

iAAMCS poster submission training

Agenda

- Significance of Tapia Conference
- Poster submission and presentation overview
- Preparing a poster submission
 - Creating an abstract
 - Introduction
 - Approach
 - Methods
 - Results
 - Conclusion
- Resources

Tapia Conference

- Richard Tapia is a National Medal of science winner
- Of Mexican-American descent
- University Professors (highest rank attainable as a researcher)
- A champion of diversity in academia (which traditionally has been difficult for minorities to navigate)

Tapia Conference

- In Seattle Washington from Feb 4th-7th, 2014
- Supported by companies such as Microsoft, Intel, etc
- Mix of panels, discussions and networking
- Both diversity and computer science research issues are presented
- It's just plain a lot of fun (brush up on your wobble and your salsa...)

Tapia Conference

- Important to have a support group of people that understand the challenges
- Relationships matter
- Understanding of all the career paths that are open to you
- Opportunity to present and discuss your research
- Participants will get their travel covered (hotel, airfare, travel to/from airport and meals...most meals are provided as part of the conference so usually this pertains to meals while traveling)

Poster submission and presentation overview

- A two-page overview that describes your research (provides a preview of what will be on your poster)
- Professors and graduate students that are familiar with your area of research will review your poster submission
- You will be notified if you are accepted or declined
- Authors of accepted posters will need to submit a “camera ready” copy with any errors or omissions corrected (within a month)
- You present your poster at Tapia in a two hour session. Poster presenters stand by poster and engage conference participants in the research subject

Preparing a poster submission

- Two pages in length (very strict about maximum length)
- Includes the following sections:
 - Creating an abstract
 - Introduction
 - Approach
 - Methods
 - Results
 - Conclusion

Preparing a poster submission Abstract

- Is like a summary
- Can determine relevance without reading entire publication
 - Side note: Literature search is when you search databases of publications to locate reports of research that is relevant to your research
- Around 250-300 words

Preparing a poster submission

Abstract Sample

Robotic systems using unmanned aerial vehicles (UAVs) are becoming more practical in military applications. However, current systems utilize a one (or multiple) operator/one UAV interface and are difficult for inexperienced operators to use. In addition, systems that have an autonomy component create issues because operators tend to intervene more frequently if their expectations of the autonomy are not met. In this paper, we examine several approaches for cooperative surveillance using multiple UAVs. Additionally, we elucidate the role of human expectations in a surveillance task using a novel single operator/multiple UAV user interface.

Preparing a poster submission

Abstract Statements

Statement on rationale

Objectives

Methods

Results

Conclusions

Preparing a poster submission

Abstract

Statement on Rationale

"Robotic systems using unmanned aerial vehicles (UAVs) are becoming more practical in military applications. However, current systems utilize a one (or multiple) operator/one UAV interface and are difficult for inexperienced operators to use."

Answers questions like:

- What problem does this research attempt to solve?
- What impact does this problem have and on whom?
- Who is most interested in this research and why?
- How is that problem solved without this research?

Preparing a poster submission

Abstract

Statement on Objectives

"In this paper, we examine several approaches for cooperative surveillance using multiple UAVs. Additionally, we elucidate the role of human expectations in a surveillance task using a novel single operator multiple UAV user interface. "

Answers questions like:

- What do we hope to learn from our research?

Preparing a poster submission

Abstract

Statement on Methods

"We conduct a study that measures how well an operator can identify a target in a region using both autonomous, semi-autonomous and manually controlled UAV teams. "

Answers questions like:

- New software created/used
- New algorithms
- New formulas (compare to old formulas)
- New models (source of models)
- New hypotheses
- New studies (give population/conditions)

Preparing a poster submission

Abstract

Statement on Results

"Results show that operators that manually set waypoints find the targets in less time and using shorter paths as compared to using semi-autonomous robot control."

Answers questions like:

- What were the quantifiable results?
- Are there any qualitative features or observations that are important?

Preparing a poster submission

Abstract

Concluding statement

"Results show that manually designating paths does not interfere with surveillance performance for up to two cooperating robots. Future studies will increase the number of cooperating robots to measure surveillance performance."

Answers questions like:

- What is the new knowledge known based on this project?
- What future studies or new questions does this research support?

Preparing a poster submission

Introduction

Provides context to the research

Answers some of the following questions:

- What is the purpose of this paper?
- What problem does this research attempt to solve?
- What impact does this research have and on whom?
- Who is most interested in this research and why?
- How is that problem solved without this research?
- Why is the current solution not enough to solve this problem?
- How do we propose to solve this problem?
- How would this new solution be better and who would benefit?
- Why is this research different from current research?

Preparing a poster submission

Approach

- Incorporate tables and figures where you can
- Edit judiciously (If a sentence can be deleted without changing the meaning of the paragraph, I delete it)
- Should be longer than the introduction but leaves room for the last three sections (methods, results and conclusion)

Answers some of the following questions:

- What is the new proposed approach?
- What inspired the new approach?
- Has this approach had success in other areas?
- Why will the new approach work?
- What is the new approach? (i.e. software created/used, algorithms, formulas, models, hypotheses, studies, etc)

Preparing a poster submission

Methods

- Details of the research process

Answers some of the following questions:

- What process did we use to collect data?
- What tools did we use (i.e. software, surveys, hardware, etc)?

Preparing a poster submission

Results

- Presents highlights of the collected data
- Use tables and graphs where appropriate

Answers some of the following questions:

- What significant trends occur in the data?
- Are there additional observations that can explain the data?

Preparing a poster submission

Conclusion

Summarizes the objective and the results
Should include mention of future work

Answers some of the following questions:

- What is the problem?
- What is the hypothesis?
- What are the results related to the hypothesis?
- What are the implications of this result?
- Are these results generalizable and if so, in what way?
- What are the future extensions of this work?

Preparing a poster submission

Overall guidelines

- Strive for an impersonal, noncritical, and informative account.
- Generally statements should be supported in previous literature. Judgments should not be included except in the results section.
- Avoid the use of the first person unless writing the methods or results sections.
- Use active verbs where possible
- Be specific; refrain from using imprecise adjectives such as important, good, great, etc
- Refrain from using words that do not enhance the meaning (if a word can be deleted without changing the sentence meaning, DELETE IT)
- Use correct grammar, spelling and punctuation. Ask if you are unsure

Resources

- Sample abstracts
- Video on poster submission
(<http://www.ncsu.edu/project/posters>)
- English usage resources
(<http://www.grammarly.com/handbook/>)
- Peer-review
 - Helps proofread
 - Helps readability