

## Mark Khusid

566 Highland Avenue

Buffalo, NY 14223

Cellphone (716)392-9908

[markkhusid@protonmail.com](mailto:markkhusid@protonmail.com)

[www.mkdynamics.net](http://www.mkdynamics.net)

<b>Objective</b>	<b>A challenging position in electrical and computer design engineering</b>	
<b>University Education</b> 1995 – 2000	<b>Polytechnic University, Brooklyn, N.Y.</b> Bachelor of Science in Electrical and Computer Engineering Graduation Date: Spring 2000 GPA: 3.50 / 4.00	
<b>Course Work Polytechnic University</b> 1995 – 2000	Electrical and Electronic Circuit Analysis C, C++, Assembly, and Fortran languages TCP/IP Analysis and Programming Electric Circuit Design and Testing Engineering Design Project	Wireless, Ethernet and ATM Networks Communications Engineering Data Acquisition and LabView VHDL Digital Design Control Systems Engineering
<b>Course Work Coursera.org</b> 2018 – Present	<a href="#">Sensors and Sensor Circuit Design</a> (Coursera Certificate) <a href="#">Motors and Motor Control Circuits</a> (Coursera Certificate) <a href="#">Introduction to Cyberattacks</a> (Coursera Certificate) <a href="#">Cyber Attack Countermeasures</a> (Coursera Certificate) <a href="#">Electric Power Systems</a> (Coursera Certificate) <a href="#">What is Data Science?</a> (Coursera Certificate) <a href="#">Data Science Methodology</a> (Coursera Certificate) <a href="#">Tools for Data Science</a> (Coursera Certificate)	
<b>Course Work Kaggle.com</b> 2021 – Present	<a href="#">Python</a> (Kaggle Certificate) <a href="#">Pandas</a> (Kaggle Certificate) <a href="#">Data Visualization</a> (Kaggle Certificate) <a href="#">Time Series</a> (Kaggle Certificate) <a href="#">Data Cleaning</a> (Kaggle Certificate)	
<b>Course Work Tryhackme.com</b> 2021 - Present	Complete Beginner Learning Path (Tryhackme Certificate) Pre – Security Learning Path (Tryhackme Certificate)	
<b>Honors &amp; Awards</b>	<ul style="list-style-type: none"><li>• Dean's List, Fall 1996 – June 2000</li><li>• William L. Everitt Student Award of Excellence</li><li>• IEEE Student Branch Award</li><li>• Best Project Award – 1999 Summer Junior Research Internship Program</li><li>• Professor Myron M. Rosenthal Scholarship</li></ul>	
<b>Employment</b>		
2/2019 – Present	<b>Moog, Inc., East Aurora, N.Y.</b> <b>Electrical Design Engineer</b> <ul style="list-style-type: none"><li>• Designed mixed-signal circuit card assemblies launch vehicle applications</li><li>• Participated in system integration testing and control loop closure activities for Electronic Control Units for launch vehicle applications</li><li>• Developed combination of Pspice, Python, Fortran and Jupyter Notebooks to analyze complex circuits and Electronics Control Unit subsystems</li><li>• Performed worst – case circuit analysis using in – depth custom component models</li><li>• Prepared and presented designs to customers</li></ul>	
1/2014 – 9/2018	<b>Electrical Engineering Consultant</b> <ul style="list-style-type: none"><li>• Consulted on and designed novel devices for solar power applications</li><li>• Constructed prototypes from concept to testing phase using engineering best practices</li><li>• Used LTSpice to simulate designs and verify concordance with test results from built prototypes</li></ul>	

