VARDAN SEMERJYAN

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KEY SKILLS

- ❖ Proficient in the use of the following software packages and programming languages:

LabVIEW	Solid Edge	Windows/Linux
MATLAB/Simulink	C#, C++	MS Access
MathCAD	Java	MS Office

- ❖ Moderate knowledge of the following software packages:

AGI STK 9	Auto CAD	Dreamweaver
MS Visio	MS Project	MySQL

- ❖ Extensive knowledge of Piccolo Autopilot and Ground Station System for Unmanned Aerial Vehicles (UAV), Cloud Cap Technology
- ❖ Satellite Took Kit (STK) Certified, Analytical Graphics, Inc (AGI)
- ❖ Experience in implementing Temperature Control Systems and Calibrating Temperature Sensors (RTD, Thermocouples)
- ❖ Electronic Circuits Design, Modeling and Simulation
- ❖ Electronic Design Automation (EDA) Certified, Synopsys Armenia CJSC
- ❖ Basic PLC
- ❖ Soldering skills
- ❖ Highly competent mathematician
- ❖ Project Management and Systems Engineering
- ❖ Fluent in: English, Russian and Armenian

KEY ACHIEVEMENTS

- ❖ Securing Cyberspace Competition 1st Place Winner, "Automated Attack Detection & Prevention (ADAP) for Unmanned Aerial Systems" ($3000), Space Dynamics Laboratory (SDL) 2012
- ❖ EURP Grant, "Evaluation of the Google Android® Operating System and Smart Phone Technology for CubeSat Guidance, Navigation, and Control System Operations" ($1500), USU 2011
- ❖ URCO Grant, "Reconfiguration of the Receiver System for Sodium Doppler Wind/Temperature Lidar" ($1000), USU 2011
- ❖ URCO Grant, "PID Temperature Control and Data Acquisition System for Faraday Filter Based Sodium Spectrometer" ($1000), USU 2010
- ❖ Programming Competition 1st Place, team of three students, ICON Health & Fitness, Inc. 2012

AWARDS

- ❖ Jon M. and Karen Huntsman Scholarship Recipient, Full Tuition & Housing, USU
- ❖ Erasmus Mundus Scholarship Recipient, Master Course in Space Science and Technology

RELATED WORK EXPERIENCE

Research Assistant   June 2012 – Aug 2012
Utah State University, Mechanical and Aerospace Engineering Department (MAE), funded by Space Dynamics Laboratory (SDL)
- ❖ Developed a proof-of-concept prototype for self-proposed Automated Attack Detection & Prevention (ADAP) System for Unmanned Aerial Systems
- ❖ Prepared documentation which will assist further development of the ADAP System

Willing to Relocate or Travel Internationally

Research Assistant May 2010 – Aug 2012

Utah State University, Center for Atmospheric and Space Sciences (CASS)

- ❖ Redesigned and built two-axis Beam Steering Mirror with Control Software
- ❖ Designed and built Temperature Control Units for Faraday and Iodine Filters
- ❖ Developed PID Temperature Control System for Faraday Filter based Sodium Spectrometer, using self-designed Electronic Circuit and PID Control Software in LabVIEW
- ❖ Assisted in trouble-shooting and observations of the Sodium Doppler Wind/Temperature Lidar
- ❖ Performed data analysis of Lidar observations using MATLAB and C# programming

Research Assistant Sep 2011 – Dec 2011

Utah State University, Experimental Fluid Dynamics Laboratory (EFDL)

- ❖ Heater Control for Transient Mixed Convection Wind Tunnel (TWCMT)
- ❖ Set up Calibration Hardware and implemented the Automated Calibration Program using LabVIEW
- ❖ Calibrated more than 250 Thermocouples

Research Engineer July 2009 – Dec 2009

Armenian Military Aviation Institute

- ❖ Participated in research focused on Unmanned Aircraft Autonomous Control
- ❖ Performed systems level design and optimization of UAV systems, payload trades, analysis and integration
- ❖ Designed Steerable Antenna with Object Tracking Software
- ❖ Actively used CAD tools in the design process
- ❖ Used MATLAB and C++ for data analysis

MILITARY SERVICE

Squad Leader, Sergeant Jun 2007 - Jun 2009

Armenian Military Aviation Institute

- ❖ Directed a squad of soldiers and technicians
- ❖ Oversaw the morale, welfare, training, physical fitness and daily performance of squad
- ❖ Provided technical and IT support to senior officers

EDUCATION

Erasmus Mundus Master Course in Space Science and Technology Oct 2012 -

Julius - Maximilian University in Würzburg, Germany

B.S. Degree, Mechanical Engineering Jan 2012 - May 2012
Aerospace Emphasis GPA: 3.59

Utah State University (USU)

- ❖ Passed FE Exam
- ❖ Final Design Project, Cube Sat

B.S. Degree, Computer Science Sep 2003 - June 2007
Computer Systems and Software GPA: 4.0

State Engineering University of Armenia (SEUA)

- ❖ Thesis, "Extraction Algorithms for Integrated Circuits at Electrostatic Discharge"

RESEARCH & TEAMWORK

- ❖ Participated in a team to design and build Cube Satellite which will use Android phone as a System Computer, USU 2012

Willing to Relocate or Travel Internationally

- Participated in a team to design and fly Unmanned Aerial Vehicle in national AUVSI student Unmanned Aerial Systems (UAS) Competition 2010
- Grading room lead, Northern Utah Mathcounts Competition 2012
- Presented research findings at the following conferences
  - National Conference on Undergraduate Research (NCUR) 2012
  - American Physical Society (APS) March Meeting 2012
  - Research on Capitol Hill in Salt Lake City 2011,2012
  - Utah Conference on Undergraduate Research (UCUR) 2011
  - Utah State University, Student Showcase 2011,2012
- Chéron, C.; Dennis, A.; Semerjyan, V.; YangQuan Chen; , "A multifunctional HIL testbed for multirotor VTOL UAV actuator," *Mechatronics and Embedded Systems and Applications (MESA), 2010 IEEE/ASME International Conference on* , vol., no., pp.44-48, 15-17 July 2010

MEMBERSHIPS

- AIAA, AUVSI, American Physical Society (APS), Student Member
- President of Armenian Students Association, USU

HOBBIE

Self-Taught Artist known as Sevard (paint in acrylics, oils, ink)
- Featured Artist, Contemporary Design & Art Gallery, Salt Lake City 2012
- Solo Exhibition, USU Merrill-Cazier Library, Logan 2011

Willing to Relocate or Travel Internationally