



13th IEEE/IET International Symposium on Communication Systems, Networks and Digital Signal Processing

20-22 July 2022, Porto, PORTUGAL

- <https://csndsp2022.av.it.pt/>

Instituições Associadas



Portugal Chapter



Horizon2020
European Union Funding
for Research & Innovation



Closing Ceremony



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General Information

- Group photo: join at the main entrance of Fundação Dr. Antônio Cupertino Miranda at 13h50, we will take photo sessions every day
- Enjoy the permanent exhibitions on Fundação Dr. Antônio Cupertino Miranda
 - Miniature toys
 - Paper money
- Enjoy the conference!



How vehicular networks can be used to improve the safety on roads: examples from a city-scale digital open laboratory

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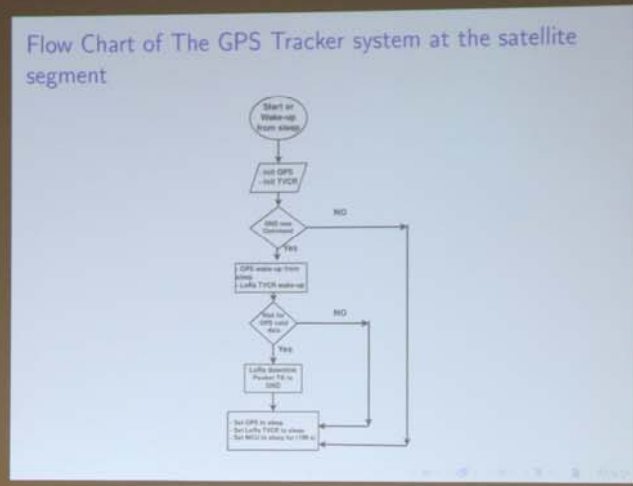
departamento de eletrónica,
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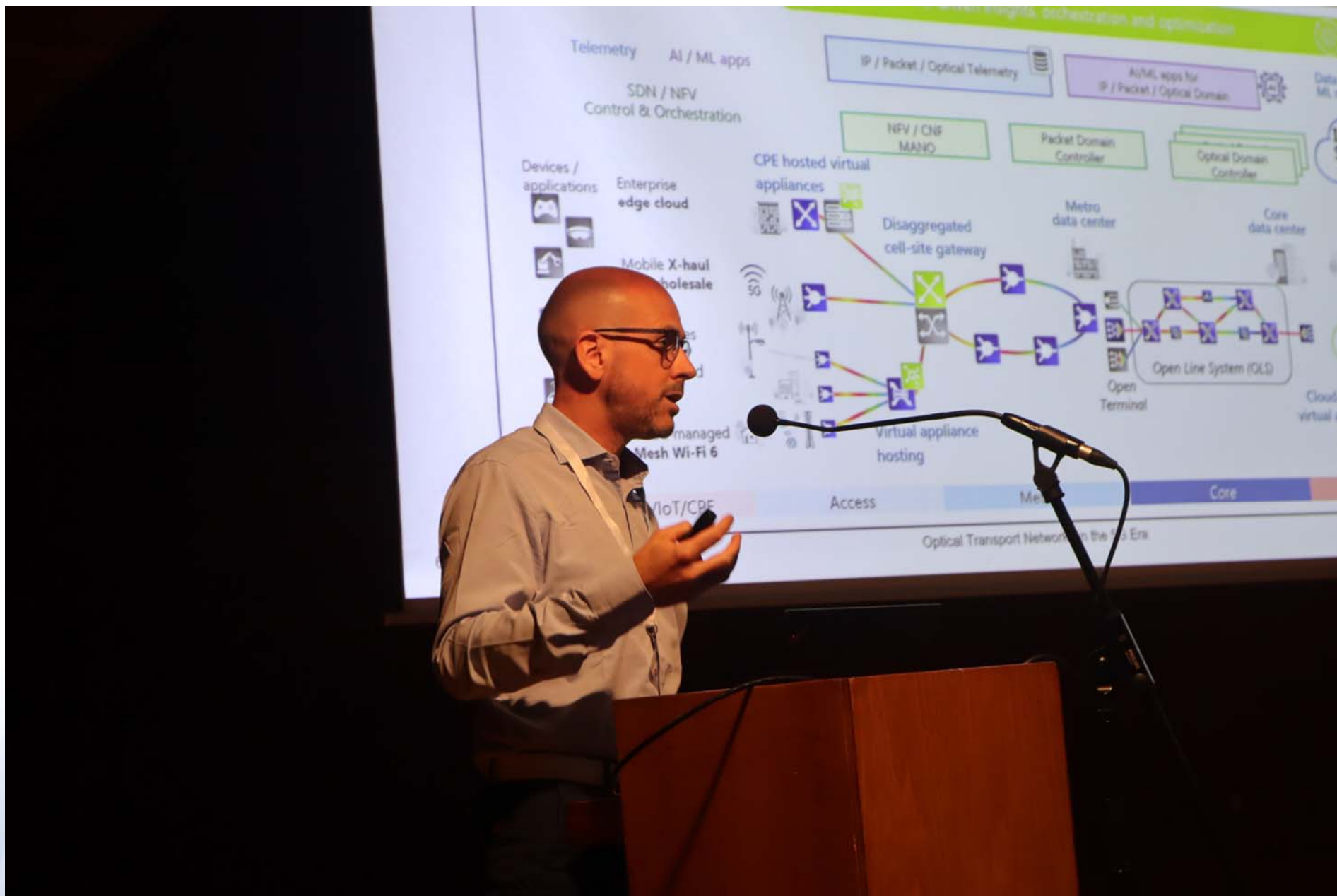