	<ul style="list-style-type: none"> <li>Implemented out-of-the-box solutions to solve design and testing challenges in small scale and unique solar power applications</li> </ul>
7/2007 – 12/2013	<p><b>Moog, Inc., East Aurora, N.Y.</b>  <b>Electrical Design Engineer</b></p> <ul style="list-style-type: none"> <li>Designed analog and power circuit card assemblies for mission-critical Electronic Control Units for the Taurus II, Delta IV and Centaur Launch Vehicles</li> <li>Designed, tested and implemented all-opamp Inductive Simulator for simulating servovalve dynamic response</li> <li>Designed test fixtures for 787 Aircraft program</li> <li>Analyzed complex circuits using PSpice, MathCAD and Matlab analysis software</li> <li>Prepared and presented designs to customers</li> </ul>
1/2007 – 7/2007	<p><b>Moog, Inc., East Aurora, N.Y.</b>  <b>Engineering Technician</b></p> <ul style="list-style-type: none"> <li>Constructed test fixtures to test flight critical electronic circuit boards</li> <li>Coordinated with engineering to optimize test fixture construction and test procedures</li> <li>Performed development and production testing of flight critical electronic circuit boards</li> </ul>
2/2006 – 9/2006	<p><b>Keller Technology Corporation, Inc., Tonawanda, N.Y.</b>  <b>Electrical Controls Engineer</b></p> <ul style="list-style-type: none"> <li>Designed electrical control systems for novel and complete manufacturing machinery</li> <li>Prepared drawing package of electrical schematics in AutoCAD Electrical 2006</li> <li>Researched and documented cost estimates to design and fabricate electrical control systems in response to user requirement specifications</li> </ul>
3/2003-2/2006	<p><b>MK Buffalo Unlimited, LLC, Buffalo, N.Y.</b>  <b>Real Estate Investor</b></p> <ul style="list-style-type: none"> <li>Acquired, rehabilitated and tenanted investment properties in the Buffalo, N.Y. area</li> <li>Communicated with accountants, attorneys, brokers and other business consultants and acquired knowledge of their respective fields</li> <li>Managed costs and rental income to insure business profitability</li> <li>Acquired knowledge and skill in financial statements and business computer software</li> </ul>
9/2000 – 3/2003	<p><b>Space Technology Branch, US Army CECOM, Fort Monmouth, N.J.</b>  <b>Computer Engineer</b></p> <ul style="list-style-type: none"> <li>Designed, assembled, configured and installed mission-critical computer systems in fixed, Army vehicular and airborne assets</li> <li>Performed extensive design, construction and field testing of Army tactical Wireless RF and Optical communications systems</li> <li>Soldered and assembled prototype Army electronic, optical and RF circuits and systems</li> <li>Configured routers, switches and transceiver communications components</li> <li>Spliced and connectorized Army and commercial optical fiber cables and network cables</li> </ul>
1/1999 – 6/2000	<p><b>MP3L Laboratory, Polytechnic University, Brooklyn, N.Y.</b>  <b>Research Assistant</b></p> <ul style="list-style-type: none"> <li>Assembled experimental apparatus to study optical microresonators</li> <li>Worked with laser diodes, optical fibers and interferometers</li> <li>Machined an optical fiber – microsphere coupler for telecommunications applications</li> </ul>
5/1997 – 8/1997	<p><b>Markperi International Enterprises Inc., Islandia, N.Y.</b>  <b>CAD / Computer Consultant</b></p> <ul style="list-style-type: none"> <li>Drafted electrical schematics and machine parts utilizing AutoCAD</li> <li>Coordinated with technicians to improve existing drawings</li> <li>Installed and maintained network over company computer systems</li> </ul>
<b>Publications</b>	<p>N. J. Vallesterio, <b>M. Khusid</b>, N. S. Prasad, LTC J. Carrano, G. Duchak, J. Ricklin, M. Vorontsov, “Free-Space Optical Communications Systems (FOCUS): An Army Overview,” SPIE Photonics West Conference, Free – Space Laser Communication and Imaging II, Seattle, 9-11 January 2002  Prasad, Narasimha S.; Kratovil, Patrick T.; Tucker, Sara C.; Vallesterio, Neil J.; <b>Khusid, Mark</b>  “Free-Space Optical Communication Link Performance Enhancement via Modified Receiver</p>

### **Special Skills**

- Learning binary reverse engineering, cybersecurity tradecraft, vulnerability analysis, exploit development, writing shellcode for x86-64, x86 and ARM processors
- Proficient in basic web page design, web server operations, Amazon Web Services server administration, Docker Container deployment, and OpenVPN server administration
- Webmaster for [www.mkdynamics.net](http://www.mkdynamics.net) and a Jupyter Lab server
- Proficient in Red Hat Fedora and Debian based Linux such as Fedora Core, Kali, Parrot OS, and Ubuntu, Whonix and TAILS
- Proficient in Python, C/C++, x86, x86-64 and ARM Assembly, Pascal and Fortran programming languages
- Proficient in the Numpy, Pandas and ipywidgets extensions to the Python programming language
- Proficient in lathe and milling machine operations, electronic circuit design, soldering and construction, computer assembly and troubleshooting, automotive maintenance and repair

### **Hobbies**

- Practicing penetration testing and Capture The Flag competitions on HackTheBox.eu, Tryhackme.com and Pentester Academy
- Licensed Amateur Radio Operator with Extra Class license. Licensed Volunteer Examiner by ARRL, Volunteer Exam Coordinator
- Data communications using the AX25 protocol over TCP/IP protocol on VHF Ham radios and Broadband Hamnet
- Mixing Python and Fortran code in the Jupyter Lab development environment
- Raspberry Pi projects
- Black Belt (1<sup>st</sup> Degree) in Tae Kwon Do, Black Belt candidate in Krav Maga, Shaolin Kungfu hobbyist, weight lifting and functional training, camping, primitive survival and self-sufficiency

### **References**

Available upon request