BRIAN LEONEL FLORES

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EDUCATION

California State University, Long Beach *June 2014*
B.S. in Physics
B.S. in Applied Mathematics - Physics
Minor in Chemistry

University of Pittsburgh *December 2016*
M.S. in Physics

RELEVANT GRADUATE COURSEWORK

ASTRON 3705	- Astronomical Techniques
ASTRON 3550	- Stellar Structure
PHYS 3725	- General Relativity 1
PHYS 3726	- General Relativity 2

RESEARCH EXPERIENCE

Department of Physics and Astronomy, CSULB July 2011 - June 2014
Research Assistant *Long Beach, CA*

· Fabricated thin films of Fe-Ni on nanospheres in Professor Jiyeong Gu lab
· Assisted characterizing hysteresis loops of various thicknesses of thin films using Magneto-Optical Kerr Effect (MOKE) system
· Improved measurement efficiency of MOKE systems with lenses
· Simulated magnetic domain annihilation/nucleation in thin films under MOKE system conditions using Objective Oriented MicroMagnetic Framework (OOMMF)

Argonne National Laboratory, Department of Material Science June 2012 - August 2012
REU Intern *Lemont, IL*

· Simulated magnetic vortex ground states of nanodiscs on OOMMF in Dr. Valentin Novosad lab
· Made various concentration of Hypromellose (HPMC) solution for spin coating.
· Fabricated nanodiscs of Au/Fe-Ni/Au using (HPMC) layer and stencil mask

Department of Physics and Astronomy, University of Pittsburgh May 2015 - Present
Research Assistant *Pittsburgh, PA*

· Create model spectra of hot, massive stars using CMFGEN with Dr. John Hillier
· Developed a new method for treating inhomogeneous ("clumped") stellar winds, testing it with observed spectra of AzV83, a O7Iaf+ star
· Writing code to calculate convective flux using the Mixing-Length Theory formalism in stars

PRESENTATIONS

"Synthetic Spectra of S Dor" June 2017
Eta Carinae, LBVs, and Supernova Impostors Workshop, University of Pittsburgh, Pittsburgh, PA

TECHNICAL STRENGTHS

Computer Languages	FORTRAN 95, Mathematica 8, LaTeX
Operating System	Unix, Linux
Computer Code	CMFGEN
Tools	Vim

LEADERSHIP & COMMUNITY INVOLVEMENT

Astrosnacks & Astrohacks

Host a weekly hour-session where graduate students can present their research, a piece of their code, or a general computer programming topic (e.g. how to use Git and GitHub, increase coding productivity using an IDE, etc.) in the comfort of their peers and receive feedback.