

# Moving Forward with Clarity: The Second IMS 3MT Competition

*John W. Bandler and Erin M. Kiley*

Were you lucky enough to be inspired by the first-ever IEEE Microwave Theory and Techniques Society (MTT-S) International Microwave Symposium (IMS) Three Minute Thesis (3MT) Competition at IMS2017 in Honolulu, Hawaii? If so, perhaps you noted that at least one of the 3MT finalists introduced his regular oral presentation using his 3MT slide.

Or perhaps you watched one of the excellent IMS2017 3MT videos available online [1] and noted the competitors'

adept use of metaphors and other rhetorical devices to clearly explain their research to a general audience?

2017 marked the inaugural IMS 3MT Competition [2]. In no more than 3 min and using only one static slide and no other props, contestants delivered presentations to a panel of nonspecialist judges who ranked them on how engaging, accessible, and compelling they made their presentations.



IMAGE LICENSED BY INGRAM PUBLISHING

Moving forward to 2018, we welcome you to attend the second IMS 3MT Competition [3], which rewards presenters for brevity, clarity, and, above all, understandability, engagement, and capturing an audience's imagination. Originally developed at the University of Queensland, Australia, in 2008, the 3MT [4] challenges contestants to improve their communication and delivery skills,

showcasing the creativity, theatricality, and narrative control that the most skilled of presenters draw upon in giving brief, clear, and understandable research talks.

## The IMS2018 3MT Competition

The IMS 3MT competition provides an avenue for students and young

---

*John W. Bandler (bandler@mcmaster.ca) is with McMaster University and Bandler Corporation, Hamilton, Ontario, Canada.*

*Erin M. Kiley (emkiley@mcla.edu) is an assistant professor of mathematics with the Massachusetts College of Liberal Arts, North Adams, Massachusetts, United States.*

Digital Object Identifier 10.1109/MMM.2018.2801701  
Date of publication: 6 April 2018



professionals to improve their communication and presentation skills. Finalists can work with the chairs of the competition in the months leading up to IMS, attending a webinar and receiving feedback on their drafts and practice runs. This hard work will culminate in a 3MT presentation to be delivered at IMS2018 in Philadelphia, Pennsylvania, possibly earning a spot in the top three (and the cash prize that comes with those honors) but certainly leaving each presenter with a battery of techniques and strategies for improving communication of technical work, useful skills across disciplines and career paths.

An equally important benefit of the competition is promoting developments in microwaves and high-frequency electromagnetics, surprising and engaging the general public with our breakthroughs, and making people curious about our innovations. These are a far cry from the microwave popcorn that generally comes to nonspecialists' minds when "microwaves" are mentioned. Such engagement should stimulate public interest in microwaves as a transformative technology, rewarding to both those who study it and to those whose daily lives benefit from its incorporation into the latest developments in consumer products.

Showcasing the human element of our Society on IMS's YouTube channel through a suite of award-winning 3-min presentations by passionate and articulate younger members of the MTT-S [1] should help attract high school students, undergraduates, and women to our profession. To this end, IMS2018 warmly welcomes all symposium attendees and guests to join us at both the briefing session and competition in Philadelphia.

### The World of 3MT Presentations

Many outstanding recent presentations covering several disciplines, including engineering, can be found on the 3MT showcase page of the University of Queensland [4]. Another fine collection of videos of finalists in the 2017 Canadian National 3MT Competition is available online [5]. And, of course, we also invite you to watch the 3MT videos on our Society's IMS YouTube channel [1].

As you watch these online presentations, keep in mind that you are watching videos and not the live performances on which the judges based their rankings, as discussed in [6]. Another article [7] addresses live presentation dos and don'ts in general, as well as 3MT issues in particular; and [8] covers a wide variety of issues related to presentations, 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 would do well to review the references provided in [1]–[13].

### The Prizes

The top winners, selected by the panel of nonspecialist judges, together with an audience choice winner will be announced and awards will be presented during IMS2018. It is planned to award cash prizes to the top three contestants as well as to the audience choice winner.

### IMS2018 3MT Competition Procedure

The contestants for the 3MT Competition were chosen from among those who identified their desire to enter the competition upon submitting their paper. A contestant must be a student or young professional (the latter defined by the IEEE as post-student members within 15 years of their first professional degree).

As with all IMS2018 paper submissions, 3MT submissions were reviewed by the Technical Paper Review Committee (TPRC). Only papers that were selected by the TPRC for either an oral or interactive forum presentation (and whose authors had self-identified as eligible for the competition) and that met the published 3MT criteria are eligible to participate in the competition [9], [12].

Finalists were selected and recommended by the IMS2018 3MT Competition committee from all eligible 3MT submissions. Contestants may speak only once, with no substitutions, and only 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 3MT rules [12]; their decision is final. Judging criteria are in accordance with those of the University of Queensland [13].

The equipment available will be the same as for any technical session, with the addition of a videographer who will record each 3-min presentation for uploading to YouTube. The competition is scheduled for Monday, 11 June 2018, in one of the technical session venues.

### Prepare to Be Engaged!

The IMS2018 3MT Competition complements the extensive suite of IMS initiatives designed for students and young professionals. It should promote diversity, hopefully attract underrepresented communities, as well as women in microwaves, and will surely provide useful benchmarks for meaningful dialogue between MTT-S members and the public.

