

# Crossroads of Creativity and Manufacturing

Mary Ellen Doran, AGMA Director, Emerging Technology

I fly out west to Los Angeles later this month. It will mark the fourth time AGMA will provide a curated tour on the RAPID+TCT show floor. Each year brings more clarity on developed technologies, I am always looking for one or two tweaks that move the needle on the next possibility for additive manufacturing to impact traditional manufacturing processes. Are we looking for mass-produced 3D metal gears? The short answer is: no. But we are always watching indicators that may change that answer.

Additive manufacturing affords options outside the capabilities of traditional subtractive manufacturing. We are constantly monitoring this space. If the right material with the right science to rival gear is created, that would be important to note. If two materials can be printed together where they could not be traditionally machined together to create better gears, this would be an important step. (Especially, if it could be made cheaply.) And if that material could be printed in a nontraditional form that elevates what a gear can do now, then we will see disruption in the gear industry.

On this trip, we plan to show attendees useful information in three specific

areas for gear manufacturers today: materials, cutting tools, and tooling. The tour will take our group to 15–17 exhibitors for a short presentation and then the opportunity for direct interaction, where we can ask our burning questions. Do you print hobs? How can we utilize 3D printing for tooling? And what is the latest in materials development? And then a little bit of time is saved to see the new and visionary.

Past AGMA RAPID tours have afforded our members audiences with leaders in the field, like Jonah Myberg, CTO for Desktop Metal. Last year, we had a great discussion with Mark Norfolk, President & CEO of Fabrisonic, learning about low-temperature ultrasonic additive manufacturing, his company's novel technique, which is definitely "cool." These discussions have led to deeper dives for the wider AGMA audience; in Desktop's case, a presentation at an AGMA SNL event, and in several other cases, we have brought RAPID exhibitors into the AGMA Emerging Tech webinar series.

2023 AGMA webinars from 3DEO, Fortify, Lumafield, and Mantle3D are still available on-demand, for free, on the AGMA website. We stay in touch

with all these companies so if you have any questions after you watch the webinars, just let me know and I will put you in direct contact. I hope to find new players, a technique, or a technology to bring to the 2025 webinar series.

This year seems to have an extra layer of anticipation for me. I think it is for two reasons. First, is that the show is in California. Recent RAPID shows were held in more traditional manufacturing cities like Detroit or Chicago. Having the show on the West Coast will bring additional 3D printing companies based there as seen by the more than 400 exhibitors. It will give AGMA West Coast members an easier trip to attend an AGMA event. And there could be a slightly larger aerospace presence. And second, specifically having the show in Los Angeles allows for a bigger presence of the film industry and its unique use of this technology.

The influence of the more creative industry with different objectives and end uses side by side with manufacturing applications always provides new insights. I was just at the Boston Robotics Summit where the buzz of "the possible" was almost palpable. There was something great about the juxtaposition of keynotes by Amazon Robotics leadership and a live demo of the new *Star Wars* robots by Disney creators. While the two have very different objectives we can all learn from the widely varied applications of science. How does Amazon use AI to create new robotic projects compared to Disney? What are the lessons we can learn by looking at two distinctly different applications? I think the influence of Hollywood applications in the 3D space will provide that same experience at RAPID. I look forward to the show.

Join us in Los Angeles!



AGMA RAPID tour of Fabrisonic booth in 2023.