David P. Larson

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Education

University of California, San Diego in progress
Ph.D., Mechanical Engineering
Advisor: Carlos F.M. Coimbra

University of California, San Diego 2014
M.S., Mechanical Engineering

University of California, Merced 2012
B.S., Mechanical Engineering

Research Experience

University of California, San Diego, with Carlos F.M. Coimbra 2012–present
Forecasting power output of solar power plants.

University of California, Berkeley, with Robert Dudley Summer 2011
Visiting UC LEADS Scholar, Cal NERDS Program
Evaluated the effects of turbulence on hummingbird flight dynamics.

University of California, Merced, with Carlos F.M. Coimbra Summer 2010
UC LEADS Scholar
Assisted in the development of an experiment for studying insect flight aeroelastics.

Journal Publications

D.P. Larson, L. Nonnenmacher and C.F.M. Coimbra (2015). **Day-Ahead Forecasting of Solar Power Output from Photovoltaic Plants**, submitted.

Teaching Experience

ENG 1: Intro to Engineering I, Teaching Assistant Fall 2013, 2014
University of California, San Diego
Lectured on academic planning, time management, and study habits.

ENG 2: Intro to Engineering II, Teaching Assistant Winter 2014, 2015
University of California, San Diego
Lectured on career planning, business etiquette, résumé development, and presentation skills.

ENG 3: Intro to Engineering III, Teaching Assistant Spring 2014, 2015
University of California, San Diego
Lectured on project management, engineering as a profession, and ethics.
Developed interactive design activities.

Outreach and Community Service

Center for Energy Research: Outreach Council, Volunteer 2014–present
University of California, San Diego
Presented solar energy demonstrations at events in the San Diego area.

SWEET Workshop Series, IDEA Student Center Spring 2015
University of California, San Diego

Co-developed a set of technical workshops for undergraduate engineers.
Taught workshops on Python, Solidworks, numerical methods and image processing.

Professional Activities

Paper Reviewing
Solar Energy, Renewable Energy

Awards

1st Place: People's Choice, Innovate to Grow Competition — Spring 2012
University of California, Merced
Project title: "Microturbine for UC Merced Irrigation Canals"
Team members: David Larson, Daniel Leong, Samuel Isaiah, Steven Fleming

Affiliations

ASME, Student Member — 2009–present

Technical Skills

Programming
General purpose: Python, C, Go, Shell
Scientific programming: Numpy, Scipy, Pandas, Matlab, Mathematica
Version control: Git, Mercurial

Hardware
Arduino, Beaglebone, Raspberry Pi, Trinket, XBee

Computer Aided Design (CAD)
Pro/ENGINEER, Solidworks

Rapid Prototyping
Milling machine, lathe, lasercamm, 3D printing

Operating Systems
OS X, Linux, Windows

Document Preparation
LaTeX, Microsoft Office, Google Docs