Notes Toward Emerging Technology

Welcome to the Inaugural "Frontiers" Column!

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This new column is designed to provide information on the forward-thinking tech that is being reviewed and discussed in AGMA emerging technology committees. What should we be watching in the specific topic areas we cover? How will that impact the future of the gear industry? What are people discussing, specifically in the manufacturing space? I hope to be able to provide some of these answers in the coming issues.

The beginning of the year is always that unique time where you reflect on accomplishments from the past yet at the same time use those as a springboard for success in the future. Our emerging tech committees were very busy in 2023. We held more than 25 committee meetings. We hosted twelve webinars on topics that ran the gamut from blockchain to new techniques in additive forging, to major advances in technology on machine tools—all of these are available on-demand, for free, at *agma.org*. We hosted members at what is now our annual curated tour on the RAPID show floor. We tackled the topic of new standards at an EV Town Hall at the MPT Expo, and we worked hard on white papers that will be published in the coming months.

Using these great accomplishments as a starting point, we have much on the calendar already for 2024. Another busy monthly webinar series, including a special presentation on February 29th of the new updates to CMMC 2.0. If you do any government contracting, this is one not to miss.

Each of our committees will have a special focus in 2024. The IIoT committee will stay true to its cybersecurity roots (the December 2023 webinar on cybersecurity is another one to watch), but you can expect a lot of discussion on artificial intelligence (AI). AI may have gotten a lot of buzz in the last year, but we have been watching it for some time as it was utilized for digital twin technology and many more applications in manufacturing. We will bring you the latest as AI for manufacturing begins to be used for customer service and order-taking while keeping our eye on the power generation that is necessary for all this added computing.

Each committee will have at least four meetings this year; each meeting will have a topic of discussion and, in many cases, a special guest presentation. I welcome anyone with interest in these topics to join our committees. These are not committees for experts, they are committees for the curious. Joining is easy, please just send an email to: *doran@agma.org*.

The robotics committee is watching the projections of the industry moving from 590,000 units delivered in 2023 to estimates in the tens of millions by the 2030s. How will we get there? What technologies will be utilized for new robotic applications? And how will this directly impact the gear industry? We hope to tackle these tough questions this year.

The 3D printing committee understands that the place to watch in this space is materials development. We are always watching for more printed gears, but we are seeing movement in the development of materials for the cutting tool space that we would like to follow. Look for some updates here this year.

And finally, the electric vehicle committee will finalize its white paper at the beginning of 2024. All of us watched a transformation in the auto market in the last three years as major players announced the turn to electric vehicles, and new players emerged from some places we did not expect. We will be watching and discussing the trend lines in the EV committee this year. And we are putting a special focus on the supply chain with some discussions about steel and other natural resources much needed in this sector.

I am psyched for 2024 emerging tech work at AGMA! I hope to keep you updated, and maybe introduce something brand new to you through this column in coming issues.