

Ryan Dumlao

Electrical Engineer

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Education **University of California, Los Angeles (2008-2010)**

MS, Electrical Engineering – Solid State & Photonics

Research: Model for Calculating the Surface State Density and Resistivity in n-doped GaAs nanopillars

University of California, San Diego (2003-2007)

BS, Electrical Engineering – Photonics

Minor – Japanese Studies

Experience **Engineering Rotation Program (9/2011 – Present)**

Raytheon Space and Airborne Systems, El Segundo, CA

Highly selective rotation program with roles in engineering and non-engineering functions for engineering breadth, leadership development and business exposure. 10 candidates per year.

Optical Engineer (Current Rotation)

- Perform testing, alignment and characterization of optical systems for Visible Infrared Radiometer Suite (VIIRS) for NASA Joint Polar Satellite System (JPSS) using interferometers and laser trackers
- Responsible engineer for crucial portion of optical train on VIIRS Opto-Mechanical Module
- Successfully devised working solution for defective flight-hardware mirrors for VIIRS assembly to ensure on-time system integration and customer delivery
- Perform test and longevity characterization of high-power solid-state laser system

Material Quality Manager

- Managed suppliers and quality control systems for 3 space and airborne programs (VIIRS, GPS & Navigation Systems, Global Hawk), leading interaction between programs, suppliers and customers for quality control on procurement orders in upwards of \$20M
- Performed root-cause and corrective action investigations at suppliers, facilitated mitigation
- Decreased backlog of supplier investigations for VIIRS program two-fold over 6 months

Financial Analyst

- Re-engineered existing methods of reporting/analysis to use more efficient, created automated tools, increasing productivity and reducing hours spent on financial data analysis
- Created allocation of \$18M company overhead budget for Engineering, monitored and analyzed budget expenses for 2012 fiscal year using self-developed tools and processes
- Received Six Sigma Specialist certification as a result of direct impact on efficiency

Electrical Engineer II (7/2010 – 9/2011)

Raytheon Space and Airborne Systems, El Segundo, CA

- Redesigned VXI wire-wrap boards to incorporate use of a Xilinx FPGA in place of outdated logic systems for F/A-18 Radar Upgrade Test Station group, using Mentor Graphics for schematic design and PADS Layout for board layout, and Xilinx ISE for FPGA development in VHDL
- Successfully programmed, tested and integrated finished FPGA hardware into existing F/A-18 radar test stations for production use
- Supported schematic and document conversion effort for Japan F-15, Saudi F-15 radar test equipment program

Teaching Assistant (1/2009 – 12/2009)

Department of Chemistry and Biochemistry, University of California, Los Angeles

- Create lesson plans, teach and advise students on lecture material for general chemistry course

Jr. Electrical Engineer (6/2007 – 6/2008)

Space Micro, Inc., San Diego, CA

- Worked with NASA Ames and Clemson University researchers to design a low-dose passive radiation dosimeter
- Designed PCB layout and schematics, mechanical housing and testing fixtures, performed data collection and analysis on effectiveness of using commercial EEPROMs for passive detection of gamma radiation as well as an active, directional, high-sensitivity radiation detector

Engineering Intern (1/2007 – 6/2007)

Space Micro, Inc., San Diego, CA

- Designed relay circuits and characterized UV light sources for EEPROM erasure

Skills

Software

Mentor Graphics Design Architect, Xilinx ISE, Matlab, ORCAD PSpice, PADS Layout, LabVIEW, Punch ViaCAD, Microsoft Office (adept at Excel), Adobe Photoshop, Adobe Premiere, Adobe Dreamweaver, SAP-based environments, Linux Operating Systems

Hardware

Oscilloscopes, Logic Analyzers, Military-spec assemblies and control panels, FPGA Interfaces (JTAG), Interferometers, Lasers, Laser Trackers, Optical Systems, Class 1,000+ Cleanrooms

Programming

C, C++, VHDL, Java, HTML5, CSS, JavaScript, jQuery (Basic to Intermediate)

Overall

Engineering, Digital Photography, Web Design, Video Editing

Certifications

Six Sigma Specialist, Earned Value Management System (EVMS) Level 1, NI LabVIEW Level 1

Awards and Honors

Eagle Scout – Boy Scouts of America, San Francisco Bay Area Council (03/2003)

Provost's Honors – UC San Diego (2004-2006)

Eta Kappa Nu, Electrical and Computer Engineering Honor Society – UC San Diego (2007)

Individual & Team Achievement Awards – Raytheon Company (2011, 2012, 2013)

Shining Stars – Stellar Award Recipient – Raytheon Company (2013)

Membership and Affiliations

SPIE International Society for Optical Engineers, UCSD Chapter (2005 – 2007)

Webmaster, 2006-2007 Academic Year

UCSD Nikkei Student Union (2003 – 2007), Officer (Japanese-American Interest Organization)

Executive Board 2006-2007

UCLA Engineering Graduate Student Association (2008 – 2010)

UCLA Nikkei Student Union (2008 - 2010)

UCLA Alumni Association (2010 – Present)

Society of Aerospace Professionals, El Segundo, CA (2010 – Present)