

IEEE TEC Prize Ph.D. Thesis Talk - 3 Min PhD Challenge **2020-2021**

1. Introduction

The IEEE Transportation Electrification Community invites PhD graduates to submit for the IEEE TEC Prize PhD Thesis Talk. The competition is to provide an international platform for all Ph.D. researchers in the field of Transportation Electrification to present their project. The talk is limited to 3 minutes and five winners will be awarded.

This award recognizes not just quality research, but an engaging presentation understandable for people not versed in the researcher's narrow specialty.

2. Who is Eligible

- Ph.D. graduates who were awarded their PhD or have defended their PhD recently.
- Graduates from any location area welcome.
- Participants should show their PhD certificate or a proof of thesis defense after 1 Jan 2019.
- IEEE TEC Members (Student Members or Regular Members).

The Ph.D. thesis should be in the field of interest of the IEEE Transportation Electrification Community. Possible topics include, but are not limited to:

- Electric vehicles
- Charger, conductive and wireless
- Power electronic devices (Si and wide band-gap) and applications for electric transportation
- Electric rail, Electric rolling stock
- Power train for electric mobility
- Electric machines for electric mobility
- Packaging, integration, and advanced manufacturing for electric mobility
- Transportation systems
- EMI and EMC for electric transportation
- Renewable and alternative energy for vehicle
- Smart grids and micro-grids for transportation, and vehicle to grid
- Electrical energy storage for vehicle
- Security and Information Technology for vehicle, and smart mobility
- Electric aircraft, electric vessel
- Light rail, trams, catenary
- Wireless power transfer (WPT) for mobility

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3. Important dates

- Submission platform opens: November 2020
- Submission Deadline: 30 April 2021
- Announcement of results June 2021
- Award ceremony July 2021 (virtual)

4. Submission Details

The submission must include the following information to identify the participant.

- Full Name
- University/Institute of your PhD study
- IEEE Membership Number
- Date of Graduation or date of defense
- Proof of Ph.D. degree or Defense (eg certificate, letter)
- Thesis Title
- Brief abstract (< 300 words)
- Keywords (3-5)

The submission is in English, with the exception of the PhD certificate (which should be translated as needed). The video is limited to 3 minutes. It can be uploaded to the nomination system.

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5. Judging Criteria

Three judges from the field of Electric Transportation will review the submissions. The criteria and the weighting are based on the following criteria:

Rubric

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

Judging Items		Weighting
Definition of the problem 20%	Define the problem clearly	10%
	Impact to the technology	10%
Method statement 20%	Technically sound	5%
	Impact to Transportation Research Development	5%
	Innovative method	5%
	Method of verification	5%
Result of the research and development 20%	Significant contribution to the field	10%
	Feedback and response from peers or potential users	10%
Presentation Skill 40%	Quality of oral presentation	10%
	Suitable use of the presentation aids	10%
	Attractive	10%
	Quality of the video	10%

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6. Awards

The winner will receive a certificate and a premium of US\$500. A ceremony will be organized, either online or at a TEC-sponsored Conference. A total of five awards will be presented.

7. Guidelines for the video

- The video must first start with an introduction with the title of the thesis, name of participant, supervisor's name, and name of the institution.
- The presentation must be in English.
- Pure voice-over PowerPoint presentation is not suggested.
- Subtitles may be useful for some complicated technical jargon.
- The video resolution should be high, of 1080p, or above.
MP4 format is preferred.

8. Intellectual Property and copyright

- No copyright issues involved with your presentation.
- Participants must ensure that the intellectual property (IP) has been protected before their submission.
- Consult your supervisor or project sponsor to clear any copyright /IP issues.
- The copyright of video submitted to the IEEE will be rested with IEEE.

9. How to Submit

The video should be submitted to IEEE Openwater platform. Participant should have an IEEE account. The IEEE TEC 3-minPhD Talk Submission Portal is located in

Questions:

If you have questions please contact the IEEE Transportation Electrification Community at tec@ieee.org

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Appendix: Tips to prepare your video submission

The content of your video:

- **Introduction:** Besides the basic participant information, the introduction must be attractive and spell out the key issues you like to present and the impact of your research.
- **Main content:** The content is your work done. You may present with your methodology, solution, important outcome with suitable animation, image/video recording, etc.
- **Conclusion:** Your PhD work is summarized here with the impact to the field and the society.

Narration:

- Clearly to deliver your points.
- Use layman language and avoid too many complicated technical jargon. Remember, you are presenting to individuals who are not in your specialty.
- Subtitles may be useful for some complicated technical jargon.
- Do not use too many slides or PowerPoint (one or two slides OK, but only as a side prop).

Video Editing and animation:

- Photo or movie maker from Window
- Solidworks <https://www.solidworks.com/>
- 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>)