

Image Processing and Computer Vision

Degree in Physics

Final project guidelines

1. You can work in teams of two (preferable) or by yourself.
2. Due date: July 4th, 2022, or September 1st, 2022.
3. Perform bibliographic research on imaging algorithms in physics or applied science. Select a paper that might interest you. Consider papers published in journals that are listed in the Journal Citation Reports (JCR) or Scopus. Other sources are not acceptable (e.g.: non-JCR/Scopus journals, conference papers, blogs entries, et cetera).
4. Inform your instructor on the topic and the paper you analyze. You will get feedback (just once). Topic due: TBD.
5. Develop the code for the procedure described in that paper and test it with appropriate images. The code must be original. Mere duplication of already published code is not acceptable.
6. Use only numpy, scipy matplotlib, skimage, sklearn and opencv. Other modules are not allowed
7. Write a 4-page report. DO NOT exceed the 4-page limit. Do not include the code in this document.
8. Use the template for the IEEE Transactions on Computational Imaging:
<https://template-selector.ieee.org/>
Select Journals, Transactions and Letters > Select name of publication: IEEE Transactions on Computational Imaging > ...
Papers that do not strictly fulfill the template will not be considered.
9. Submit (upload) two files to campusvirtual2.ub.edu: (i) the paper (as a pdf file) and (ii) a zip compressed file including the python code plus the images / video / supplementary files required to run the script. If the size of the supplementary materials is too big, provide a link to the zip file stored in an external cloud service (UB Onedrive is the preferred option).
10. Grading criteria
 - Coding style: 1p
 - Originality and interest of the topic: 2p
 - Quality of the results: 2p
 - Discussion: 3p
 - Use, number, and quality of references: 1p
 - Subjective assessment: 1p

Notes:

- Plagiarism (including the use of third-party images without authorization and/or citation, code reuse) is unacceptable.
- A short meeting to discuss your project might be scheduled.
- Do not contact the instructors beyond July 22nd.