

First Round Submission Instructions for the EDA284 2019/2020 SP3 Project

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First round submission

1. Now that scenarios are assigned, the design teams can start working on the survey document. The document should follow the following layout:
 - a. **Title and Designer Teams:** Give your survey a title and add the names of the designer team. This year we do not use "blind review", please show the names of the authors.
 - b. **Introduction:** Describe the application, why it is computationally challenging, and why developing high performance solutions is important.
 - c. **Main Body**, including:
 - i. A "roofline" analysis of the algorithm, what is the arithmetic intensity (AI) assuming ideal caches? How do you expect realistic caches to impact the AI?
 - ii. A survey of existing computer architectures addressing the scenario. As much as possible, the survey should include solutions ranging from general-purpose systems to special-purpose designs, possibly including also systems based on accelerators.
 - iii. A discussion of the different designs in terms of functionality, performance and cost, and proposal of your own design.
 - iv. A discussion of the merits of the solutions considering current technological trends, flexibility and energy efficiency (i.e., sustainability). What performance do you think is achievable, and how does it address energy efficiency concerns? Try to find supporting data from existing literature on the topic.
 - v. A discussion of the programmability requirements for scenario (e.g., instruction sets, required programming schemes, portability of existing codes, existing parallel programming models/runtimes).
 - d. **List of references**
2. The survey should have a length of about 2000 words, including introduction and main body, but not including the references. The document should be prepared according to the guidelines of ACM TACO (<http://www.acm.org/publications/authors/submissions>). For LATEX users, load the "acmart" template and specify `\documentclass[acmsmall]{acmart}` as the document type. For Microsoft Office users, use the Microsoft Word template provided in Step 1 of the ACM TACO submission guidelines