

1-4-2018

Biomedical Optics Scientific Community

Brian W. Pogue
Dartmouth College

Follow this and additional works at: <https://digitalcommons.dartmouth.edu/facoa>



Part of the [Bioimaging and Biomedical Optics Commons](#)

Recommended Citation

Pogue, Brian W., "Biomedical Optics Scientific Community" (2018). *Open Dartmouth: Faculty Open Access Articles*. 3929.
<https://digitalcommons.dartmouth.edu/facoa/3929>

This Article is brought to you for free and open access by Dartmouth Digital Commons. It has been accepted for inclusion in Open Dartmouth: Faculty Open Access Articles by an authorized administrator of Dartmouth Digital Commons. For more information, please contact dartmouthdigitalcommons@groups.dartmouth.edu.

Journal of Biomedical Optics

BiomedicalOptics.SPIEDigitalLibrary.org

Biomedical Optics Scientific Community

Brian W. Pogue

SPIE.

Brian W. Pogue, "Biomedical Optics Scientific Community," *J. Biomed. Opt.* **23**(1), 010101 (2018),
doi: 10.1117/1.JBO.23.1.010101.



Biomedical Optics Scientific Community

The biomedical optics world today is thriving, with leadership in industry, biomedical market share, dynamic academic and government laboratories, and an actively supportive professional society in SPIE. Part of the key to bringing a voice to this field is that SPIE supports the single largest international conference on this topic, and publishes leading journals that help shape the peer-reviewed advancement of the field. The magnitude of the growth seen in biomedical optics over the last 20 years would have been unimaginable when SPIE started this journal back in 1996. So today, as the field continues to grow and differentiate, publications such as the *Journal of Biomedical Optics* must continue to define their role in this expanding roadmap. Historically, the role was very clear, in that the journal was the singular home for scholarly publishing in biomedical optics, and the flagship journal for the SPIE biomedical optics community of researchers. Those who attend SPIE BiOS, and consider SPIE their professional society, choose to publish their biomedical optics work in this journal because it is part of their community.

A defining difference between publishers is how they interact with the scientific community. For example, journals are often singularly encoded by their impact factor, but to focus on this singular metric ignores the role of the scientific community in charting research directions of the field. Publishing well-developed work with recognized peers has a deeper impact that pushes the field in productive directions and is reinforced through direct communication at affiliated conferences. In science, there has always been a drive to publish in the highest impact journal feasible, based upon the work in the manuscript, and this is one of the keys to collegial competition and striving for excellence in research. However, it is critical to observe that the highest impact journals rarely contribute to a specialized scientific field beyond a handful of hand-picked articles. Instead, it is the specialty or topic-based journals that carry the load of scientific developments, as is the case in biomedical optics with this journal. The scientists who choose to publish their work with SPIE benefit from a large international readership, which is wholly within their peers, and their papers are directly available to SPIE members through journal email alerts and subscriptions.

Additionally, leading scientists in the field are invited to be on the editorial boards of specialty journals, and it is their shepherding of manuscripts through the peer-review process that maintains the quality and impartiality needed for the scientific publishing system to work. There are journals that select papers based on their own view of impact, without the vetting of a peer scientist-editor, a process that is inherent to scholarly publishing. These journals often don't represent the scientific community via a society, which people join with the intention of shaping the field together. Also, in the biomedical optics field, many journals are run by smaller societies, but few have the advantage of synergy with such an important conference and community as SPIE BiOS. The synergy between a journal, a society, and a conference cannot be underestimated in defining the voice and direction of a field, which has impact in far-reaching areas such as national funding and human translation. These features form the backbone of our scientific community provided by SPIE BiOS and the *SPIE Journal of Biomedical Optics*.

Another aspect that defines a journal and the impact of the papers is the way in which we interact with the authors as colleagues or leaders of a collective field of study. Today we live in a world where search engines largely define what published reports we read, and people rarely pick up a physical journal to browse and read anymore. This transition has been very useful given the vast ocean of publications and activity; however, there are still singular moments in this electronic barrage where we can recognize the origin of a collective body of work. We can appreciate the clarity when we receive a collection of papers that is from our community of fellow researchers. It is at these times, when a table of contents email arrives, and the names are recognizable as people who have presented at SPIE BiOS and who have chosen to publish in a journal that represents a cohesive field. The *Journal of Biomedical Optics* offers their table of contents alerts as a way to keep up with recently published articles and as a community outreach, as do most journals.

What JBO does for the community goes well beyond this, because it is connected with events and programming at the BIOS conference, as part of the society-driven approach to ensuring that new students meet each other and meet experienced scientists. Additionally, new and old scientists can meet editorial board members and discuss advances and manuscripts at the BIOS conference. It is this community that makes the difference for a journal that is published by, and read by, the same group of scientists. I believe that all biomedical optics researchers and translational scientists can find their home in this SPIE journal.

In taking a long-term view of where the field of biomedical optics has been and where it is going, it is apparent that SPIE and its conferences and journals are the largest center of mass of our field. SPIE helped define and amplify this field of development, and BiOS and the *Journal of Biomedical Optics* continue to partner in being a conduit. I encourage all researchers to think about who they view as their scientific peers, and to work with SPIE over time to define this community. I have been deeply honored to be asked to be the editor-in-chief of the journal and look forward to working with the people in this field to shape the future scope and directions.

Brian W. Pogue
Editor-in-Chief