Approach

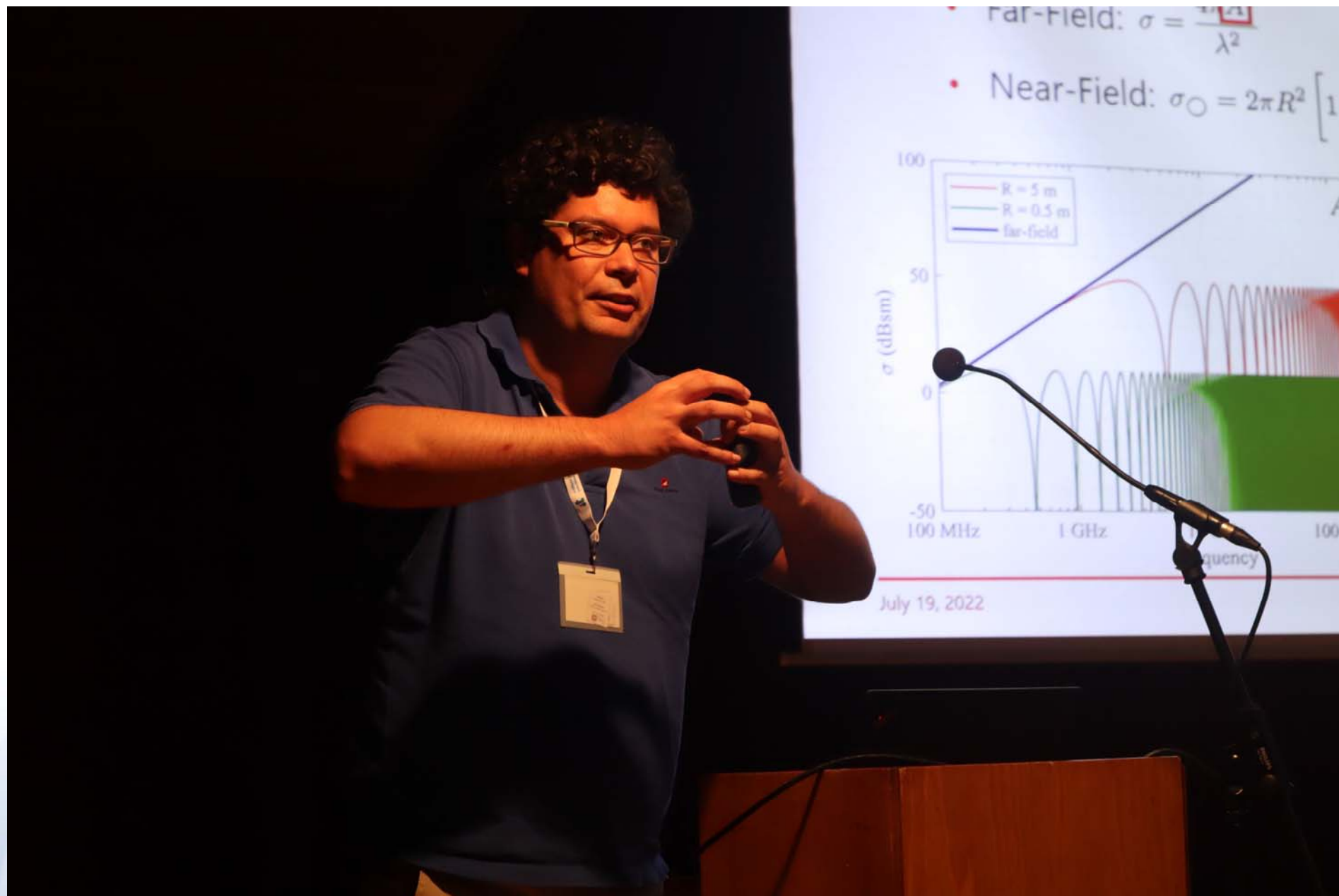
Work – validation

FAU

Can we reasonably approximate bigger tiles?

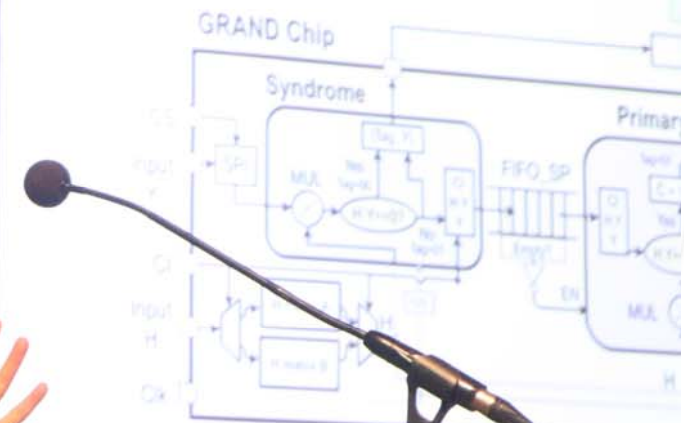
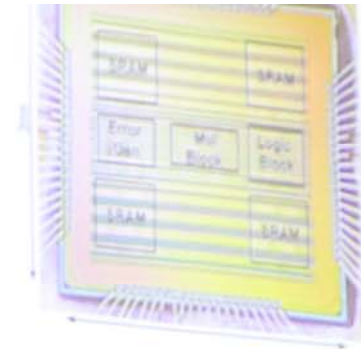
by processing both on Reference tiles and partitioned tiles and compared the results











GRAND Decoder Chip Arisan, Barak, Solomon, An, Liu, Gal, Riaz, Medard, Duffy, Yazicioglu IEEE COMSNETS, 22,



Fig.3. System block diagram of Conventional Method in S2SVLC







Random Forest.
Decision tree with Gini index equation is,

$$Gini = 1$$

Random Forest equation is.

$$RFf_i = \frac{1}{n}$$



TDEC method

It is the ratio between the amount of noise that can be added to an ideal signal and the noise that can be added to the actual measured signal for a determined BER.

Asymmetric noise

- In contrast to TDEC definition in IEEE802.3bm, in 50G-PON, APDs produce asymmetric noise in the "1" and "0" level.
- To account for this, a ratio between the noise in the "1" and the "0" levels was introduced.
- In the case of PIN, the ratio is equal to 1.

$$M = \frac{\sigma_1}{\sigma_0}$$

Equalizer

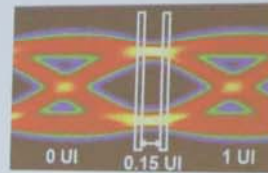
- IEEE802.3bs introduced TDECQ with a C_{eq} parameter for PAM4 to consider the use of a reference FFE equalizer:

$$C_{eq} = \sqrt{\int N(f) \cdot |H_{eq}(f)|^2 df}$$

- The effect of the equalizer needs to be considered because the noise is not anymore white after it.

Histogram positions

- Equalizer produces an eye that is compressed towards the center. A separation of the histogram positions is thus at 0.15UI.





