

# IEEE NSW Joint Chapter – Industrial Electronics, Industry Applications, and Power Electronics

## Postgraduate Research Competition

### Description

The IEEE NSW Joint Chapter IES/IAS/PELS Committee is now inviting video submissions for the IEEE 3MT Research Talk competition 2021. The goal of this competition is to showcase a research topic to the entire joint chapter IAS/IES/PELS community in NSW – both in academia and industry. The length of video should be up to 3 minutes long. Three 3MT Research Talks will be awarded in 2021 which include a prize money and a certificate for each awardee. This competition is designed based on similar format of the international IEEE PELS talk competition.

### Eligibility

- All HDR students from second year to thesis submission (i.e., Master by Research or PhD) can participate in the competition by showing their enrolment evidence in one of the NSW Universities.
- The student should be an IEEE student member and the scope of the research topic should be aligned with that of the IEEE Transactions on Industrial Electronics, IEEE Transactions on Industry Applications, and IEEE Transactions on Power Electronics.

### Schedule

Open Submission	25 Oct 2021
Deadline to Apply	28 Nov 2021
Winners Notified	10 Dec 2021

The three winners will be communicated via email and announced on the IEEE NSW Section main webpage. The video of the first-prized winner will be uploaded to the IEEE NSW Section YouTube channel.

### Submission Criteria

Upload a video up to 3 minutes to any online cloud storage such as One Drive, Dropbox, and Google Drive and share with the committee a workable link OR

share a link to your video if you have uploaded to YouTube, Vimeo, or other online video sharing platforms.

Submission requires the following information:

- Name and contact information
- University
- IEEE Membership Number
- Confirmation of enrolment
- Title of the research topic

All submissions must be in English. Submit your video link to Dr. Ricardo Aguilera, Vice Chair of the chapter, at [raguilera@ieee.org](mailto:raguilera@ieee.org).

## Judging Criteria

Each submission will be reviewed by at least three judges from across the NSW state Universities to score and rank the video submissions. Reviewers will be asked to score the video submissions according to the judging rubric given below. The winners will be identified based on the total score comprised of the following four aspects with their respective category weights:

- Problem definition (20%)
- Design methodology (20%)
- Achieved outcomes (20%)
- Quality of video and presentation (40%)

### ***Judging Rubric***

(On the scale of 1 to 5)

1 - Not satisfactory, 2 - Satisfactory, 3 - Good, 4 - Very good, 5 -Excellent

Judging Items		Scores
Problem definition	Clear research objectives, problems, and hypothesis	
	Rich in engineering judgement and insight	
Design methodology	Methods are technically and mathematically accurate	
	Well supported with analysis and experimental evidence (Are there any prototype/application demonstrations?)	

Achieved outcomes (contribution)	Contribution to the field (e.g., interesting to readers, stimulates new ideas, publications/result dissemination)	
	Valuable for practicing engineers or researchers	
Quality of video and presentation	Present within 3 minutes, personally appear in the video, and use of English (clear, concise, and correct)	
	Presents the material in a well-organized way - from framing the problem to presenting the proposed solution	
	Effective use of visual aids (figures, tables, charts, layout, etc.) improves effectiveness of video and presentation	
	Video and audio quality (e.g., resolution, clear audio, design)	

## Presentation of Awards

A certificate and a monetary award of AUD\$300 will be awarded to the 1st winner and a certificate and a monetary award of AUD\$100 for the two runner-up contestants.

## Video Guidelines

- Prepare a video that highlights your research topic and its impact. The length of the video should NOT exceed 3 minutes. It is suggested that the video should begin with a "title page" that includes the title of the video, the name of the applicant (the HDR student), the advisor's names, and the University/affiliation.
- The video should be a live recording where the presenter appears on the screen most of the time and uses displays to explain the main points of his/her research. Only voice over power point video presentations is not recommended.
- All entries must be submitted in English.
- The video resolution should be high, along with high quality audio.

- Video must be in one of the following formats for upload (note: video can be uploaded online platforms (e.g. YouTube, Vimeo, etc.) and a link can also be submitted. Please be aware that some video platforms may not be accessible from certain regions/countries; and it is the applicant's responsibility to ensure the video is accessible everywhere. Video Formats: AVI, MOV, WMB, or MP4 (MP4 format is preferred).
- Use of copyrighted materials must be avoided. Proper citations/references to the materials should be included, including your own publications. It is the applicants' responsibility to resolve any copyright issues before submission.

## Helpful Guidelines for Creating Videos

Following information is provided to assist participants in developing a good video that presents the project in an engaging way.

- **How to organize:**

Effective presentation should convey the following five things about your research work:

- A. What is the problem and why it's important to solve it? (Problem Statement)
- B. What has been done so far to solve it? (State of the Art)
- C. What have you done with your methods that is different than what others have done so far? (Methodologies)
- D. What value does your approach add to the body of knowledge how does it advance the field? (Significance of Results)
- E. Where do we go from here? (Future Plan)

The applicants are suggested to present the research work like a story. It's not easy to condense the research work into 3 minutes. Breaking your presentation down into smaller sections may help to smooth the presentation. For instance, the presentation may include:

- **Introduction:**

Create an interesting opening sequence that captures the audience's attention. Use the introduction to give a brief overview of the Ph.D. project, explain the problem(s) that have been addressed, the lack of limitations of prior-art solutions, and define the impact of the proposed solutions.

- **Body:**

Use the main body of the video to present your design methodology and your solution. Support the video presentation with hardware/software prototype images and engineering analysis data to strengthen the technical content of the video.

- **Conclusion:**

Summarize the main results of the project/ video presentation, the expected impact to sponsor/other, and the knowledge gained in this project. Wrap up the video with a memorable ending.

- **How to narrate:**

The length of videos must be 3 minutes or less. Here are some hints that may be considered:

- Carefully budget the time. Allow approximately 120 seconds to present the main body. Introduction and conclusion should take around 30 seconds each.
- Use simple and easy to understand language. Avoid using long sentences and jargons.
- Speak clearly. Maintain good speech pace. Avoid speaking at a pace that is either too fast or too slow. Pause at key points.

- **How to record a video:**

- Use a quality camera and microphone.
- Select a neutral background for the project.
- Use visuals freely. Insert slides into the video if and when required. Keep the inserted slide simple. Text and complicated images can be distracting and will be hard to read on a mobile device. Do not entirely rely on slides to convey your message, rather use it to compliment your spoken oration.

- **Video Editing software:**

There is a variety of video editing software options including, but not limited to, the following:

- **Video editing software:** Adobe Premiere Pro, Camtasia, iMovie
- **Video engaging tools for animation:** There are various open-source animation tools available. Some of them are:
  - Pencil (<https://www.pencil2d.org/>)
  - Synfig Studios (<https://www.synfig.org/>)
  - Stykz (<http://www.stykz.net/>)
  - Blender (<https://www.blender.org/>)
  - Daze (<http://www.daz3d.com/technology>)

## Intellectual Property

Describe your research work without disclosing confidential information. Necessary permission from the sponsor should be obtained in case of the sponsored research project.