

Advanced Glazing System Laboratory (AGSL)

http://www.solarme.uwaterloo.ca/about_agsl.html

Location

ERC 3009

Management

Director:

- John Wright (jlwright@mecheng1.uwaterloo.ca; x36849)

Tour operator:

- John Wright (jlwright@mecheng1.uwaterloo.ca; x36849)
- Michael Collins (mcollins@mecheng1.uwaterloo.ca; x33655)

Users

- Graduate Students (mechanical engineering)
- Undergraduate Students (nanotechnology)
- Industrial Contracts:
 - Guardian Windows
 - Edge Technology
 - PPG in Pittsburgh
 - Canadian Standard of Energy
 - National Resource – Canada
 - USA department of Energy/Commerce
 - Pilkington

Research

- Thermal Properties of Windows
- Experimental, Numerical, Theoretical & Simple Model of Windows & Shading Devices
- Energy Simulation Software

Selected Projects

- Producing window modeling software (California Energy Commission)
- Window modeling for ESPr (building simulation software)

Equipment

- Optical Testing:
 - UV/VIS/NIR Spectrophotometer
 - Fourier Transform Infrared Reflectometer (FTIR)
 - Gier Dunkle DB-100 Infrared Reflectometer
 - Gier Dunkle MS-251 Solar Reflectometer
 - Broad Area Illumination - Integrating Sphere
- Main Lab:
 - Heat Pump Test Rig
 - Greywater Test Rig
 - Guarded Heater Plate Apparatus

Supporting Partners

- NSERC (Discovery, Strategic, RTI, Network)
- CFI
- ORF
- ERA
- NRCAN (CANMET)
- others

Access Rights

- Open to university faculty/student
 - Fees depends on usage
 - (\$50/test for optic testing)
- Open to public/industry for a fee
 - \$150/test for optic testing
 - May add hourly rate for technicians
- Process:
 - Email/call Prof. John Wright about projects details (reply time depends on project & availability)
- Training:
 - Industry - no training needed (technicians)
 - students - 1.5 hr to train