

Advanced Digital Manufacturing

In line with the Great Expectations in Technology track, leading-edge Advanced Digital Manufacturing™ processes such as additive manufacturing (AM) / 3D printing are becoming more widely accepted as production-ready technologies. These processes have already illustrated advantages in medical, aerospace and industrial sectors that will be discussed.

A major challenge is educating experienced engineering professionals and future professionals. Most universities or colleges are not yet teaching additive manufacturing design or manufacturing methods, yet global OEMs like GE, Airbus, Michelin and Striker, are spending \$100s of Millions on AM technologies and factories.

The way we design for manufacturing and think about problem solving is key to obtain more freedom to engineer increasingly sophisticated, more functional and ultimately better systems. Our Professional Development is key to keep us up to speed and comfortable with these relatively new technologies.

Lastly, in order to compete on a global scale with other countries in AM, it will be critical for developing advanced manufacturing expertise and leadership roles in Canada.

Questions to be discussed include:

- Where should engineering professionals start with AM?
- How and when to use these new tools? How do they integrate with existing manufacturing techniques?
- What kind of software do I need to be aware of to help me design?
- How to get students in our university system familiar with these technologies?
- What standards exist for AM?

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Jared Kozub is a Professional Engineer at Precision ADM in Winnipeg. With over a decade of design and manufacturing engineering experience in the medical device and manufacturing industries, Jared channels his passion for additive manufacturing / 3D printing to develop optimal engineering solutions for clients.