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Year in Review

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Over the three years that I have now served as Editor-in-Chief of *Optical Engineering*, I have been learning a few things about the world of scientific publishing. One aspect is very clear: it has been changing. Many researchers now routinely publish their work on archival sites on the Internet, often as an alternative to traditional journals; there continues to be a strong demand for open access; search engines seem to drive everything; and the chase for impact factor by journals and authors remains in full force. SPIE and *Optical Engineering* have been adapting to these trends with, for example, significant attention to the SPIE Digital Library, leveraging the latest information technology, and a hybrid open access model that caters to author choice. At the same time, many steps we have been taking to maintain and enhance the quality of the journal resemble old-school principles: recruit authors who present interesting work at SPIE conferences, publish special sections in areas of high interest, invite SPIE conference program committee members to serve as guest editors, emphasize high acceptance standards by the editorial board, and minimize decision times to support timely publication for authors.

In reviewing our publication statistics for 2017, this approach seems to be working. Submitted papers, published papers, paper downloads, and impact factor are all on the rise. Specifically, *Optical Engineering* received 1734 submissions and published 716 papers in 2017, representing a 6% increase in publications over 2016 with an acceptance rate just below 40%. Roughly 14% of the publications were open access and almost 19% were part of special sections. Average manuscript decision times remained below 40 days, and the two-year impact factor increased to above 1.0 for the first time this century. I expect these positive trends to continue, especially as we have been bringing on some great new editorial board members, and I believe that there is still some room for improvement.

It has become a habit of mine at the end of each year to review the top downloaded and cited papers to get a sense of what our readers find interesting and impactful. Last year's top two downloaded papers by a wide margin were published as part of our special section on active electro-optical sensing: a review paper providing a historical perspective[1] and a laser radar design optimization for autonomous navigation.[2] Another top paper on flash lidar[3] was also part of this special section. Four additional top-downloaded papers were review papers on laser feedback interferometry,[4] head-mounted displays for air transportation,[5] terahertz photoconductive antenna technology,[6] and conformal displays.[7] The final three in the top-ten download list included special section papers on white light interferometric microscopy[8] and anisoplanatic imaging through turbulence,[9] along with a regular paper on laser-induced damage of camera sensors.[10] All of these papers are available with open access, which is a likely factor in the high number of downloads.

Although it is difficult to draw much insight from citation statistics this soon after 2017 has concluded, it is still interesting to see what paper topics were most cited. According to the Web of Science, three were in the laser damage special section, describing laser damage tests for femtosecond laser coatings,[11] laser-induced damage by picosecond pulses on petawatt-class laser coatings,[12] and laser-based removal of space debris.[13] The active electro-optical sensing special section included top-cited papers on hyperentanglement[14] and deep turbulence wavefront sensing,[15] while papers on anisoplanatic imaging through turbulence[9] (the only top-ten downloaded and cited) and atmospheric turbulence mitigation algorithms[16] from the long-range imaging special section were part of the list. The remainder included a paper on extended wavelength infrared photodetectors[17] from the infrared detectors special section, along with regular papers on binary holograms for depth visualization[18] and channel capacity of optical data links.[19] Six of these ten papers are available with open access.

As time passes, there are likely to be other papers amongst the 2017 *Optical Engineering* issues that ultimately exhibit high reader demand or become more heavily cited due to the lasting significance of the work. These top-ten lists, however, provide an excellent set of papers from which to understand some of the emerging developments in the optical engineering field. If you have not had an opportunity to read these papers, I encourage you to add the papers below to your reading list.

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