Jacob Miller, *C*urriculum Vitae

Denver, CO 920.850.2210 jake0miller@gmail.com

Education

M.S. Astrophysical & Planetary Science, University of Colorado 2013
National Science Foundation Graduate Research Fellowship
Research focus in computational physics of planet formation, accretion disks
Studied graduate level numerical, statistical, computational, and analytical methods

B.S. Physics & Astrophysics, University of Wisconsin 2010
Graduation with Distinction & Honors (3.95 GPA)
Wisconsin Space Grant Undergraduate Research Fellowship
Research focus in data analysis of simulated galactic dynamics and evolution

Professional Experience

President & CEO, H.E. Technology 2017 - 2018
- ◇ Solar energy startup dedicated to reinventing customer experience
- ◇ Pioneered innovative design and presentation to enable customer self-acquisiton

Regional Sales Manager, Tesla Energy 2016 - 2017
- ◇ Drove market expansion for San Diego region
- ◇ Updated sales process and developed collaborative leadership techniques

District Sales Manager, Vivint Solar 2013 - 2016
- ◇ Ramped regional production in South Carolina from zero to market leader
- ◇ Recruited, trained, & developed sales leadership for local branches

Professional Research Assistant, University of Colorado 2010 - 2013
- ◇ Graduate level computational research in astrophysics
- ◇ Conducted simulations using DOE & NSF supercomputers
- ◇ Specialized in Computational Fluid Dynamics using Multigrid Methods, Adaptive Mesh

Research Assistant, University of Wisconsin 2007 - 2010
- ◇ Analyzed data from full MHD Cosmological simulations of Galaxy Clusters
- ◇ Constructed 1 MW Klystron Tube for Magnetically-Confined Fusion Project

Teaching Experience

Graduate Teaching Assistant, University of Colorado 2010 - 2013
- ◇ Lesson planning, preparation, & instruction
- ◇ Courses: College Algebra, Calculus 1-3, Physics 1-2, Astronomy (various)

PEOPLE of Wisconsin 2009 - 2010
Pre-college Enrichment Opportunity Program for Learning Excellence
- ◇ Educational summer program for minority & low-income students
- ◇ Promote interest in higher education

Teaching Assistant, University of Wisconsin 2009 - 2010
- ◇ Guide students in lab work, grade papers & exams
- ◇ Courses: Astronomy 101, 103

Peer-Mentor Tutor, Physics Learning Center 2007 - 2010
- ◇ Weekly seminar on best practices in teaching & instructional methodologies
- ◇ Tutor small student groups, encouraging critical thinking & problem-solving
- ◇ Courses: Physics 103, 104, 207, 208

Museum Docent, L. R. Ingersoll Physics Musem 2006 - 2010
- ◇ Tour guide of museum exhibits, workstations, & interactive experiments

Research Experience

Hydrodynamic Models of Planet Formation 2010 - 2013

- ◇ Quantified the rate of angular momentum transfer in protoplanetary disks
- ◇ Assessed the role of vorticity in formation of voids, moons, and planets

Hydrodynamic Simulations of Double-Bent Radio Sources in Galaxy Groups 2008 - 2010

- ◇ Quantified the reciprocal relationship between the evolution of AGN & IGM
- ◇ Used RoC of double-bent AGN as a density probe of IGM in full cosmological clusters
- ◇ Presented work at 217th American Astronomical Society Conference, 2010
- ◇ Presented work at Wisconsin Space Conference, 2009
- ◇ Presented work at 215th American Astronomical Society Conference, 2009
- ◇ Published 2010, Senior Honors Thesis Advisor: Dr. Sebastian Heinz

A Search for Missing Dwarf Galaxies 2010

- ◇ Observed & analyzed Dwarf Galaxies with Arecibo telescope
- ◇ Presented work at UW-Madison Undergraduate Research Symposium, 2010
- ◇ Published 2010, Research Advisor: Dr. Snezana Stanimirovic

Novel Processes and Materials for Fabrication of Nanoscale Photovoltaics 2008

- ◇ Optical Spectroscopy of CdSe Nanocrystal Photovoltaics
- ◇ Explored Nanolithography as a method of fabricating nanoscale solar cells
- ◇ Presentated work at UMass REU Research Symposium, 2008
- ◇ Published, Opt. Express 18, 15560-15568 (May 2010):
  Time-resolved surface plasmon polariton coupled exciton and biexciton emission
  Research Advisor: Dr. Marc Achermann

Partial Differential Equations in Classical and Quantum Mechanics 2007

- ◇ Studied solutions to Green's Function for Coulomb's Law on D6 Conifold metrics
- ◇ Presentated work at UCF Summer Research Symposium, 2007
  Research Advisor: Dr. Costas Efthimiou

Electron Bernstein Wave Project 2006 - 2007

- ◇ Designed & constructed 1 MW Klystron evacuated electron tube
- ◇ Improved heating and stability of magnetically-confined toroidal plasma
- ◇ Hands-on experience with electronics, wave guides, Magnetic guide fields, etc
  Research Advisor: Jay Anderson, jkanders@wisc.edu

Professional Skills

Resourceful, Professional, Friendly, Outgoing, & Motivated
Python, C++, Java, FORTRAN, IDL, Ruby, JavaScript, LaTeX
Github: https://github.com/Jake0Miller
Completed various online coding bootcamps, challenges (Google, etc) for fun