

# Mentorship revisited

**Michael T. Eismann**

Editor-in-Chief



When I started my tenure as editor-in-chief for *Optical Engineering* five years ago, one of my first editorials was on the subject of mentorship. In it I specifically recommended that more experienced scientists and engineers provide guidance to their junior counterparts on the art of technical writing, a skill that does not always receive adequate attention in our engineering schools. Coauthoring a conference proceedings or journal paper certainly provides a golden opportunity to provide such mentorship, and I know that opportunity is often exploited to a positive effect. Unfortunately, that is not always the case, and early professionals sometimes receive insufficient assistance in writing their first papers. I must admit that nothing has frustrated me

more in my editorial position than to receive a response from a professor to an ethics violation laying blame on their student coauthor and claiming minimal personal involvement in preparing the manuscript. While I appreciate the need to learn by doing and recognize that all of us are busy, each coauthor has a duty to expend the effort to ensure the quality and integrity of the manuscript, and that responsibility is higher for the more experienced coauthors.

As I reflect on the most positive mentor-protégé relationships I have witnessed over the years, there are two notable characteristics I would like to discuss. First, the nature of the relationship moves well beyond a transactional one. I acknowledge and understand the *quid pro quo* component of the relationship between professors and students, or senior scientific leaders and junior scientists and engineers. Professors need students to drive their research forward, while students gain an education in the process. Senior scientific leaders in industry and government laboratories need junior counterparts to make their projects successful, and these junior professionals leverage these opportunities to develop skills and grow in their own careers. These symbiotic relationships are positive and appropriate, but the best mentors in my career undoubtedly looked beyond the needs of the project, organization, and themselves to my needs as an individual scientist, professional, and person. For whatever reason, they were interested in my success even when it did not necessarily align with theirs.

The second characteristic that I find very important in a mentor is the ability to provide guidance without an expectation that it actually be followed. I appreciate the apparent dissonance in this statement, as it may appear nonsensical to provide advice without this expectation. The best mentors, however, do not expect their protégés to be molded into their likeness but to learn from their experiences, weigh alternatives to their unique situations, strengths, and weaknesses, and take full ownership in the directions they ultimately choose to follow. While I may not always admit it, I have taken great pleasure in seeing young professionals take a path different than I advised, make it their own, and succeed well beyond my expectations. After all, the goal is not to see them become you but to show them ways to become better than you.

Back in February before the COVID-19 pandemic took hold, I was asked to give a farewell presentation during the retirement ceremony for a longtime colleague, John Scheihing, who led our research in infrared focal plane array technology. In my remarks, I highlighted how John had recruited and nurtured a team of young scientists in his field of research, served as their mentor, and guided them to a position where they will surely succeed despite his departure. I observed that he was leaving our organization in better shape than when he arrived, a mark of a successful career and probably the accomplishment with which he is most proud.

Perhaps because I am starting to become well-seasoned in my career, I am also very mindful of the importance of mentorship to ensure the long-term vitality of my research organization, its mission, and my profession. I feel that I have something to offer in imparting my knowledge and

experiences to my younger colleagues, but I also recognize their great potential to succeed in different ways and surpass my accomplishments. Like John, I want to leave things better than when I arrived. I hope all of you feel the same.