W. Ross Stone

Resources on Double-Blind Reviewing

This column provides some resources related to the research on bias in single-blind reviewing that is apparently mitigated by double-blind reviewing; a piece of software that allows creating bootable, executable, and installable images of CD-ROMs; how to mount such images in *Windows 10*; and some thoughts on the value of conferences.

RESOURCES ON DOUBLE-BLIND REVIEWING

"One of the strongest steps that the IEEE Antennas and Propagation Society (AP-S) could take to support women in engineering would be to adopt double-blind reviewing for all of our journals and conferences." I made that statement (or something very similar) during a discussion of measures the Society could take to support women in engineering at the February 2020 AP-S Administrative Committee meeting. When I made the statement, I had expected objections to be raised because of the additional time and effort involved in implementing double-blind reviewing. To my surprise, most of the objections raised were from people who apparently were not familiar with the results of research that showed that dou-

ble-blind reviewing mitigated against various types of bias in single-blind reviewing. I'm therefore going to provide a few references to that research here for those who might want to become familiar with what is known about the subject.

In single-blind reviewing, the reviewer knows the name(s) and affiliation(s) of the author(s) of an article, but the identity of the reviewer is kept hidden from the author(s). In double-blind reviewing, the name(s) and affiliation(s) of the author(s) of the article (as well as any identifying information in the article) are removed, so that the reviewer is "blind" to the author(s) and affiliation(s).

Doing experiments to test whether double-blind reviewing has an effect on removing various potential biases in the reviewing process as compared to single-blind reviewing is challenging: human behavior is involved, and it is difficult to control for all of the potential variables. However, more than 600 such studies have been done. An editorial [1] and an associated article [2] by Snodgrass and the references therein provide an excellent, comprehensive overview of much of the literature. A more-recent study [3] and the refer-

ences cited therein led to basically the same results.

Some of these studies were done on reviewing for journals, and some were done on reviewing for conferences. Not all of the studies looked at the same issues, and not all of the authors of the studies came to the same conclusions regarding the issues looked at. However, in most cases the conclusions I and most of the authors of the studies reached from the literature and these studies were the following:

1) There often is a bias in single-blind reviewing favoring better-known (typically, more-senior) authors, and this bias is typically reduced using double-blind reviewing.

2) There often is a bias in single-blind reviewing favoring larger, better known institutions with which authors are affiliated, and this bias is typically reduced using double-blind reviewing.

3) There often is a bias in single-blind reviewing favoring very prolific authors, and this bias is typically reduced using double-blind reviewing.

4) There often is a bias in single-blind reviewing favoring authors identified as male over those identified as female, and this bias is
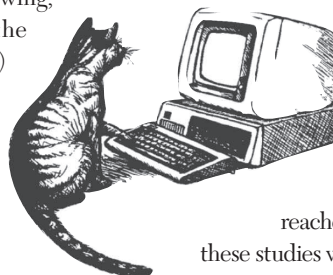
typically reduced using double-blind reviewing.

5) After double-blind reviewing was instituted for a period of time in a journal or conference that had previously used single-blind reviewing, any of the above groups against which a bias had appeared to exist under single-blind reviewing experienced an increase in the proportion of papers accepted in most cases.

I urge you to read the available literature and draw your own conclusions.

NO MORE CD-ROMs

There are several pieces of software on which I depend for which the original installation medium is a CD-ROM or a DVD. Yes, most of those are older pieces of software, but they still are essential to my productivity for various reasons. I have repeatedly tried to make images of some of those CD-ROMs from which I could install the software if I ever needed do so in case of a system crash, or moving to a new system. Until now, I have not been able to find any software that would accurately produce an .iso file that allowed installation.

An .iso file is an exact, sector-by-sector copy of an optical disk. It can be digitally mounted by the operating system in the same manner as the original optical disk, and otherwise appears identically to the operating system as the original optical disk. In particular, if properly made, an .iso file of a software installation CD-ROM or DVD will allow the software to be installed from the .iso file. Until now, all of the software I had tried for making .iso files would not reliably create an .iso file that would allow installation of the software for at least some of the CD-ROMs I had.

I have finally found software that will reliably create bootable and installable .iso files of my software: *ImgBurn* (available from www.imgburn.com). In addition to creating image files from a wide variety of optical disks, *ImgBurn* will also write files to recordable optical disks in a variety of formats, and reads and writes a wide variety of audio and video formats. It is also free.

> **Instead of dealing with CD-ROMs for restoring critical software, I now have a set of .iso files of each of the CD-ROMs on a single flash drive.**

Instead of dealing with CD-ROMs for restoring critical software, I now have a set of .iso files of each of the CD-ROMs on a single flash drive. I can reinstall my software from the .iso files. Of course, this also means that I can back up these files, and do not have to worry about what happens if the original CD-ROM becomes scratched.

MOUNTING .ISO FILES IN WINDOWS 10

Now that you have an .iso file of your software, how do you use it? To do anything with it, you have to mount the .iso file. It turns out how to do that isn't quite as obvious or well documented as it could be.

There are at least three methods to mount an .iso file in *Windows 10*. The first is to double-click the file in *Windows File Explorer*. That may or may not work. If it doesn't, the second method is to right-click the .iso file in *Windows File Explorer* and left-click on the "mount" option. The third method is to click on the .iso file in *Windows File Explorer*, choose the "Manage" tab at the top, and then click on the "Mount" button on the tab.

