Project Brainstorming

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intent ROBOTICS LAB

Announcements

Midterm Report: due date moved to **Friday**, **March 14**
(Friday after spring break)

Today
~~Belief-space safety~~ Project brainstorming!

Midterm Report

Please use the IEEE Conference template!

IEEE Conference Template Official

Open as Template | View Source | View PDF

Author: IEEE

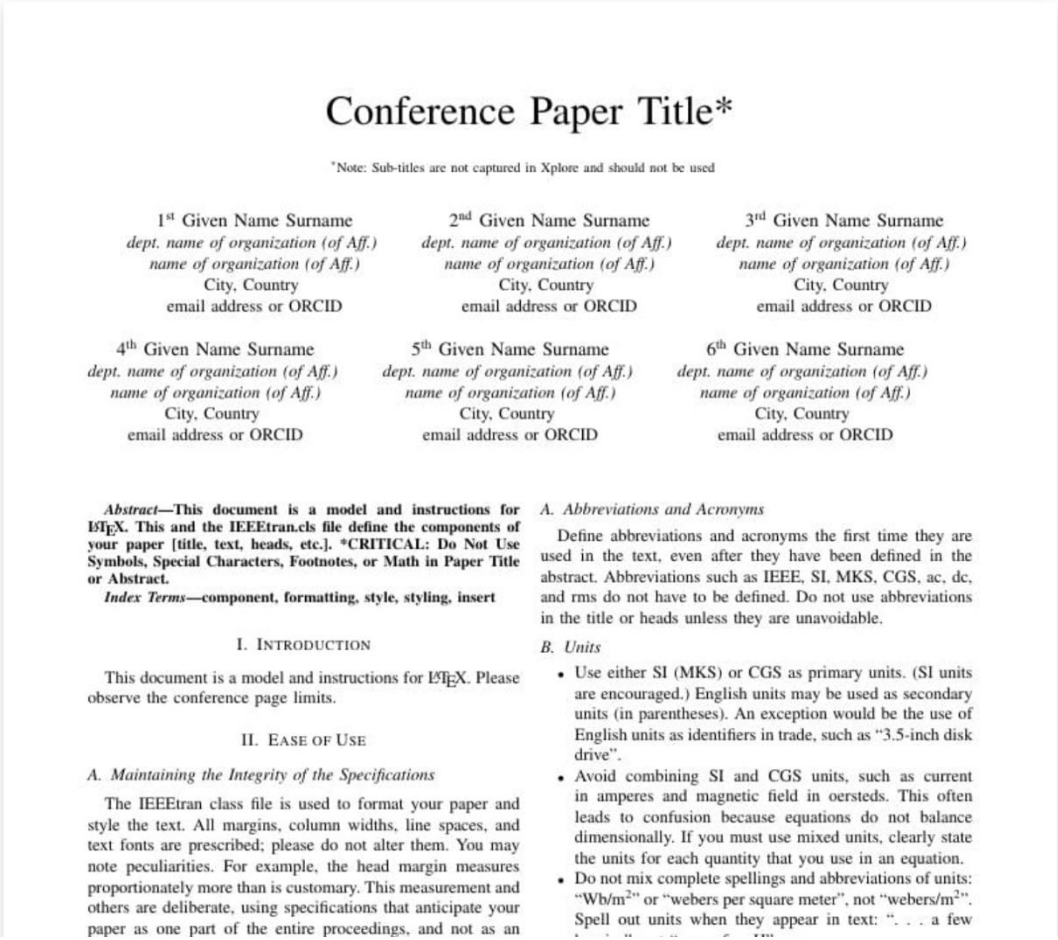
Last Updated: 5 years ago

License: Other (as stated in the work)

Abstract: This demo file is intended to serve as a "starter file" for IEEE conference papers produced under LaTeX.

This is one of a number of templates using the IEEE style that are available on Overleaf to help you get started - use the tags below to find more.

Tags: Conference Paper | IEEE Official Templates | IEEE (all)



Conference Paper Title*

*Note: Sub-titles are not captured in Xplore and should not be used

1st Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

2nd Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

3rd Given Name Surname
dept. name of organization (of Aff.)
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5th Given Name Surname
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City, Country
email address or ORCID

6th Given Name Surname
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name of organization (of Aff.)
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email address or ORCID

***Abstract*—This document is a model and instructions for LaTeX. This and the IEEEtran.cls file define the components of your paper [title, text, heads, etc.]. *CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract.**

***Index Terms*—component, formatting, style, styling, insert**

I. Introduction

This document is a model and instructions for LaTeX. Please observe the conference page limits.

