

Debbie Ha

1

Email: debbie@debbieha.net

PROFESSIONAL ATTRIBUTES

Excellent communication and collaboration skills acquired as a self-taught graphic designer, and demonstrated in various roles in council and other groups requiring strong teamwork and leadership.

Self-motivated and able to work under high level of stress as demonstrated by maintaining a high GPA even with an increased workload and additional duties.

Innovation and creativity exhibited at as an employee of a small business with limited resources and a small budget.

Flexible with a wide range of skillsets in many different aspects of engineering that is beneficial for cross-disciplinary projects as shown in my thesis work which incorporates optical scattering with a microfluidics flow system, via the nanofabrication of a polymer chip (fabricated in-house), interfaced with LabVIEW, to create a label-free cytometer for the detection and sorting of rare biological cells. On my own time, I scavenge electronic parts and build trinkets and robots.

EDUCATION

- Sep 2010 – June 2013 **Masters of Science (MSc)**
Electrical Engineering, Microsystems and Nanodevices
University of Alberta – Edmonton AB, Canada
- Sep 2005 – May 2010 **Bachelor of Engineering (BEng)**
Co-operative Education in Electrical Engineering
Dalhousie University – Halifax NS, Canada
Received degree with Sexton Distinction
- Sep 2001 – May 2005 **International Baccalaureate (IB) Diploma**
Halifax Grammar School – Halifax NS, Canada
Received diploma with High Distinctions

TECHNICAL SKILLS

- Programming **C, C++, VHDL**
- Engineering **LabVIEW, OrCAD, Zemax (optical ray tracing), Matlab**
- Modelling **AutoCAD, SolidWorks, Sketchup**
- Other **Cleanroom experience (2.5 yrs.) at the University of Alberta, Nanofabrication Facility** Trained on processes such as: Lithography, Polymer Processing (PDMS, PMMA), Piranha Cleaning, Reactive Ion Etching, and more.

PROFESSIONAL MEMBERSHIPS

- 2010 - 2011 **Engineer-In-Training EIT#27202**
Engineers NS, Canada
- 2008 – 2010 **IEEE Student Member**
IEEE Atlantic Section, Dalhousie University, Halifax NS, Canada
- 2005 – 2010 **Engineers Nova Scotia Student Member**
The Association of Professional Engineers of Nova Scotia (APENS), Canada

SCHOLARSHIPS & AWARDS

Debbie Ha

2

Email: debbie@debbieha.net

- 2011 – 2012 **NSERC Alexander Graham Bell Canada Graduate Scholarship (CGS)**
National Sciences and Engineering Research Council – ON, Canada
- 2011 – 2012 **Alberta Innovates Scholarship**
Alberta Innovates – AB, Canada
- 2011 – 2012 **Walter H Johns Graduate Fellowship**
University of Alberta – Edmonton AB, Canada
- 2010 – 2011 **Queen Elizabeth II Graduate Scholarship**
University of Alberta – Edmonton AB, Canada
- 2010 **Electrical Engineering Award** for academics, and service to the department
Dalhousie University – Halifax NS, Canada
- 2005 – 2010 **Sexton Scholar Award (with Distinction)** for achieving a GPA >3.85
Dalhousie University – Halifax NS, Canada
- 2005 – 2010 **Percy Bertram Jollota Renewable Scholarship**
Dalhousie University – Halifax NS, Canada
- 2009 **75th Anniversary Alumni Family Scholarship**
Engineering Alumni Association, Dalhousie University – Halifax NS, Canada
- 2009 **Dr Alan E Cameron Award** for academics, personality, and leadership
Dalhousie University – Halifax NS, Canada
- 2007 **Everette Patterson Memorial Award** for academics, and leadership
Ocean Contractors Ltd – Halifax NS, Canada
- 2007 **Bruce & Dorothy Rosetti Engineering Entrance Scholarship**
Dalhousie University – Halifax NS, Canada
- 2005 **Dalhousie Alumni Association Scholarship** for leadership, community service
Dalhousie University – Halifax NS, Canada
- 2005 **Governor General's Bronze Medal & Queen Elizabeth II Medal**
Halifax Grammar School – Halifax NS, Canada

PUBLICATIONS & CONFERENCE PRESENTATIONS

[Poster, awarded best conference poster] D. Ha, M. Gupta, M.Z. Islam, Y.Y. Tsui, X.T. Su, L. Marquez-Curtis, A. Janowska-Wieczorek, W. Rozmus. **Wide-angle label free cytometry for the identification and sorting of biological cells.** University of Alberta Graduate Residence Symposium. May 07, 2012. Edmonton, AB.

[Poster] D. Ha, M. Gupta, K. Singh, X. Su, M.Z. Islam, W. Rozmus, Y.Y. Tsui. **Wide-angle label-free cytometry using light scattering.** CYTO, XXVI Congress of the international society for advancement of cytometry. May 21-25, 2011. Baltimore, MD, USA.

[Poster & Oral Presentation, awarded best oral presentation] D. Ha, M. Gupta, M.Z. Islam, K. Singh, J.N. McMullin, Y.Y. Tsui, X.T. Su, L. Marquez-Curtis, A. Janowska-Wieczorek, W. Rozmus. **Label-free microfluidic cytometry for the characterization of single biological cells.** CIPI, Canadian institute for photonic innovations. May 18 -20, 2011. Ottawa, ON.

[Technical Digest] M.T. Taschuk, M. Gupta, Y. Zhou, D. Ha, A. Ewanchuk, M. Alostaz, A. Ulrich, D. Sego, Y.Y. Tsui, 2011. **Portable hydrocarbon sensor for environmental applications**, Photons 9(1), pp. 56 – 58.