Once the .iso file has been mounted, it appears as a CD-ROM drive and the files associated with it are available just as if the original CD-ROM was actually in a drive attached to the system. Furthermore, if the .iso file has an Autorun file or an executable installation file, double clicking on that file in *Windows File Explorer* will cause the file to run, just as if the CD-ROM had been inserted into the CD-ROM drive.

SOME THOUGHTS ON THE VALUE OF CONFERENCES

As this is written, in late March, we are all dealing with major trauma to our way of life. Unfortunately, for far too many, that trauma extends to life itself. I hope and pray that all who read this and their families are well and able to withstand the threats posed by the coronavirus to health, economic well-being, and life in general. I also hope that by the time you are reading this the situation has significantly improved in much of the world, although I fear more time may be needed.

I have spent the past three weeks or so dealing with a particularly unpleasant and depressing set of duties: canceling conferences, coping with the consequences of canceling conferences, and doing contingency planning for having to possibly cancel other conferences. This has included more than a half-dozen conferences ranging in expected attendance from a few hundred people to three conferences of more than 1,500 attendees. In several cases, those of us working on this have tried—and, in a few cases, successfully executed—holding a portion or all of the sessions of the conference as an online real-time "virtual" conference. This involves connecting everyone via the Internet, with bidirectional audio for everyone and all attendees being able to view the presentation screen and hear the speaker. I've participated in such sessions with more than 100 attendees that have worked very well. This has led some to ask, "Should we consider going to virtual conferences as a standard mode of organization for the future, even when there aren't health and travel restrictions that require doing conferences virtually?" My response is based on something that happened several decades ago, but remains valid today.

I'll never forget an experience I had when I was attending one of the first conferences at which I presented a paper. I presented a paper that gave a result related to the resolution of an antenna's aperture for coherent imaging. One of the foremost researchers in radar imaging sat down with me

for about an hour afterward, and we discussed the result and how it related to a related result from radar (of which I had been unaware). He said to me, "The way I judge whether a conference has been worth my time is whether I come back with one or two new ideas I can really use in my work. This discussion gave me my idea for this conference." Of course I was flattered, but that wasn't the point. I realized that he was totally correct about how to measure the value of a conference. If in return for a few days of listening to papers and interacting with colleagues I could come back with one or two fundamental new ideas that really made a difference in my work, that was a valuable conference.

Of course, those fundamental ideas usually come from discussions

> **They might be motivated by hearing a paper, but it is the interaction with the other researchers that makes the difference.**

with other researchers in the field. They might be motivated by hearing a paper, but it is the interaction with the other researchers that makes the difference. I've saved a lot of time and come back with a lot of very valuable ideas from conferences over the years by following his model. I also think it is worth keeping in mind when we consider how far we want to go in replacing in-person conferences with

virtual meetings. I'm not alone in that thought. Surveys of attendees taken after some of the largest conferences in our field have consistently shown that what is valued most at the conferences is interaction with the other conference attendees.

REFERENCES

[1] R. T. Snodgrass, "Editorial: Single- versus double-blind reviewing," *ACM Trans. Database Syst.*, vol. 32, no. 1, pp. 1–29, Mar. 2007. doi: 10.1145/1206049.1206050.

[2] R. Snodgrass, "Single- versus double-blind reviewing: An analysis of the literature," *SIGMOD Rec.*, vol. 35, no. 3, pp. 8–21, Sept. 2006. doi: 10.1145/1168092.1168094.

[3] A. Tomkins, M. Zhang, and W. D. Heavlin, "Reviewer bias in single- versus double-blind peer review," *Proc. Nat. Academy Sci.*, vol. 114, no. 48, pp. 12,708–12,713, Nov. 28, 2017. doi: 10.1073/pnas.1707323114.

WOMEN IN ENGINEERING

■ Renuka Ramavarma, head, Electrical Design & Measurement Division, U R Rao Satellite Centre, ISRO, Bangalore, India, "Antenna and Spacecraft RF Characterization in CATF."

The speakers were all exceptional women with decades of experience on different aspects/applications of antennas and microwave engineering. They have encouraged, guided, and inspired students and scientists. The purpose of this session was to motivate, support, and urge young women to pursue higher education, careers, and work in collaboration with industry in the area of antennas and microwaves in India. It also acknowledged the significant support and opportunities available to women in the form of scholarships and grants in the fields of science, technology, engineering, and math.

> **The speakers were all exceptional women with decades of experience on different aspects/applications of antennas and microwave engineering.**

The session encouraged interaction and discussion between experienced scientists and young female researchers to associate and work in this area.

Several decades of research has shown that socially diverse groups are more innovative, diligent, and better at solving complex, nonroutine problems [1]. Getting more women in this field will influence the face of antennas and

microwaves in the future in India. There is still a lot of progress to be made, and this session was just the beginning of a long journey. The session envisioned building up women in the community as peers with men in research and higher education so as to work and progress in space, defense, and wireless sectors of the country. The session was very interactive and got excellent feedback from the attendees. InCAP 2019 T-shirts were presented to WIE speakers and attendees.

REFERENCE

[1] K. W. Philips, "How diversity makes us smarter," *Sci. Amer.*, vol. 311, no. 4, pp. 42–47, Oct. 2014. doi: 10.1109/MAP.2020.2984937.