Helen Cho

2B MECHATRONICS ENGINEERING
1060 Mesa Cres, Mississauga L5H4C1 / (226) 600 1026 / hh2cho@uwaterloo.ca / helencho.co

Summary: Goal driven mechatronics major having a broad experience in programming, automation and research with a passion for technology

KEY SKILLS

Windows/Mac OS
MS Office
PCBs and Soldering
AutoCAD/SolidWorks
Metal/Wood Shop
Alpha 5 Database

PROGRAMMING

C++, C and C#
HTML/CSS
MATLAB
XBasic

KEY STRENGTHS

Innovative Thinking
Self-motivation
Quick Learner
Organization
Diligence

AWARDS

Dean's Honours List
President Research Award
Scholarship of Distinction

RESEARCH CONTRIBUTIONS

Abstract at International Tribology Conference Tokyo, 2015

- Estimating Fluid Film Thickness in a Hydromechanical Stimulator for Chondrocytes in Agarose

Poster at International Conference of Biotribology Toronto, 2014

- Static Friction Forces for PSCA Against Simulated and Bovine Trabecular Bone

CAREER HIGHLIGHTS

DESIGN ENGINEERING STUDENT — May – Aug 2015

Automation Engineering Associates Ltd ▪ Toronto, ON

+ Established relational database for storing HVAC system data using Alpha 5
+ Designed and developed a desktop application that allowed methodical entry of data into the database and that automatically generated required approval documents for different job sites
+ Gained significant knowledge in HVAC automation by having hands on experience with HVAC equipment and controllers
+ Improved ability to make decisions and solve problems by planning and executing the database project independently

SOFTWARE QUALITY ANALYST — Sept – Dec 2014

Infrastructures for Information i4i ▪ Toronto, ON

+ Tested i4i's custom products in a detail-oriented manner while actively interacting with developers to maintain high level of quality assurance
+ Developed an application in C# that converts Excel files into XML to automate annual reporting of client information

BIOMECHANICS RESEARCH ASSISTANT — Jan – May 2014

University of Waterloo ▪ Waterloo, ON

+ Implemented experimental procedures for bio-tribological analysis of porous surfaced cobalt alloys knee implants and trabecular bones
+ Performed data analysis using MS Excel and produced 3D models of the test apparatus using SolidWorks

PROJECTS

SILENT SCHEDULE — Sept – Present 2015

+ Initiated the development of an Android application that automatically silences user's phone according to calendar schedule and/or location

ARDUINO CALIPER — April 2015

+ Designed and built a measurement device controlled by Arduino that uses a stepper motor and rack & pinion gears to measure dimensions of objects

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ACTIVITIES

EXECUTIVE
Aug – Present 2015

The Association of Korean-Canadian Scientists and Engineers ▪ Waterloo, ON

+ Founded the Waterloo division of the nation-wide association, AKCSE, to provide networking opportunities for the University of Waterloo science and engineering students
+ Organized events and prepared presentations for first year science and engineering students

BIOTRIBOLOGY RESEARCH ASSISTANT
Jan – Present 2015

University of Waterloo ▪ Waterloo, ON

+ Investigated lubrication mechanics of hydrostatic bearing indenters used in an elaborate hydromechanical stimulation of chondrocytes in agarose construct
+ Demonstrated high level of initiative by constantly seeking for additional tasks and alternative analytical approaches

CONTESTANT
Aug 2015

Hack the North ▪ Waterloo, ON

+ A 36 hour hackathon hosted at the University of Waterloo for selected individuals
+ Strived to develop a web application that allows efficient delivery system through one's network of friends

TAEKWONDO INSTRUCTOR
Dec 2011 - Feb 2013

Kwang Lee TaeKwonDo ▪ Mississauga, ON

+ Certified 3rd degree black belt with several competition experiences
+ Motivated students aged from 5 to 18 to improve their physical strength, endurance and discipline

EDUCATION

CANDIDATE FOR BACHELOR OF APPLIED SCIENCE IN MECHATRONICS ENGINEERING
University of Waterloo **Sept 2013 – Present**

RELEVANT COURSES
+ Real-Time Systems – Gained knowledge in design, implementation and testing of real-time systems
+ Sensors and Instrumentation – Designed and built signal conditioning circuits for robot sensors and actuators
+ Microprocessors and Digital Logic – Provided an understanding of computer, architecture, and microprocessor design with hands-on experience in simulation of FPGAs and PLCs
+ Data Structures and Algorithms – Practiced effective software development by learning how to build efficient data structures and algorithms in C++
+ Mechanics of Deformable Solids – Analyzed mechanical response of materials and stress-strain relationships
+ Structure and Properties of Materials – Studied relevance of materials to engineering practice