicated in the slides)

1. Is the method based on coarse-grained or on fine-grained battery traces?
2. How are errors amortized in each specific trace?
3. Is it large or small the percentage of smartphone time and battery that is used for a traditional "cellphone" purpose?
4. Is power consumption during standby much higher than expected?
5. What collected information is included in the study?
6. Invalid users are filtered out. What are the steps taken?
7. Say if you agree with the following sentence: "*One of the major obstacles is the granularity of the battery traces*". What may happen as a result?
8. Do you think that multiprocessing can be an obstacle as well?
9. How is the multiprocessing handled?
10. Does the system distinguishes between battery charging and discharging?
11. What about the data collecting system. Does it uses energy as well? How does the system handles it?
12. What is the calculation method used?
13. Does the system records the history of battery levels for each user with the battery level change events?
14. What is a charging region:
15. How is calculated the power consumption of apps?
16. What is an app usage period?
17. Say 3 of other challenges that do exist.
18. What is it expected from the large-scale analysis regarding the error?
19. Does the variance becomes smaller when the scale of battery traces increases?
20. Consider the app Angry Birds. Can we say that the energy consumption rate of the app converges to a fixed number when the number of users becomes larger and larger?
21. Do the results show that with a relative high number (up to 10000) of users it is possible to provide an accurate power estimation?
22. How was the system accuracy evaluated?
23. Regarding the battery life what was the main conclusion?
24. How many times do batteries die?
25. Do users stop charging their phone before it reaches 90%?
26. How long does a charging event usually takes?
27. In average, how many users charge their batteries more than twice a day?
28. How many apps were considered for getting the data regarding their energy spending?
29. What categories are used to categorize the apps?
30. What it measured the time and energy of a smartphone in use compared to when it is in standby?
31. What are the most used apps?
32. Which are the most energy-hungry apps?
33. What about the time and energy usage of phone calls?
34. Which are the apps that consume more and less energy?
35. Regarding standby, what is the power consumption rate on average?

36. What is on average the user using time per day?
37. What are the categories of users (based on the time they used a phone)?
38. What is the impact on time and battery life of users diversity?
39. What is the difference between heavy and light users regarding the time it takes between charging their phone batteries?
40. How long do batteries last for heavy and light users?
41. In Android what is Doze?
42. What is a maintenance window in Android (when Doze is on)?