



## Plagiarism

During the past six months at least three papers submitted to this journal have contained some type of plagiarism. Apparently I cannot assume that everyone knows what plagiarism is, so I must define the term. For on more than one occasion, those practicing the plagiarism protested that they were unaware that they were at fault or they thought it didn't apply to their situation. So, to ensure that we all know what I'm talking about, "plagiarism" is the use of the concepts, writings or results of others without giving proper credit to the sources of information. This includes not only verbatim copying, but also paraphrasing of other's work.

All of the cases that have come to our attention were discovered by a reviewer of the manuscript. In one case, additional investigation revealed that a paper in press contained plagiarized material also. Its publication was stopped. In each instance, the first author of these papers was a young researcher or graduate student. The whole affair has left a bad taste in my mouth and a sad assessment of some young researchers.

In the nearly five years that I have been editor, there has been about one case of plagiarism each year. This year, however, there have been three in the past six months. In one instance, a reviewer pointed out that there were passages in the manuscript that were directly copied or closely paraphrased from two papers previously published in this journal. Because these papers were available in Adobe Acrobat format (.pdf files), as was the submitted manuscript, I was able to pick some technical phrases from the manuscript and look for occurrences of those in the published papers. In about an hour I was able to verify that uncited passages were copied or paraphrased from the published work.

In such instances we present the authors with the evidence and offer them a chance to respond. In one case the response from the corresponding author was, at first, dismay and apology, noting that the first author was a graduate student, who had inserted the material without his knowledge. Later, this author took the position that because the material was not copied verbatim, was largely background information, and that the actual research data

were original, there was nothing wrong. I pointed out that paraphrasing material does not absolve one of plagiarism.

In a second instance, the author provided a short biography with the paper, which indicated that the author was a graduate student. Although the name of the researcher's mentor was on the paper, it was clear that he knew nothing of the submission, because he was listed as the first suggested reviewer and his e-mail and address were missing from the manuscript application. Here again, it was a sharp-eyed reviewer, a celebrated researcher in the field, who caught the copying. In addition, the work itself was highly derivative.

The last of the current cases did not copy or paraphrase text, so much as copy the figures, the approach, and a portion of the results. Although the paper that was plagiarized was cited in the references, the citation was only to the type of sample that was used and not to the entire experiment that the author had ripped off.

Plagiarized manuscripts sent to *Optical Engineering* are rejected out of hand and a notation is entered into the author's file indicating that such a transgression has occurred. Authors are informed of this action. Any new submissions will be carefully scrutinized in the light of this breach of ethics. If there is a second violation, we would refuse to accept any further submissions from that author. We do not reveal the name of the author because of the ethical and legal issues that such an action could raise.

In the first case cited, the graduate student's co-authors vehemently denied that they knowingly committed plagiarism and protested the sanctions. I pointed out that because their names were on the paper, they also were responsible for the contents of the manuscript and it was unfortunate that their young colleague had betrayed them. After considerable correspondence, the paper was rejected, but the file record would be maintained only on the graduate student.

The other manuscripts were treated in a similar manner. Without going into details that might breach confidentiality, I am fairly certain that these young researchers were never made aware that plagiarism is not tolerated in scientific research. Still, you would think that each should have been made aware of it during their undergraduate education.

Having said that, it pains me to watch a few of my undergraduate students taking physics here at Georgia Tech turn in identical homework sheets and then plead that they were just "collaborating." At what point in the life of a newly minted engineer does he or she stop falling back on others' efforts and attack the problem themselves? Eventually, a situation is going to arise when no one can provide them with the answer.

Professors and mentors must make their students aware that plagiarism is unacceptable and unethical. Representing the work of others as their own is a breach of trust in the tradition of reporting and obtaining credit for our original work. It cannot be tolerated.

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