II. Ease of Use

A. Maintaining the Integrity of the Specifications

The IEEEtran class file is used to format your paper and style the text. All margins, column widths, line spaces, and text fonts are prescribed; please do not alter them. You may note peculiarities. For example, the head margin measures proportionately more than is customary. This measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an

A. Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, ac, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

B. Units

- Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as "3.5-inch disk drive".
- Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.
- Do not mix complete spellings and abbreviations of units: "Wb/m^2" or "webers per square meter", not "webers/m^2". Spell out units when they appear in text: ". . . a few

https://www.overleaf.com/latex/templates/ieee-conference-template/grfzhhncsfqn

Midterm Report

You can find this info on Canvas under "Midterm report" assignment!

Please follow this structure in your mid term report:

1.Introduction <--- here is where you motivate your project. Why do we care about your problem? What is a gap in research you seek to address? What is an intuitive description of your key idea / approach?

2.Related Work <--- here is where you contextualize your work in the context of what has come before you.

3.Problem Formulation <--- here is a formal, mathematical description of your problem (e.g., model the state, dynamics, objective, etc.)

4.Proposed Approach <--- here is where you tell me how you are going to solve the problem you characterized in 3. e.g., tell me what your key idea is?

5.Preliminary results <--- if you have preliminary results (e.g., you setup a simulator and ran a baseline) tell me about it!

5A).*Contributions of each team member (clearly highlight what each team member contributed to the project)*

5B).*Milestones and work plan for the rest of the semester*

Midterm Report Rubric (EAI Safety)

Criteria	Ratings	Pts
Background and Motivation Does the report offer a clear introduction of the chosen problem or topic of study and a compelling justification of its importance? Are the problem and the proposed work placed into the broader technical context and connected to related prior efforts?	This area will be used by the assessor to leave comments related to this criterion.	30 pts
Formulation and Analysis Is the problem or topic of study put into a well-defined technical representation? Is there a clear definition of the scope and goals of the project? Are the techniques used to shed light on it applied correctly and appropriately?	This area will be used by the assessor to leave comments related to this criterion.	30 pts
Results and Insights What are the results that the authors hope to achieve by the final paper? Is there a clear path to obtaining those results?	This area will be used by the assessor to leave comments related to this criterion.	10 pts
Clarity and Rigor Are the ideas systematically explained so that they can be understood by a technically-equipped reader who is not already an expert in this work? Are technical arguments carefully and correctly laid out?	This area will be used by the assessor to leave comments related to this criterion.	20 pts
Relevance to the Class How well does the topic of study relate to the class content? Does the manuscript make a compelling connection to between the topic and the class?	This area will be used by the assessor to leave comments related to this criterion.	10 pts
		Total Points: 100

Today: Project Brainstorming

Our brainstorming goals today at related to these aspects of your project

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Project Brainstorming: Goals

Formalizing motivation (~20 min)

Narrowing down the problem (~20 min)

Identifying blockers (~20 min)

Learning how to articulate all these to other people!

Andrea & Ken will walk around, available for discussion and brainstorming facilitation! ☺

Project Brainstorming: Logistics

Each sticky note color corresponds to a different "aspect" of embodied AI safety we are studying in this class.

Pick <u>1 color</u> whose topic you most identify with:

- **Pink** = decision-making / controls / robustness
- **Blue** = foundation models
- **Green** = uncertainty (reasoning, quantification, …)

Project Brainstorming: Logistics

Get into groups (of 3-5 ppl) where ***at least one of every color is represented!***

- You should *not* necessarily be in a group with your project team-members
- You do *not* have to do the final project with these folks (but you can if you want to! ☺)
- You *are* meant to talk to people who come from a different background / interest than you

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Project Brainstorming: Goals

Please make sure everyone has an opportunity to talk during the 20 minutes ☺

Formalizing motivation

- *What "embodied AI safety" problems are interesting to you? Why? What would happen if we solved these problems?* ***Discuss with your team.***

Narrowing down the problem

Identifying blockers

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Formalizing motivation

- *What "embodied AI safety" problems are interesting to you? Why? What would happen if we solved these problems?* ***Discuss with your team.***

Narrowing down the problem

- *Pick an "EAI safety" problem that most interests you. Choose 3 aspects or underlying assumptions of your problem that you wish you could solve. Brainstorm a solution for each.* ***Discuss with your team.***

Identifying blockers

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- *What "embodied AI safety" problems are interesting to you? Why? What would happen if we solved these problems?* ***Discuss with your team.***

Narrowing down the problem

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Identifying blockers

- *What would be a "minimum viable experiment / implementation" you'd need to study the problems you identified from before? E.g., what robot would you use? Simulator or real? What algorithms? What blockers would you face and how would you get unstuck?* ***Discuss with your team.***