Koli Calling 2015 Doctoral Consortium Format

Your Name
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ABSTRACT

This document is based on the ICER2013 DC Format. It describes the expected format of your extended abstract to the Doctoral Consortium. This document is important, as we will use it to judge the strongest candidates to the Doctoral Consortium, i.e., those who have clearly stated their research ideas, theses and goals, who have made some progress, but who are not so far along that they can no longer make changes. Note that this document should be no longer than 2 pages.

Your abstract: use the abstract to provide a very brief overview of your document.

Categories and Subject Descriptors

K.3.2 [**Computers and Education**]: Computers and Information Science Education—*Computer Science Education*. See [2] for help using the ACM classification system.

General Terms

Measurement, Experimentation

Keywords

Choose your own specific keywords.

1. PROBLEM STATEMENT - CONTEXT & MOTIVATION

Almost every research document begins with a section that frames the research and motivates the problem being studied. It describes some domain, indicates a problem in general terms, and explains why the problem is worth solving. Provide a very concise statement of your problem statement. This should be the highest-level problem or goal you plan to address and is sometimes posed as a hypothesis, proposition or conjecture. This is often followed by a small list of specific problems and sub-problems that need to be solved if you are going to satisfy your hypothesis or thesis. Problems should be stated unambiguously. The importance of the problem should be mentioned. Questions a reader should be able to answer after reading the motivation section are:

- What is the general area being addressed?
- Did the author succinctly identify the thesis, problem or set of problems being addressed?
- Is this relevant to CS Education?
- What is the motivation for studying a particular problem?
- What makes it worth the effort?
- Is it a 'real' problem in everyday life, and/or is it a 'theoretical' problem that is worth solving?
- Is this problem worthy of a CS Ed PhD thesis?
- Would anyone care if the author solved this?

2. BACKGROUND & RELATED WORK

Provide a miniature literature review (4 – 7 maximum) to give the reader enough background to (a) gain sufficient knowledge about what others have done, (b) know how your work will build upon this prior work, and (c) be assured that you have sufficient knowledge of the relevant literature. *You should highlight only the key literature here; a full review is not required.* Questions a reader should be able to answer after reading this section are:

- Did the author provide enough background to help me know what others have done in this area, as well as what discipline(s) have considered this area?
- Does the author have sufficient knowledge of the relevant literature necessary to do the proposed work?
- How does the author's proposed work fit within and extend what has been done before?

3. RESEARCH GOALS & METHODS

While the previous section details the problem you are addressing, your job here is to translate this into research goals and corresponding methods. Each goal should briefly indicate how you are going to solve the problem, i.e., the research method(s) you will use. Goals should be operational; i.e., if you later claim to achieve your goal, you should be able to match your solution against the goal statement. Then describe what contributions you expect to make if you satisfy these goals.

We cannot overstate how important it is to have clear goals. When problems, goals, methods and contributions are not clearly stated, readers will be unable to evaluate your solutions. Questions a reader should be able to answer after reading this section are:

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ACM 978-X-XXXX-XXXX-X/XX/XX.

- What are the specific goals being pursued?
- Do these goals actually help solve some or all of the stated problem(s)?
- Has the author stated how s/he will achieve this goal (i.e., the method)?
- Are the goals actionable, i.e., will we know when a goal is actually attained?

4. DISSERTATION STATUS

Clearly state what you have done and what you have left to do. Summarize the most important findings thus far, and make it clear how these findings match and inform your original problems and goals. Include a short argument as to why these findings are important. Include references and brief descriptions to key publications (if any) arising from your thesis work. State how much of your actual thesis document is written, and what form it is in (e.g., outline, rough draft, etc.)

In addition to describing your current status (as of submission), please also include a paragraph about your future plans, for example the research activities remaining, and how much time you expect these to take, and what sorts of assistance you hope to obtain through your participation in the Consortium.

5. EXPECTED CONTRIBUTIONS

Use this section to connect your research approach back to the problem statement. This section should conveys what you anticipate as results or outcomes from your dissertation project and how it will contribute to the CS Ed research community. This is a very important section in which you highlight the importance and impact of your work/(expected) results.

6. REFERENCES

[1] Adobe Acrobat Reader 7. URL: `http://www.adobe.com/products/acrobat/`.

[2] How to Classify Works Using ACM's Computing Classification System. URL: `http://www.acm.org/class/how_to_use.html`.

[3] R. Anderson. Social impacts of computing: Codes of professional ethics. *Social Science Computing Review*, 10(2):453–469, 1992.