

# CURRICULUM VITAE

**N. Reed Parsons**

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## EDUCATIONAL BACKGROUND

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**2011 - Present**

**University of Lethbridge;** Lethbridge, Alberta

**Bachelor of Science *Co-op Designation***

Major: *Remote Sensing*; Minor: *Computer Science*

## NSERC-AMETHYST CO-OP

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**Summer 2013**

**University of Lethbridge;** Lethbridge, Alberta

**Dr. Christopher Hopkinson, University of Lethbridge**

- Design and implement meteorological monitoring stations using Campbell Scientific
- Design and implement software to communicate with camera, sensors and GPS

**Summer 2013**

**University of Lethbridge;** Lethbridge, Alberta

**Dr. Christopher Hopkinson, University of Lethbridge**

- Design and implement component level GPS and environmental sensors to be integrated with a FLIR A615 Thermal Infrared Camera
- Design and implement software to communicate with camera, sensors and GPS

**Summer 2012**

**University of Lethbridge;** Lethbridge, Alberta

**Canadian Center for Behavioural Neuroscience (CCBN)**

- MRI rodent body coil build and tune
- Code (IDL) parallel imaging program for multi-channel human head coil
- Imaging simulations - MATLAB and JEMRIS

## RESEARCH

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**September 2013-Present**

**University of Lethbridge;** Lethbridge, Alberta

**Mobile Remote Sensing Unit**

- Design and build a RGB, thermal, Ground Penetrating Radar (GPR), and Light Detection and Ranging (LiDAR) system with multiple environmental sensor and Position Orientation System (POS) integration for snowmobile and all-terrain vehicle use.

**Summer 2013**

**University of Lethbridge;** Lethbridge, Alberta

**Independent Study-Testing of Digital Systems**

- Design and implement mobile component level GPS system
- Design and implement GPS simulation and testing software

**Summer 2011**

**University of Lethbridge;** Lethbridge, Alberta

**Applied Study-Audio Transmission in the Radio Broadcast Industry**

- Broadcast of analogue and digital information
- Electricity and magnetism
- FM/AM theory and application

## RELEVANT WORK EXPERIENCE

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**September 2013-Present**      **Artemis LiDAR Lab**      Lethbridge, Alberta  
**Research Assistant, Lab Manager, IT**

- Maintenance of lab computers and equipment
- Development, implementation and maintenance of lab inventory database (in progress)

**2011-Present**      **Roger's Media Inc.**      Lethbridge/Calgary, Alberta  
**Broadcast Engineering Technician**

- Design, solder, and implementation of new and existing circuitry
- Troubleshooting and general maintenance of RF/FM transmitter
- Design, install, configure, and general maintenance of broadcast/capture studio wiring and equipment
- Design, install, configure/code, and general maintenance of automation hardware/software
- Computer software/hardware installation/configuration

## TRANSFERABLE PROFESSIONAL SKILLS

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- Basic knowledge of survey procedures and equipment
- Proficient in ArcGIS
- Proficient in the use of AutoCAD
- Computer Hardware/software installation, debug/troubleshoot
- Experience in controller and data path, design, analysis, and implementation
- Experience with analogue/digital circuit design, analysis, and implementation
- Experience using RF test and tuning equipment
- Proficient with interpreting and drawing circuit schematics, and blueprints

### Architecture:

- |            |               |        |
|------------|---------------|--------|
| • AVR      | • Xilinx FPGA | • ARM  |
| • Epiphany | • MIPS        | • X_86 |

### Language/platform:

- |         |  |               |
|---------|--|---------------|
| • C/C++ | • Unix/Linux, Windows,<br>Dos, Macintosh | • MATLAB      |
| • IDL   | • Assembly                               | • Verilog HDL |

## ADDITIONAL WORK EXPERIENCE

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**2002-2011**      **Sub-contractor**      Victoria, BC; Calgary, Alberta  
**Residential/Commercial Construction**

**2002-2007**      **Unique Solutions**      Victoria, British Columbia  
**Audio Technician**

- Audio/visual set up maintenance and troubleshooting

## **PUBLICATIONS**

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Hopkinson, C, Ballard N, Chasmer C, Parson R. 2013. Alberta Airborne LiDAR stakeholder Forum & Questionnaire Report, 10/01. :55., Lethbridge: University of Lethbridge  
<http://scholar.ulethbridge.ca/hopkinson/publications>

## **PROFESSIONAL MEMBERSHIPS**

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**April 2013-Present**                      **Lethbridge Area Search and Rescue Alberta**

**2012-Present**                              **IEEE Member**

- IEEE Geoscience and Remote Sensing Society
- IEEE Computer Society
- IEEE Communications Society
- IEEE Broadcast Technology Society

**2012-Present**                              **Canadian Association of Physics**

**2012-Present**                              **American Physical Society**

## **CERTIFICATIONS**

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**2013**    **Safety Buzz**    Medicine Hat, Alberta  
Fall Protection

**2013**    **St. Johns Ambulance**    Lethbridge, Alberta  
Standard First Aid  
Level C CPR  
AED (2011 Protocol)

**2013**    **Rocky Mountain Education**    Lethbridge, Alberta  
Wilderness First Aid

**2009**    **S.A.I.T**    Calgary, Alberta  
Safety and Environment  
OH&S  
AutoCAD

## **HOBBIES/INTERESTS**

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- Microcontroller programming and implementation
- Sport climbing
- Mountain biking
- Snowboarding
- Music and sound – composition/production/recording/analysis
- Circuit design and build
- Mountain/alpine hiking and climbing