[Whitepaper] J. Josefowicz, & D. Ha. 2008. **Vision & exterior lighting: Shining some light on scotopic & photopic lumens in roadway conditions.** LED Roadway Lighting Ltd. Reviewed and approved by Dr Samuel M. Berman. <http://www.ledroadwaylighting.com/white-papers.html>

WORK EXPERIENCE

Debbie Ha

Email: debbie@debbieha.net

- Oct 2011 **Nanofabrication Facility, University of Alberta** – Edmonton, AB, Canada
Contract work
- Built a LabVIEW system for the XeF2 Etching System with a user-friendly interface, that allowed users to customise etching times and gas flow rates while logging errors.
- May 2009 - **J.J. MacKay Canada Ltd.** – Halifax NS, Canada
Aug 2009: R & D Department, Co-op Testing Analyst
- Tested range and factors affecting the range of different designs of wireless antennas for use in parking meters. Designed test procedure, built test jig, performed tests, and analysed data for design prototypes. Findings were documented in detailed reports.
- Sep 2008 - **LED Roadway Lighting Ltd.** – Halifax NS, Canada
Dec 2008: Design Team, Co-op Researcher & Developer
- Co-authored a white paper on the effects of photopic & scotopic light under roadway conditions with Dr Jack Josefowicz, the company's Chief Technology Officer. Worked effectively with lighting consultant, Dr Samuel Berman, a renowned expert in the field of lighting science, carried out research, and performed laboratory tests and analysis to support the whitepaper.
 - Designed and conducted tests with an integrating sphere and temperature chamber.
 - Used graphic design skills to create illustrations to convey technical concepts for whitepaper and technical marketing presentations.
- Jan 2008 - **Nova Scotia Power Inc.** – Halifax NS, Canada
Apr 2008: Conservation & Energy Department, Co-op Student
- Directly involved in planning the 'Small Business Lighting Solutions' (SBLs) program. Worked effectively with the SBLs team, interacted with labour and material vendors, created proposals and presentations, & oversaw marketing materials.
 - Used graphic design and 3D CAD skills to design new installations for the Annapolis Tidal Power Plant Museum, in Annapolis Royal, Nova Scotia.
 - Worked with Public Affairs department to design NSPI's 'Cleaner Greener Home show booth'. Participated in conceptual meetings with booth designers, created written material for displays and 3D conceptual renderings of booth layout.
 - Trained employees on the difference between EnergyStar® & EnerGuide Labels prior to the Nova Scotia Home Builders Home show.
- Jun 2004 - **West Art Furnishings** – Halifax NS, Canada
Sep 2008:
- Setup & maintain the store's Point-of-Sale (POS) system. Trained sales personnel in the operation of the POS to ensure a smooth transition from manual invoicing to the POS system.
 - Perform secretarial and bookkeeping duties as necessary.
 - Exhibited ingenuity by utilising the knowledge of CAD programmes to assist in the 3D rendering of new furniture products; facilitating communications between factory and designer.
 - Demonstrated creativity when designing advertisements for print, striving for eye-catching designs that reflect the store's product, attract customers, and boost sales.

EXTRA-CURRICULAR ACTIVITIES

- May 2013 **Optics Presenter for Young Scientist Conference**
University of Alberta – Edmonton AB, Canada
- Jul 2012 **Direct Supervisor of a high-school student for WISEST (Women in schlr**
Jul 2011 **engi sci & tech) Summer Research Program**
University of Alberta – Edmonton AB, Canada
- May 2011 **Science Outreach at Grandview Heights High School**
FGSR Outreach program, University of Alberta – Edmonton AB, Canada
- 2010 **ECE Student Representative**
Engineering Faculty Council, University of Alberta – Edmonton AB, Canada
- 2009 **Vice President of Finance**
IEEE Student Branch, Atlantic Section, Dalhousie University – Halifax NS, Canada
- 2009 **Treasurer**
Electrical Engineering Society, Dalhousie University – Halifax NS, Canada
- 2009 **Guitar/Voice Accompaniment**
Metro Wesleyan Church – Halifax, NS
- 2008 **Graphic Designer**
Engineering Student Events, Dalhousie University – Halifax NS, Canada
- 2007 – 2009 **Co-op Class Representative**
Dalhousie University – Halifax NS, Canada
- 2007 **Lead Organiser**
Atlantic Engineering Competition, Dalhousie University – Halifax NS, Canada
- 2006 – 2007 **Vice President of Communications**
Undergraduate Engineering Society, Dalhousie University – Halifax NS, Canada
- 2006 **Pulling for the Kids Fundraiser Volunteer**
Christmas Daddies – Halifax NS, Canada
- 2005 – 2006 **Trick or Eat Volunteer**
Dalhousie Meal Exchange – Halifax NS, Canada
- 2004 – 2006 **Graphic Designer**
Wadeng Wings of Hope Charitable Organisation – Halifax NS, Canada

RELAVENT COURSEWORK

Micro-fabrication & Nano-fabrication I & II	IC Design & Fabrication	Digital Circuits
Microfluidics & Micro-scale Transport	Microprocessors	Electro-mechanics
Optics & Lasers	RF Communications Electronics	Digital Control Systems
Optical & Quantum Electronics	Analog & Digital Communications	Data Structures & Numerical Methods (C++)
Intro to Plasma Engineering	Digital Signal Processing	Engineering Economics
Computational Electromagnetics	Power Systems I	Technical Communication
	Analog Electronics I & II	Engineering Safety, Ethics, and Professional Practice