

The Expanded Microwave Week 3MT Competition

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Imagine that you're pacing on an empty stage in an empty room at the Los Angeles Convention Center, diligently practicing your Three Minute Thesis (3MT) presentation ahead of the 2020 competition. Good for you! As you begin your umpteenth round, someone wanders in, coffee cup in hand, and sits on a chair. Is it an executive of the convention center? A member of the maintenance staff? Security? Are you about to be kicked out?

You continue rehearsing. As you stop speaking, your intruder ducks out of the room. So far, so good: you haven't been kicked out. But why did the person leave? Was your speech frightening or baffling? Or did he or

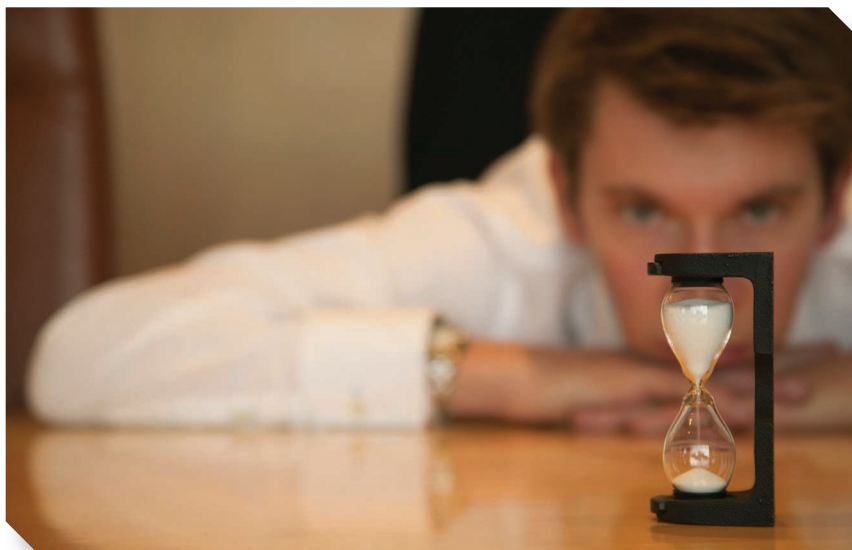


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she leave excited by what you were talking about and why it matters?

What Exactly Is 3MT?

Originally developed by the University of Queensland, Australia, in 2008, the 3MT [1] challenges contestants—in our case, participants with a specialized knowledge of microwaves—to improve their communication and

delivery skills, showcasing the creativity, theatricality, and control of a narrative that the most skilled of presenters draw upon in giving brief, clear, and understandable research talks. Since its inception, the 3MT competition has grown to include more than 600 universities across more than 65 countries worldwide [1].

In three minutes or fewer, using only one static slide and no other props, contestants deliver presentations to a panel of nonspecialist judges who rank them on how engaging, accessible, and compelling they made their presentations. A speaker who goes over his or her allotted time is disqualified.

The New 2020 IEEE Microwave Week 3MT Competition

Now in its fourth year, our 3MT competition has been expanded from an IEEE Microwave Theory and Techniques Society International Microwave Symposium (IMS)-only competition into one that includes finalists from the co-located RFIC Symposium and ARFTG Conferences as well.

Finalists work with the competition cochairs in the months leading up to IMS2020, attending a webinar and receiving feedback on their drafts, videos, and practice runs. This hard work will culminate in a 3MT presentation to be delivered in Los Angeles, possibly earning a spot in the top three (and a cash prize that comes with those honors), leaving the presenter with a battery of techniques and strategies for improving communication of technical work—skills that are useful across disciplines and career paths.

An equally important benefit of the competition is promotional: the accessible, engaging nature of these talks is perfect for making the general public curious about innovations and breakthroughs in microwaves and high-frequency electromagnetics.

