

Keith Menezes

B.Eng. Space Engineering 2018

Hardworking and motivated engineering graduate seeking a career opportunity from an innovative and growing company in the defense and space sector.

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CORE TECHNICAL SKILLS

Scripting & Programming MatLab, Java, C++, C, VHDL, Shell, Fortran.

Microsoft Office Suite Word, Excel, Project, Powerpoint, Outlook, Visio.

Test Equipment Digital Multimeter, Power Supply, Electric Load, Oscilloscope, Signal Generator, Spectrum Analyzer.

Mechanical and Thermal Design AutoCAD, SolidWorks, ANSYS, Siemens NX 11.

Electrical Design Altium Designer, Cadence Allegro, ORCAD, LabVIEW.

Test Environments Unix, Windows, Vibration, Thermal, Vacuum, Cleanroom.

EDUCATION

B.Eng. Spec. Hon. Space Engineering

Lassonde School of Engineering, York University

08/2013 – 05/2018

Toronto, ON

Specialized Courses in:

- Materials For Space Applications
- Space Communications
- Space Hardware
- Remote Sensing of the Earth's Surface
- Physics of the Space Environment
- Space Mission & Payload Design

WORK EXPERIENCE

Design Verification Engineer

Wolf Advanced Technology

05/2018 – Present

Whitchurch-Stouffville, ON

Test and validate rugged boards for video capture, process, encode and display for the harsh environments of aero/space.

Achievements/Tasks

- I work closely with industry partners to understand technology roadmaps, research and develop next-generation designs to continually improve the performance, capacity, and capabilities of future products.
- I engage early in the design cycle by identifying and quantifying requirements. I craft the architectural definition and support the design and validation efforts throughout the product life-cycle.
- I characterize product performance under various workloads/conditions to identify system bottlenecks, and design and model features and configurations that improve product power, performance, and cost.
- I develop/execute automated methodologies, tools, and tests to fully validate graphics board level products including thermal, power integrity, signal integrity, cooling, and functional requirements.
- I prepare the product design planning; component selection, schematic design, and requirements review of new designs. I assist other associated teams (Marketing/Sales) that are integral to the launch of successful new products.
- I lead the internal WOLF Innovation/R&D team to improve our processes and technology offerings in the defense & space sector.

Contact: keith@wolf.ca - www.wolf.ca

Unmanned Aerial Vehicles (UAV) Research Assistant

Geomatics & Space Engineering, Lassonde School of Engineering, York University

05/2015 – 08/2017

Toronto, ON

Over two (2) years experience designing, building and testing UAS. Including documenting and implementing operational and safety procedures.

Tasks/Achievements

- Design, build, and test UAVs for aerial mapping and maintain systems.
- Assess reliability and airworthiness of UAVs.
- UAV Pilot and Navigator for aerial mapping and surveying.
- Wrote Special Flight Operations Certificates approved by Transport Canada.
- Scholarship funding and Collaborators: Collaborative Research and Training Experience (CREATE), Centre for Aerial Robotics Research and Education (CARRE), Kepler Space Inc., JWLR Inc., and Canada's Centre for Mapping and Earth Observation.

Contact: PhD., P.Eng. Costas Armenakis – Associate Professor of Geomatics Engineering

VOLUNTEER EXPERIENCE

President and Team Leader

Canadian Satellite Design Challenge Team at YorkU

08/2014 – 08/2018

Toronto, ON

CSDC is a challenge for Canadian Universities to design and build a 3U cube-satellite (CubeSat)

Tasks/Achievements

- Advise management, motivate team and drive growth within the organization
- Preside over the organization's day-to-day operations and oversee the project's progress
- Design system architecture, define system requirements, define project scope, and identify/mitigate risks to the project
- Approve final reports and design decisions and ensure the envisioned product becomes the deliverable
- Maintain official contact and affairs between faculty advisor, team, and CSDC Management Society
- Systems Engineering Team Lead focusing on the RF Transceiver & Electrical Power Subsystems

Contact: <http://www.lassat.ca> – csdcyorku@gmail.com

QB50 Mission Project Coordinator

York University Space Engineering Nanosatellite Demonstration Group (YUsend)

05/2015 – 08/2016

Toronto, ON

International network of 50 CubeSats developed by university teams.

Tasks/Achievements

- Create work packages, gantt charts, and timeline schedules using Microsoft Project.
- Organize student volunteers into subsystem teams and distribute work packages.
- Battery selection, environmental testing, and qualification.
- Power budget, link budget, and orbital analysis with the Systems Tool Kit (AGI STK).
- Maintain official contact with QB50 CubeSat Coordinator at the von Karman Institute, Belgium to address concerns on our design.

Contact: PEng. Hugh Chesser – Associate Lecturer of Space Engineering

HONOR AWARDS

The Pierre L. Morrisette Institute for Entrepreneurship Silver Prize (03/2016)

Young Space Entrepreneurs, Students for the Exploration and Development of Space

- Designed an optical communication device for small spacecraft and devised a business proposal.
- Presented to a panel of judges knowledgeable about entrepreneurship and the space sector. Resulted in second place with cash prize.

Impact! Youth Conference for Sustainability Leadership (05/2014)

The Co-operators Group & The Natural Step Canada

- Selected as one of 175 post-secondary students from across Canada to develop sustainable solutions and become effective agents for change.
- As an IMPACT! Alumni, I benefit from a network of student sustainability leaders, partners and sponsors, the eligibility to apply for seed funding.

Engineering Supplemental Entrance Scholarship (08/2013)

Lassonde School of Engineering, York University

- Awarded to high school students applying to a direct-entry undergrad program with high academic standing (80+).
- Also obtained renewable entrance scholarship upon acceptance for my first year of full-time undergraduate study.

Honeywell's Leadership Challenge Academy (03/2011)

Honeywell & The U.S. Space and Rocket Center in Huntsville, Alabama

- Selected as one of 200 students from over 200 countries all around the world where I learned leadership and teamwork skills with the theme of space.
- Participated in a simulated jet-fighter missions, a rocket construction class, and astronaut training - including a realistic shuttle mission.

CERTIFICATES

Basic Pilot Certificate, RPAS VLOS (05/2019 – Present)

Transport Canada license to exercise privileges to fly a drone subject to the rules and regulations listed under the Canadian Aviation Regulation (CAR).

AGI STK Certification Level 3 Grand Master (06/2018 – Present)

Analytical Graphics (AGI) software proficiency with the Systems Tool Kit (STK) used for systems engineering design (<http://www.agi.com/>).

UAV Operations and Pilot (08/2017 – Present)

Aerobotika Academy UAV Ground School classroom and hands-on training for pilots (<https://aerobotika.com/>).

Engineering Intern (EIT), Professional Engineers Ontario (04/2018 – Present)

PEO's EIT program provides guidance and assistance to engineering graduates as experience is acquired with goals towards licensing.

Basic Amateur Radio Operators License (02/2017 – Present)

Industry Canada licensing to perform amateur radio communications, call sign VA3PWK.