Engaging Technical Activities in IES Industry Activities Programs

Industry activities are an important part of the IEEE Industrial Electronics Society (IES). In recent years, the IES has established some industry-focused activities, starting with the Industry Forum [1], a key element of many of our conferences and publications. The Industry Activities Committee's (IAC's) goal is to grow additional programs through which industry can participate in IES activities that assist both industry and IES's membership and programs. A part of this is working together with established successful programs within the IES. This article looks at how IES Technical Committees (TCs) can engage with and greatly benefit from the IES Industry Forum programs. This provides one critical opportunity for IES members and their colleagues in general to interact with and receive value from industry activities in the IES.

Industry Forum

The Industry Forum is central to most of the IES' organized conferences and selects suitable topics for the event, often aligning them to the special sessions. The Industry Forum Committee, along with the Conference Organization Committee, finds suitable speakers for the topics. They advise speakers to discuss where technology is heading in their industry as well as the associated current and future challenges. Given that the audience is primarily from technical research community, this opens up opportunities for researchers to apply their research, if suitable, or even explore new areas that are or will be needed by industry. Having a marketing prestation, for example, does not really benefit the IES community directly, and audience members would be less likely to focus on product purchasing.

To underscore the potential value of the industrial forum, an example from the 2013 Annual Conference of the IEEE IES (IECON 2013) is shared with the reader. Here, the session was on LED lighting. The industry speaker spoke on their LED lighting products applied in integrated traffic light application and management. A researcher in the room realized that they had worked on same LED lighting techniques that can be shared in traffic light management applications. This session connected the industry speaker with the researcher. As a result, the LED company worked to enhance their product design with the researcher's development applied in a real-life situation. Interestingly enough, the researcher was not from the same region of the world as the speaker or LED company. We wish to achieve this with every Industry Forum. To do so, it is important to ensure that the researchers are fully engaged in the Industry Forum programs.

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The committee recommendation regarding the Industry Forum is to have topics and speakers that are suitable for the event's focus. As noted previously, the committee discusses the speakers' best approach to presenting at the forum. To maximize the benefit to the speakers and the IES community, we recommend that the conference organize the forum as nonparallel sessions, like keynotes, enabling the IES researchers to understand the uses and challenges faced by industry in using IES technologies. This would invite opportunity for research and industry to work together. Many Industry Forums have been successful in involving industry with our researchers [2]. During the pandemic, we were even scheduled to have a successful industry program with Harbin University using virtual technology [3].

TCs

The IES' TCs are a critical backbone for many IES programs, providing opportunities for engagement and cooperation among IES members and focusing on the specific technical areas of interest. From my personal observation, many TCs across other IEEE Societies have good intentions but do not deliver as effectively for the Society as they do for the IES. At several of the past IES-managed events, such as the IEEE International Symposium on Industrial Electronics and IECON, nearly 50% of all the papers and sessions were populated by the activities and work of the TCs. This speaks very well to the quality of our technical activities' programs.

These committees are key focus points for the IES and are being established as new areas continue to grow. Healthcare 4.0, for instance, has found that many of the technologies in the IES are being used in medical and consumer health measurement and analysis systems. Such technologies include both sensors, informatics, artificial intelligence, networking, and robotics. These committees contribute to the conference with paper submissions and session organization and provide publications with papers and special issues for all the IES magazines, journals, and so forth. The time has come for the TCs to realize that they could support and greatly benefit by participating in the Industry Activities programs, starting with the Industry Forum.

Working Together

We have observed how researchers can gain by engaging in the Industry Forum and with its speakers. This advantage can be much greater if the TCs interact with the Industry Activities team to propose general topic areas and even suggest contacts for the IAC to reach out to for speakers. Having the TCs involved can help us with locating speakers in their area of interest to make the Industry

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Program even more interesting to their team. In addition, because the TCs organize special sessions, the IAC can then align the Industry Forum speakers to the sessions they are organizing. The speakers can be TC members; however, it is more likely that they can suggest industry contacts in the right technical areas for the IAC to pursue and find suitable speakers. The IAC will work with the speakers to assist them with aligning the appropriate presentation content to our research audience, as the IAC team has always done.

Drawing on speakers of interest to the TCs allows them to apply or focus committee open research opportunities applications on their research or on how they might wish to purse these challenges. Consequently, it would be good for TCs to interact with the IAC to suggest topics and speakers for conferences. For instance, a researcher may not know a suitable speaker but might have an industry contact that the IAC could pursue for an event. This concept is fully supported by our vice president of technical activities.

Summary

In this article, the IAC and its projects, mainly the Industry Forum, were overviewed. With the Industry Forum, opportunities are available for industry to present technical challenges to our research community, and our researchers will benefit by utilizing their current research or possibly pursuing new research to solve existing industry problems. Technical activities are a major area of focused research in the IES. By working together, we can expand our industry activities and make the programs more valuable to the whole IES. This is particularly the case as the IAC hopes to expand the relationship between industry and the IES community.

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References

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Prof. Okyay Kaynak Receives the Prestigious 2020 TÜBA Prize of the Turkish Academy of Sciences

It is our greatest pleasure to announce that one of our most prominent IEEE Industrial Electronics Society (IES) volunteers, Prof. Okyay Kaynak, was recently awarded the prestigious 2020 Türkiye Bilimler Akademisi (TüBA) Prize from the Turkish Academy of Sciences in the Basic and Engineering Sciences for his works and contributions to the sliding mode control method developed by using artificial intelligence and artificial neural network techniques in his applications and studies in the fields of industrial process control, aviation, vehicle control, robotics, and automation (see Figure 1).

FIGURE 1 – Prof. Okyay Kaynak (second from left) receiving his award from Turkish President Recep Tayyip Erdoğan (right) in Ankara, Turkey. (Source: Courtesy of the Republic of Turkey Directorate of Communications; used with permission.)

2020 TÜBA Academy Prizes were awarded to four scientists in three categories: Social Sciences and Humanities, Health and Life Sciences, and Basic and Engineering Sciences. These awards are given annually to encourage scientists with original, leading, and groundbreaking works in their fields. Each laureate receives an academy medal and US$30,000 in prize money.

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