Showcasing the human element of our Society on MTT-S social media channels using videotaped award-winning 3MT presentations by passionate and articulate younger members [2]–[4] should help attract high school students, undergraduates, and women to our profession. To this end, this year's Microwave Week in Los Angeles warmly welcomes all symposium attendees and guests to attend the precompetition presentation skills workshop, the briefing and coaching sessions, and the competition itself [5].

Preparing for 2020

If you've previously competed in one of our IMS 3MT competitions, you may have sensed the tension between satisfying an audience of mostly technical peers while delivering a research-based presentation that is clear, accessible, and engaging to nonspecialists like the judges.

How do you (or did you) rid your script of irresistible jargon? Of excruciating detail? Of mind-twisting technical complication? How can you (or did you) fire up your audience with your passion as well as the essence of your research? Will anyone (or did anyone) care?

Your passion should be authentic and your results believable. Your audience must trust you right from the moment you begin. Your articulation must be clear, with every word discernible, including your name. Your delivery should not be too fast or too slow. You must include pauses that are dramatic, meaningful, and supportive of your story. Words that are essential but likely to confuse, including your name, should be placed carefully, standing upright in your sea of words, judiciously repeated, if necessary, so that they come across as comprehensible and memorable.

It can be done [6]. Just watch a few of the playlist videos from our inaugural [2], second [3], and third [4] IMS 3MT competitions.

The Expanding World of 3MT Presentations

The University of Queensland provides links to outstanding 3MT presentations [7]. Video collections from the 2018 and 2019 3MT competitions in the Department of Electrical and Computer Engineering at McMaster University are available [8], [9], and we invite you to watch the IMS

3MT videos on our Society's YouTube channel [2]–[4].

As you watch online presentations, be aware that you are not watching the live presentations on which the judges based their rankings (see Bandler and Kiley's introduction to the first IMS 3MT competition [10]). Another article by Bandler and Kiley [11] addresses live presentation guidelines in general, as well as 3MT issues in particular. Bandler [12] covers various issues, including a question-and-answer session with a 3MT winner.

For 3MT, it is highly desirable to deliver an overview and avoid jargon, convey enthusiasm and a commitment to the "long haul," and demonstrate empathy through human stories. In preparation for the competition, finalists should review [1]–[21].

Microwave Week 3MT Competition Procedures

Finalists for the 3MT competition were chosen from individuals who identified their desire to enter the competition upon submission. A contestant must be a student or young professional (YP); the IEEE defines YPs as poststudent members within 15 years of their first professional degree.

As for all regular Microwave Week submissions, 3MT submissions were reviewed by the technical paper review committees (TPRCs). Only papers accepted by the TPRCs whose authors had self-identified as eligible for the competition and met the published Microwave Week 3MT criteria were eligible to participate in the 3MT competition [13], [14].

Finalists were selected and recommended by the 2020 Microwave Week 3MT Committee from the eligible submissions. Contestants may speak only once, with no substitutions, and only

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Awards will be presented during the closing session of IMS2020, with cash prizes to be awarded to the top three ranked contestants and to the audience choice winner.

one 3MT presentation per accepted paper is allowed.

Contestants will make their presentations to symposium attendees, invited guests, and a panel of five nonspecialist judges. The judges will rank the contestants in accordance with the 3MT rules [14], and their decision is final. Judging criteria is in accordance with the University of Queensland [15].

The equipment available will be the same as for any technical session, with the addition of a videographer who will record each presentation to upload to YouTube. The competition is scheduled for Sunday, 21 June 2020.

The Prizes

Winners will be selected by the panel of nonspecialist judges, and an audience choice winner will also be named. Awards will be presented during the closing session of IMS2020, with cash prizes to be awarded to the top three ranked contestants and to the audience choice winner.

Asking for More!

Returning to that mysterious intruder who sipped coffee while watching you rehearse on that empty stage in that empty convention center room—whether maintenance worker or convention center executive—imagine if, instead of leaving unceremonious-

ly, that person had broken into applause, rushed up to you, shook your hand, and peppered you with questions. You may have then had your answer as to how you came across. And, most likely, you wouldn't have been kicked out.

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