

Tooling

The McMaster Manufacturing Research Institute combines their experience with state-of-the-art equipment to meet the sophisticated research and development needs of leading manufacturers.

The focus of this research group has been to develop intelligent solutions to issues faced by Canada's manufacturers in all steps of machining processes.



Technology Transfer

The MMRI has extensive experience in machining process improvement and optimization to improve part quality and productivity while lowering cost.

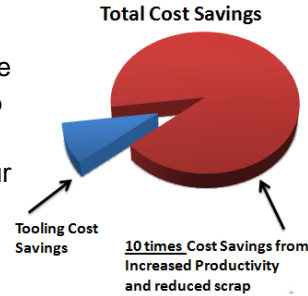
Through partnership with the Manufacturing Automation Laboratories (MAL) at the University of British Columbia, we are able to offer expertise and solutions to a wide range of machining challenges.



Tooling Selection

Let the MMRI help you pick the right tool for your process. Taking material, process and tooling information from your production, the MMRI can identify tool geometries, edge prep and advanced tool coatings which will significantly extend tool life and performance.

This not only saves on tooling costs, it also has a huge positive impact on productivity and part quality. These tools will reduce scrap rates and allow you to stop "baby-sitting" your processes.



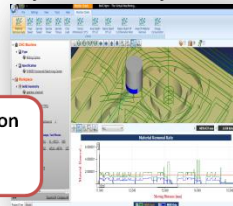
Proven Success:
Up to 500% improvement in tool life

Tool Path Development

Improve cycle times and push your machines to their full capability by optimizing your tool paths using the world's most advanced process simulation and NC program optimization software: MACHpro.

MACHpro was developed by MAL at UBC, and incorporates over 20 years of machining research. MACHpro simulates your process in up to 5-axis, and automatically modifies your NC program to fully utilize your machine and tooling.

Most Advanced Process Simulation and NC Program Optimization Software in the Market

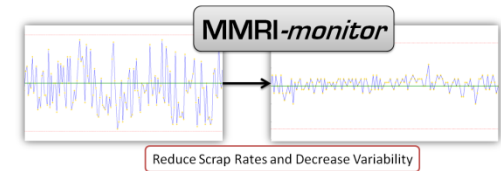


Proven Results:
Average of 25% reduction in cycle time and over 50% improved cost savings

Process Monitoring

Enhance decision making by backing them up with detailed process data; identify production issues in real time; reduce variance and hold tighter tolerances on key dimensions; all with the MMRI's process monitoring software: MMRI-monitor.

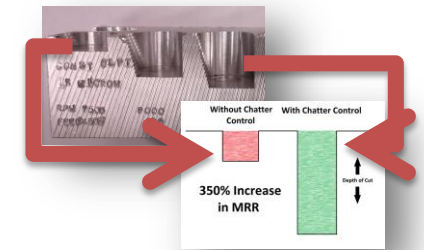
MMRI-monitor is a highly customizable software which interfaces with any data source in a production cell to track process performance and assist process engineers in improving and tracking production issues.



Proven Results: Improved C_{PK} value by over 100% in a mid-volume automotive application

Process Parameters

Tune process parameters such as feeds and speeds to optimize your production. Improve tool life, productivity and surface finish by intelligently identifying optimal feeds and speeds using CUTPRO software developed by MAL at UBC.



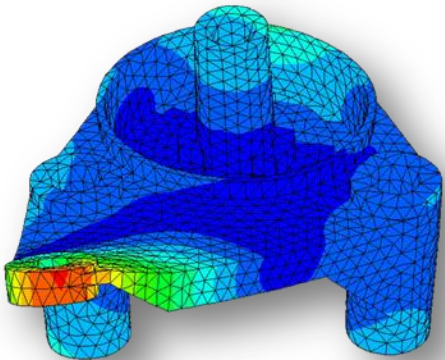
Proven Results: Over 300% increase in MRR
Increased tool life and improved surface finish

Collaboration

Industry collaboration is at the core of the MMRI research efforts. We engage in both short-term technology transfer projects as well as in-depth, multi-year basic research programs with industrial partners.

Government sponsored programs are available to facilitate University-Industry interactions through Ontario Centres for Excellence (OCE), National Sciences and Engineering Research Council (NSERC), and other organizations. These programs offer cash incentives to offset the costs of collaborative projects.

For more information on these programs, contact the MMRI.



Contact Us

If you are interested in working with the MMRI to improve quality, productivity and cost in your processes, or to get more information, contact the MMRI at:

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Technology
Capabilities

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