



CUSTOMER SPOTLIGHT

CENTRE OF ADVANCED MATERIALS JOINING AT UNIVERSITY OF WATERLOO INVESTS IN METAL X

CAMJ BEGINS TESTING WITH THE MARKFORGED METAL X

The Centre for Advanced Materials Joining (CAMJ) at the University of Waterloo has invested in the Metal X 3D print system from Markforged – Metal X 3D printer, Sinter-1, and Wash-1. CAD MicroSolutions completed the full installation in November 2019, marking the first metal additive manufacturing system in CAMJ's lab.

CAMJ carries out fundamental research related to welding, joining and industrially-supported applications to develop new and innovative technologies for materials joining. Their cutting-edge laboratories and research areas facilitate collaboration and coordination in joining research performed by students, graduates, researchers and external collaborators. With projects in microwelding, microjoining, and nanojoining as well as other welding techniques, CAMJ intends to leverage the Metal X print system to test joining methods on metal materials.

BUSINESS OUTCOMES

Markforged's metal 3D printing solution provides students hands-on learning with the tools that professional engineers use every day, and opens the door to new discoveries for researchers like those at CAMJ.

- Ability to print in 17-4 PH & 316L stainless steel, A2 & D2 tool steel, Inconel 625 and Titanium 6-4
- Ability to print in various metal materials at will to test joining methods and techniques



CAMJ's goal is to **DEVELOP TOMORROW'S LEADERS** in the welding and joining industry by performing research at the forefront of the industry. Joining materials and structures made by additive manufacturing is one of many paths we are exploring to achieve this.

- Daniel Westerbaan, CAMJ Lab Manager



CAD MICRO FOSTERS INDUSTRY - ACADEMIA ALLIANCE

CAD MicroSolutions is uniquely positioned to deliver affordable and customizable solutions to Academia across Canada that enable student-centered, collaborative learning and prepare the next generation workforce for success. Our services include access to online learning resources, training material and professional development for students and instructors alike.

In an effort to strengthen Industry-Academia alliances and accelerate the adoption of Industry 4.0 in Canada, CAD MicroSolutions offers educational solutions that enable experiential learning in the classroom or lab. Access to innovative technologies and forward-looking curriculum inspires meaningful outcomes in education, helping to ensure that Canadian educational institutes are delivering the skilled and qualified workforce to meet the needs of Industry.

SETTING UP YOUR OWN ADDITIVE MANUFACTURING CENTRE

Higher education provides a place for students to learn and practice real job skills before joining the workforce, often taught via project-centred curriculum where students learn through experience rather than lecture alone. However, many Universities and Colleges don't yet have the equipment to support this experiential learning method.

Check out Markforged's guide on How to Build an Additive Manufacturing Centre at Your University for more information.

Please click this link to access the guide.



Our desire is to enable Academia to reinvent learning through the use of innovative technology to help **BRIDGE THE KNOWLEDGE AND SKILLS GAP** that Industry is currently facing.

- Deep Singh, Director of Additive Manufacturing, CAD MicroSolutions

To learn more about CAMJ, Markforged's metal 3D printing solutions, or CAD Micro's Educational solutions, please visit the links below:

- [Markforged Metal X Case Studies](#)
- [CAD Micro Educational Solutions](#)
- [Centre of Advanced Material Joining](#)



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