### Acknowledgments

We thank Beth Bandler, Barbara Fenesi, Ramesh Gupta, Ana Kovacevic, Michelle Ogrodnik, Tushar Sharma, and John Vlachopoulos for helping shape this work. We are grateful to the IMS2018 Steering Committee, including Robert Caverly, Sridhar Kanamalur, Allen Katz, Amanda Scacchitti, Mohammad Tofighi, and Elsie Vega, for their ongoing support.

### References

- [1] MTT-S IMS YouTube channel. [Online]. Available: <https://www.youtube.com/mttims>
- [2] J. W. Bandler and E. M. Kiley, "The clarity of hindsight: The first-ever IMS Three Minute Thesis Competition," *IEEE Microwave Mag.* vol. 19, no. 1, pp. 116–123, Jan. 2018.
- [3] Three Minute Thesis at IMS2018. [Online]. Available: <https://ims2018.org/authors-organizers/competitions/3mt>
- [4] Three Minute Thesis, The University of Queensland, Australia. [Online]. Available: <https://threeminutethesis.uq.edu.au/home>
- [5] 2017 Finalists, National 3MT Competition, Canadian Association for Graduate Studies. [Online]. Available: [http://www.cags.ca/3mt/index\\_videos.php](http://www.cags.ca/3mt/index_videos.php)
- [6] J. W. Bandler and E. M. Kiley, "Brevity, clarity, engagement: The IMS2017 Three Minute

(continued on page 67)

to bring your engaging opinions and questions to both panel sessions.

The 5G Summit technical sessions on Tuesday will provide high-level 5G overview presentations that will complement the 5G-focused RFIC

technical sessions on Monday morning. A separate registration will be required for the 5G Summit sessions.

On behalf of the RFIC Steering and Executive Committees, we welcome you to join us at the 2018 RFIC Symposium

in Philadelphia! Please visit the RFIC 2018 website (<http://rfic-ieee.org/>) for more details and updates.



---

## IMS2018 Project Connect—Five Years and Counting *(continued from page 58)*

professionals in the field of RF and microwave engineering from both industry and academia. It was a life-changing moment for me and motivated me to pursue a Ph.D. degree in this field!"

Project Connect students follow a tailored conference agenda intended to expose them to new technologies and introduce them to the RF and microwave community with the hope of inspiring them to pursue a career in this vast field. The concept was first introduced at IMS2014 in Tampa, Florida. Each year since then, the program's format has expanded. At IMS2015 in Phoenix, Arizona, an industry mixer was added to allow participants the chance to interact, one on one, with people

working in industry. At IMS2016 in San Francisco, an entrepreneurial panel was added, providing students with exposure to some of the community's innovation leaders. At IMS2018 in Honolulu, Hawaii, the local committee enriched the program by including Native Alaskans and Pacific Islanders as well as by adding activities to expose participants from outside Hawaii to different local cultures.

IMS2018 in Philadelphia represents the fifth-year anniversary of Project Connect. We will continue the preconference tradition with a team-building tour of local historical sites and use the symposium's "Microwaves, Medicine, and Mobility" focus to high-

light career paths for the next-generation RF enthusiast!

The week is planned as follows:

- *Monday (11 June)*: local historical tour and team-building
- *Tuesday (12 June)*: Project Connect panel sessions, IMS student programs, and evening social events
- *Wednesday (13 June)*: more sessions and Project Connect panels, a visit to the exhibition hall, and the Project Connect industry mixer, where participants meet industry, academic, and MTT-S leaders
- *Thursday (14 June)*: student teams describe their IMS experience in a video titled "IMS Through Their Eyes."



---

## Moving Forward with Clarity: The Second IMS 3MT Competition *(continued from page 60)*

Thesis competition," *IEEE Microwave Mag.*, vol. 18, no. 3, pp. 85–87, May 2017.

[7] J. W. Bandler and E. M. Kiley, "In the first few blinks of an eye: The basics of engaging presentations," *IEEE Microwave Mag.*, vol. 18, no. 2, pp. 112–114, Mar./Apr. 2017.

[8] J. W. Bandler. (2016, Nov. 4). You, your slides and your posters: Allies or foes. Pub. Sem., McMaster University, Hamilton, ON. [Online]. Available: <https://www.youtube.com/watch?v=CtSTppBXbPg>

[9] What is 3MT, why is it beneficial, how is it judged, and how to prepare. [Online]. Available: <https://ims2018.org/authors-organizers/competitions/3mt/3mt-add>

[10] J. Bandler and A. Kovacevic. (2017, Jan. 24). Clear, brief, engaging: Your thesis in three minutes. McMaster University, Hamilton, ON. [Online]. Available: [https://www.youtube.com/watch?v=R\\_Vv5XKHHlg](https://www.youtube.com/watch?v=R_Vv5XKHHlg)

[11] J.W. Bandler, E.M. Kiley, and A. Kovacevic. (2017, Mar. 28). The art of effectively communi-

cating complex, highly technical work in three minutes. IEEE MTT-S Webinar. [Online]. Available: <https://t.co/iCsHW8vnRm>

[12] IMS Three Minute Thesis (3MT) Competition rules. [Online]. Available: <https://ims2018.org/authors-organizers/technical-program-competitions/3mt/rules>

[13] Rules and judging criteria, The Three Minute Thesis. [Online]. Available: <https://threeminutethesis.uq.edu.au/resources/competition-rules>

