

# The IMS2021 Microwave Week Virtual 3MT Competition

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What does it take to fire up your audience? You know an engaging presentation when you experience it. Does “delivery” perhaps hold the key? As a speaker, do you actually have something to give to your listeners? Do you have to deliver a worthwhile takeaway? When framed this way, the answer is clear: it’s not about you; it’s about the audience.

The typical intricacy of engaging with an audience has been complicated

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even further by the replacement of in-person meetings with “virtual” ones. What about webinars? Are they as engrossing as in-person seminars? Do you perhaps feel talked at rather

than spoken to? Do you miss that collegial postpresentation networking and small talk with a distinguished speaker? Do you wish that your online technical meetings were as motivating as your in-person meetings?

When you speak online, your audience’s reaction can be difficult to gauge; your physical movements may be restrained or not fully seen; unable to make eye contact, you may feel disconnected.

There is hope! Physical constraints and technical limitations can actually spur your creativity. As we brought the 2020 Microwave Week Virtual Three Minute Thesis (3MT) competition to reality, we discovered exciting positives to going virtual.

## What Is 3MT?

Developed by the University of Queensland, Australia, in 2008, the 3MT competition [1] challenges contestants—in our case, contestants with expertise in RF and microwave technology—to

improve their communication delivery skills, encouraging the control of narrative that skilled presenters utilize in giving research-based talks with a general audience in mind. The 3MT competition now includes more than 900 universities across more than 85 countries worldwide [1].

In 3 min or less, using only one static slide and no other props, contestants deliver their presentations to a panel of nonspecialist judges, who rank them on how engaging, accessible, and compelling their presentations are [2]. A speaker who goes overtime is disqualified.

### Goals of the 2021 Microwave Week 3MT Competition

Our 3MT competition is now in its fifth year [3]. In 2020, it successfully expanded from an IEEE Microwave Theory and Techniques Society (MTT-S) International Microwave Symposium (IMS)-only event into one that included finalists from the co-located IEEE RFIC Symposium and ARFTG Conference. Of necessity in 2020, the competition went virtual.

Our broader aims continue to be further developing our publicly ac-

cessible online suite of videotaped, award-winning, 3-min presentations by passionate and articulate younger members of our microwave community; persuading general audiences of the importance to humanity of microwaves and related technical fields; and showcasing the human element of individual members of our microwave community. These goals, we believe, should go a long way toward attracting high school students, undergraduates, and women to our profession [4]. See the YouTube playlists from 2017 to 2020 [5]–[8].

### Virtual Format for 2021

The 3MT Competition Committee chooses finalists from among those who identified their desire to enter the competition upon submitting their paper [9], [10]. A contestant must be a current student or within 15 years of his or her first professional degree. Finalists may speak only once, with

no substitutions, and only one 3MT presentation per accepted paper is allowed.

In the weeks leading up to Microwave Week, finalists work with the competition organizers, attending Zoom meetings and receiving tips and feedback on their scripts, slides, and practice runs. These encounters address strategies for distilling and delivering highly complex, technical research to nonspecialists—skills useful across disciplines and career paths. We

also aim for the best quality of presentation over a virtual medium—one that is still fraught with technical and physical limitations, surprises, and false assumptions.

The competition itself will feature a playlist of prerecorded 3MT videos. They will have been recorded “live” during time-limited, individual sessions over Zoom by the competition organizers, edited only for file size, and placed in a common template. The videos will be livestreamed to both the audience and nonspecialist judges and accessed via the 2021 Microwave Week virtual platform [3]. The judges will rank the contestants in accordance with the 3MT rules [10]; their decision is final. As in the past, selected videos will be uploaded to YouTube.

We are not looking for the fruits of a “video contest” by candidates. We hold that the spirit of 3MT is best captured by a “live” and, as far as possible, single-shot, unedited presentation accompanied by one static slide.

Our references [1]–[24] include helpful articles [4], [14], [15], workshops [16]–[20], and MTT-S webinars [21]–[24]. Check out some of the 3MT presentations [11]–[13] and presentation videos on our Society’s YouTube channel [5]–[8]. As you watch the 2017–2019 videos [5]–[7], be aware that you are watching recordings of the live presentations on which the judges based their rankings.

**The 3MT competition now includes more than 900 universities across more than 85 countries worldwide.**



**Figure 1.** Mahmoud Wagih’s slide from his IMS2020 Microwave Week 3MT presentation [25]. Wagih likens harvesting wasted microwave power to collecting rainwater.

On the other hand, the videos in the 2020 playlist [8] are the presentations actually seen by the judges, who were watching online along with the audience. The format can make a difference to your personal assessment. See, for example, the unassuming slide in Figure 1 from Mahmoud Wagih's 2020 3MT second-place presentation [25]. Wagih likens "recycling" wasted microwave power to collecting "wasted" rainwater.

## The Prizes

Winners will be selected by the panel of nonspecialist judges, while the audience will select a separate Audience Choice winner. Awards will be presented during the closing session of IMS2021, with cash prizes awarded to the top three ranked contestants and to the Audience Choice winner.

## Firing Up Your Audience

How can you fire up your audience and make people care? Make them want to hear more. First, eliminate that irresistible and all-too-comforting jargon. Second, cut out excruciating detail. You need to come across as believable; your passion must feel authentic. Instill trust, and convey your commitment to the "long haul." Learn to articulate every word clearly, including your name. Your delivery should be just right—not too fast, not too slow. And think story format: mystery, dramatic pauses, repetition, meaningful metaphors, and more. Finally, make it personal. Connecting with your audience through shared experiences is a powerful tool.

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