DAMAS LIMOGE

DAMAS W. LIMOGE
D.W.LIMOGE@GMAIL.COM
C/N: 802.989.6536

PROFESSIONAL WORK EXPERIENCE (3.5+ YEARS)

ROBERT BOSCH, LLC., PALO ALTO, CA — MAY 2016 – AUGUST 2016
TOP 84 CONTROLS INTERN

> *Debugged* battery observer script in MATLAB/C for use in *embedded system* of a laboratory battery management configuration.
> Created a *new finite element battery model* of mixed basis functions in MATLAB for use with high speed observers.
> *Coded a wrapper function* for a matrix regressor observer, for use with the novel model concept.

MIT LINCOLN LABORATORY, LEXINGTON, MA — JUNE 2014 – AUGUST 2015
ASSISTANT STAFF, RAPID PROTOTYPING
HONORS: MIT LINCOLN LABORATORY TEAM AWARDS FOR RECOGNITION OF EXCELLENCE: MPAR TEAM

> *Lead engineer* for team of designers and analysts of high energy, advanced fiber optic laser; designing for minimized volume/weight to energy density ratio, optical performance, structural stiffness, vibration minimization and heat dissipation, to be used in an airborne system.
> Led *extensive structural analysis*, design and assembly team for ground transportation mechanism of large, hyper-sensitive assembled telescope.
> *Led the design and integration* for a novel, *high-precision inflatable*, as a prototype for a future space-bound cubesat sensor suite.
> Designed and built modular, *3-D printed quadcopter cage*, with focus on *weight to strength ratio*, to be used in next-generation disaster response.
> System-level *concept design and prototyping* for tether and ground support of surveillance quadcopter, including *numerous field tests*.
> *Led mechanical design* for nose of podded sensor, focusing on stiffness, weight reduction, and manufacturing scalability.
> Successfully completed vibrational testing over wide vibration band and thermal range for sensor nose and design is *currently integrated* in field.
> Designed and assembled *weight bearing structure* for multi-phase radar, including frame alignment and electronics cooling over 46 ft^2.
> Led mechanical design and assembly of system for rotation of large, high-precision telescope in a clean room setting.
> Designed simple mechanism for high-precision, rigid *optical element fixture* over wide temperature range, sealed against contamination.

RESOLUTE MARINE ENERGY, BOSTON, MA — JANUARY – JUNE 2013
MECHANICAL AND COMPUTER ENGINEERING CO-OP

> Extensive *MATLAB data analysis*, using *FFT spectral analysis*, from instrumentation in hydraulic circuit for power generation pressurized by WEC.
> *Dynamically modeled* hydraulic circuit in SimScape to determine *efficiency*, and confirmed results analytically.
> Used SimScape and Simulink to model component specifications for use in future pilot program.

MIT LINCOLN LABORATORY, LEXINGTON, MA — JANUARY – AUGUST 2012
TECHNICAL CO-OP, RAPID PROTOTYPING
HONORS: MIT LINCOLN LABORATORY TEAM AWARDS FOR RECOGNITION OF EXCELLENCE: REDEYE TEAM

> *Designed mounting structure* for 90 lb. payload on the exterior aft of an aircraft chassis.
> *Oversaw purchasing and assembly* of parts for electrical operating station intended for data acquisition from podded air force sensor.
> Led validation of antenna components, including laser cutter characterization, foam tensile testing, and assembly *vibration testing*.
> *Designed and iterated camouflaged enclosure* for IR/light sensor in rugged environment.

GE ENERGY, BILLERICA, MA — JANUARY – JULY 2011
DESIGN ENGINEERING CO-OP

> *Extensively used SolidWorks* to model and design parts and assemblies, while finalizing their drawings and bills of materials.
> Completed the *design and modeling* of the sample system for a gas moisture analyzer.

GOODRICH, INC., VERGENNES, VT — MAY – AUGUST 2010
DATA MANAGEMENT INTERN

> Extensive use of Excel pivot tables and lookup functions for project management of part drawing updates.

EDUCATION (6 YEARS)

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MA — JUNE 2017
CANDIDATE FOR S.M. IN MECHANICAL ENGINEERING — **GPA:** 4.7/5.0

THESIS FOCUS: Adaptive Estimation and Control of Advanced Battery Management Systems.
ADVISOR: Dr. Anuradha M. Annaswamy, Active Adaptive Control Laboratory
Topics: Partial Differential Equation Modeling, Parameterization of Nonlinear Equations, Algorithm Optimization
SELECTED GRADUATE STUDIES: Introduction to Numerical Simulation, Nonlinear Control System Design, Fundamentals of Advanced Energy Conversion, Mechatronics, Entrepreneurship in Engineering, Computational Science and Engineering
PUBLICATIONS: D. Limoge, P. Bi, A. Annaswamy, A. Krupadanam, "A Reduced-Order Model of a Lithium-Ion Cell Using the Absolute Nodal Coordinate Formulation Approach," *IEEE Transactions on Control Systems Technology*, 2017. (Accepted)

NORTHEASTERN UNIVERSITY, BOSTON, MA — MAY 2014
B.S.M.E. IN MECHANICAL ENGINEERING, MINOR IN COMPUTER ENGINEERING — **GPA:** 3.93/4.00

SENIOR DESIGN PROJECT: Data Acquisition from Strain Gauges for an Off-Road Vehicle under High Duress
AWARD: Senior Capstone Design Award for Most Complete Solution
HONORS: The Huntington 100 (most influential students on campus), Sears B. Condit Award, William M. Rand Award
SELECTED MECHANICAL STUDIES: Mechanical Engineering Design, Controls and Mechatronics, Thermal Systems Analysis And Design.
SELECTED COMPUTATIONAL STUDIES: Optimization Methods, Robotics, Computer Architecture and Organization, Digital Logic Design.
SELECTED ACTIVITIES: Tau Beta Pi Engineering Honor Society, President; NU Film Enthusiast Club, President.

COMPUTER SKILLS

COMPUTATIONAL: MATLAB, C++, LabVIEW, SSH Unix Terminal, Microsoft Excel (pivot tables/lookup functions).
ENGINEERING: SolidWorks (design and simulation), ANSYS, CREO Elements/Direct, AutoCAD.
CREATIVE: Adobe Photoshop, Adobe Illustrator, Adobe Dreamweaver, Adobe InDesign, HTML, CSS.

LAB EXPERIENCE

FIRST YEAR ENGINEERING LEARNING CENTER, NORTHEASTERN UNIVERSITY — JANUARY – JUNE 2014
LAB SUPERVISOR AND DESIGN/CODING EXPERT, COLLEGE OF ENGINEERING