[[1]](#footnote-1)

Visual Computing:   
Template for the First Assignment

This will be anonymous

***Abstract*—The abstract is mandatory. Do not make it too long, but please make it descriptive of the overall contents. In short, a small context and what the reader will find..**

***Index Terms*—Up, to, four, keywords**

# I. INTRODUCTION

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HIS individual evaluation (40\%) for Visual Computing consists of an

individual article (30\%) covering a topic related to the course and a participation, as reviewer, of two of the articles delivered by other students (10\%). The purpose of this assignment is to allow the student to demonstrate competences to autonomously explore and succinctly explain the most relevant aspects of an advanced topic in Visual Computing. Each student will select one topic from a list made available in the *elearning* platform or propose one, in agreement with the teacher.

Two types of approach are possible (with some topics are more suited for one of them): a more conceptual/descriptive approach, or a more tutorial like article.

## A. Conceptual Article Type

In this type of article, the student is expected to explain the main concepts and ideas behind the topic and, if relevant, the latest advances in the field. The relevance of this topic in the context of Visual Computing should also be established. In this article type, only the 4-pages (plus one for references, if needed) are delivered.

## B. Tutorial Article Type

In this type of article, the student is expected to explain the main concepts of a topic in tight relation with how it is implemented, e.g., in OpenGL. Please be aware that an article consisting mostly of code listings or a simple script to achieve something is not acceptable. The article should explain the concepts required to understand the topic, establish its relevance in the context of Visual Computing, and present the reader with the ideas behind how things are done and what is obtained. In this context, the 4-pages should have a companion piece of software, i.e., an implementation of the explained features and methods that can be used by the reader to observe and (eventually) experiment with what is being explained in the article. Naturally some comments on specific parts of code judged important can be made to improve the readers' understanding of what is being done and illustrate core ideas.

# II. Organization, Content Depth, and Style

Four sections are expected for all articles, regardless of the topic and type: ``Abstract'', ``Introduction'', ``Conclusions'', and ``References / Bibliography''. The remaining structure of the article, in-between, is not imposed and may vary depending on the chosen topic and on the approach to the subject chosen by the student.

As a rule of thumb, the organization and level of detail should be adjusted considering that it should provide a good reference for any of the students in this course to have a quick point of entry on the covered topic. Therefore, the article should start by providing a contextualization of the covered topic and why it is important in the context of Visual Computing / Computer Graphics and, then, move to the core. Given that the available number of pages is limited, you are advised to distil what is essential and provide references for further reading.

Keep a formal style. Moderate the use of unjustified adjectives and always substantiate the information you provide with adequate sources (e.g., scientific articles, books, or, if deemed important, online resources). The use of illustrative figures and diagrams is advised.

## A. Size

The article should have a maximum of 4 pages. An extra page is allowed if it only contains references and further reading notes.

# III. Peer-Reviewing

Additionally, after delivering the assignment, each student will be assigned the evaluation of two of the works delivered by other students (worth 10\%). The purpose of this task is twofold: to be able to learn about additional topics, by reading about them, and improve competences in critically analysing a short report on a topic. It is expected that each student makes a fair judgment of the reviewed articles according to the evaluation criteria explained below. Saying that everyone did a wonderful job or that everyone missed the point without proper substantiation is not acceptable. The 10\% will reflect the quality of the review work and the constructive comments provided: it has nothing to do with evaluating the works as good or as bad, but in being fair and constructive. The question you should ask is: was I fair with the evaluation and can my comments be considered to improve the article?

# IV. Evaluation

The article will be evaluated considering the following criteria:

* **Content organization (25\%):** is the article organized in a way that makes sense and is understandable to the reader? Does it follow a logical sequence for the topic?
* **Relevance and quality of the content (45\%):** is the relevance of the content being provided established, i.e., why should I be interested in this topic in the context of Visual Computing? Is the content sufficiently detailed and beyond common knowledge? Is it easy to grasp the key concepts and ideas to take away?   
  In the case of a tutorial article, this evaluation considers both the article and the companion code, during evaluation and will also cover how these are inter-related and how the companion code works to illustrate the concepts discussed.
* **Clarity and language (15\%):** is the content described in a clear way that is easy to understand and in adequate language?
* **Quality of the suggested references (15\%):** are the included references and suggested reading adequate and useful? Do they relate with the described topic and complement it? Does it include recent sources?

# V. A Note on Plagiarism

Plagiarism, i.e., the use of materials created by others as your own, without acknowledging the source, is a serious matter. All the works delivered for grading will be automatically submitted to plagiarism detection tools for inspection. Please be aware that translating content from another language is still plagiarism. Any case of plagiarism **will be graded with 0 (zero)** and will be reported to the department head to assess if further action is warranted.

Additionally, please be aware that the overuse of materials taken from other authors, even if citing the sources, will have a severe negative impact on your grade. If in doubt about the use of specific material, such as images, code, or text, please contact the teacher. The use of AI tools should be acknowledged stating what tool was used and for what purpose. Please be aware that current plagiarism tools also detect AI patterns. If ChatGPT does the job for you, it will be the one receiving the grade.

**End of Instructions**

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**The content below is just a placeholder to show how to perform some of the basic aspects of a document using this template.**

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# V. Conclusion

## A conclusion section is a good idea. Although a conclusion may review the main points of the article, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

Acknowledgment

The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments. Avoid expressions such as “One of us (S.B.A.) would like to thank ... .” Instead, write “F. A. Author thanks ... .” In most cases, sponsor and financial support acknowledgments are placed in the unnumbered footnote on the first page, not here.

References

*Basic format for periodicals:*

J. K. Author, “Name of paper,” *Abbrev. Title of Periodical*, vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year, doi: 10.1109.XXX.1234567.

*Periodicals using article numbers:*

J. K. Author, “Name of paper,” *Abbrev. Title of Periodical*, vol. x, no. x, Abbrev. Month, year, Art. no. xxxxx, doi: 10.1109.XXX.1234567.

*Examples:*

# J. U. Duncombe, “Infrared navigation—Part I: An assessment of feasibility,” *IEEE Trans. Electron Devices*, vol. ED-11, no. 1, pp. 34–39, Jan. 1959, doi: 10.1109/TED.2016.2628402.

1. E. P. Wigner, “Theory of traveling-wave optical laser,” *Phys. Rev*., vol. 134, pp. A635–A646, Dec. 1965.
2. P. Kopyt *et al., “*Electric properties of graphene-based conductive layers from DC up to terahertz range,” *IEEE THz Sci. Technol.,* to be published, doi: 10.1109/TTHZ.2016.2544142. *(Note: If a paper is still to be published, but is available in early access, please follow ref [5]).)*
3. R. Fardel, M. Nagel, F. Nuesch, T. Lippert, and A. Wokaun, “Fabrication of organic light emitting diode pixels by laser-assisted forward transfer,” *Appl. Phys. Lett.*, vol. 91, no. 6, Aug. 2007, Art. no. 061103.
4. D. Comite and N. Pierdicca, "Decorrelation of the near-specular land scattering in bistatic radar systems," *IEEE Trans. Geosci. Remote Sens.*, early access, doi: 10.1109/TGRS.2021.3072864. (*Note: This format is used for articles in early access. The doi must be included.)*
5. H. V. Habi and H. Messer, "Recurrent neural network for rain estimation using commercial microwave links," *IEEE Trans. Geosci. Remote Sens.*, vol. 59, no. 5, pp. 3672-3681, May 2021. [Online]. Available: https://ieeexplore.ieee.org/document/9153027

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