



nc Walker
Advanced
Manufacturing
Innovation Centre



SERVICES OFFERED IN:
English



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100 Niagara College Boulevard
Welland, ON L3C 7L3



WEBSITE:
ncinnovation.ca/specializations/walker-advanced-manufacturing-innovation-centre



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Niagara College's Walker Advanced Manufacturing Innovation Centre team specializes in engineering design, 3D laser scanning technologies, lean manufacturing processes and additive manufacturing. We work with Southern Ontario businesses to bring ideas to life, from concept through to developing working prototypes, utilizing leading-edge technology, including equipment and software.

AREAS OF INNOVATION EXPERTISE

- Additive Manufacturing
- Product design and development
- Process Improvement and Automation
- Reverse Engineering
- Product re-design and improvement
- Canada's only material beta testing facility for Stratasys

Affiliated with Niagara College Canada



TECHNICAL AND BUSINESS SERVICES

- Business development & market research services
- Commercialization referrals
- Competitive market analysis
- Components/parts fabrication
- Concept ideation & design review
- Design Services
- Fabrication, Prototyping and Installation Services
- FDM Materials testing
- Field trials/Simulation
- Ingredient selection and recommendations
- Non-destructive inspection (NDI)
- Performance Monitoring and Management
- Printability testing and analysis
- Problem solving
- Product testing
- Project management
- Proof of concept
- Rapid Prototyping / 3D Printing & Laser Scanning
- Technology & workflow consultation
- Technology development / evaluation / validation



APPLIED RESEARCH AND DEVELOPMENT

- Automation
- Coaching
- Composite part manufacturing
- Composite tooling design and manufacturing
- Concept validation
- Cost avoidance
- Design of Experiment
- Human Factors Studies
- Industrial scale prototyping
- Laboratory/pilot scale prototyping
- Manufacturing process design and development
- Measurement inspection and alignment
- Non-destructive inspection
- Process optimization
- Product Design & Development
- Product Re-design & Improvement
- Provincial and federal grant proposal development
- Reverse Engineering
- Technology validation and transfer



TRAINING

- Connections to co-op placement opportunities
- Corporate on-site & in-house training
- Curriculum development
- Design, development, and delivery of customized
- Interactive Workshop Sessions

- Needs assessment and gap analysis
- Qualitative & quantitative research
- Skills assessment/Competency evaluation
- Training planning



TECHNOLOGY DIFFUSION

- Customized technology demonstrations
- Evening speaker series
- Field site product demonstration
- Industry-specific events & symposia
- Networking events
- Open houses - Testing facility & personnel
- Participation at trade shows & other venues with or on behalf of partners
- Presentation of results at conferences
- Publishing in Peer Reviewed Literature
- Rental of space & equipment
- Seminars and Workshops
- Technical Service Bulletins



INVENTORY OF SPECIALIZED EQUIPMENT

- 3D Systems Geomagic Control X: 3D GD&T inspection software used to compare as-is to nominal
- 3D Systems Geomagic Design X: Conversion of scan data to intelligent CAD models
- Autodesk Inventor Fusion, Factory Design Suite, AutoCAD, Revit, CFD
- Autodesk ReCap 360: Conversion of photographs to point-clouds (photogrammetry), basic stitching of point cloud data
- Very versatile 3D GD&T inspection tool
- Connex 1 Objet 260
- DJI Inspire 1 Unmanned Aerial Vehicle (UAV)
- EdgeWise: Advanced feature recognition from pointcloud data for BIM applications
- Faro CAM2 Measure 10
- Faro Edge (probe), Faro Scene, Faro Laser Line Probe (Blue LLP), Faro Tracker Vantage, Faro Focus 3DS 120
- Fortus 400mc & Fortus 900mc
- InnovMetric Polyworks: Very versatile 3D GD&T inspection tool
- Insight/Control Centre: tool path creation/ optimization, and printer management for Fortus machines
- Objet Studio (3D print optimization / management for Connex machines
- PTC Mathcad
- SimCAD Pro
- Timer Pro