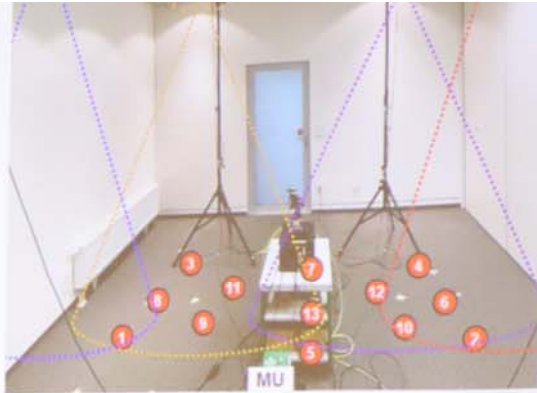
Recent Advances in Multimodal Machine Learning via Unfolding Transformers

Miguel Rodrigues

Dept. Electronic and Electrical Engineering
University College London



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Object Tracking in an Indoor Scenario

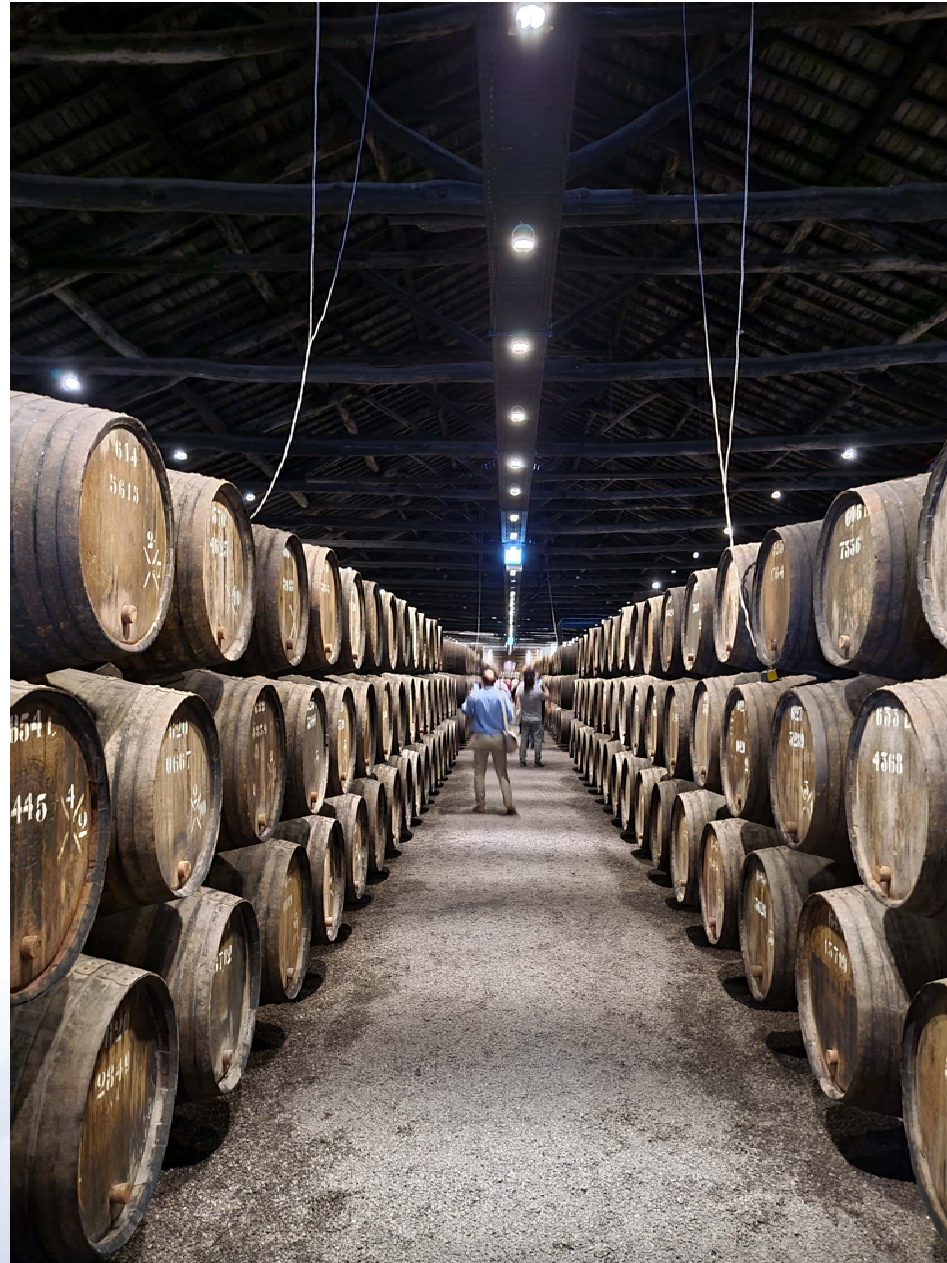


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Thanks to our official photographer
Rodolfo Caldeirinha (IPLeiria)