

# CURRICULUM VITAE

## Christopher Thomas Gabler

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### Education

M.S., Astronomy, San Diego State University  
M.S., Electrical & Computer Engineering, UC Santa Barbara  
B.S., Chemical Engineering, Cal Poly Pomona

### Thesis (M.S. Astronomy, SDSU)

“The Initial-Final Mass Relation of White Dwarfs in Old Open Clusters”  
<http://mintaka.sdsu.edu/talks/index.html>

A theoretical study on the evolutionary models of stars in old, open clusters of the Milky Way, focusing on the relationship between the initial stellar mass and the final white dwarf stellar mass of open cluster NGC 6819. Theoretical models of isochrones are used in conjunction with astereoseismic data, and observational data of evolving binary stars near the color-magnitude diagram main-sequence turn-off point are used in this study.  
Advisors: Dr. Eric Sandquist, Dr. Kurtis Williams

### Thesis (M.S. Electrical & Computer Engineering, UCSB)

“Color Edge Detection for IC Inspection”

[https://books.google.com/books/about/Color\\_Edge\\_Detection\\_for\\_IC\\_Inspection.html?id=8mgvHAAACAAJ](https://books.google.com/books/about/Color_Edge_Detection_for_IC_Inspection.html?id=8mgvHAAACAAJ)

The development of software programs in Color Edge Detection algorithms for the visual inspection of integrated circuits. Silicon wafers will have different refracted colors from the optical constructive and destructive interference patterns that depend on impurities or thickness variations in the IC surfaces. This publication covers different and new techniques to model color edge detection with IC applications.  
Advisors: Dr. Susan Hackwood, Dr. Gerardo Beni

### Additional Education

University of Phoenix, San Diego, California  
Managerial Communication and Ethics (COM 525),  
Managerial Communication (COM 515),  
Legal Environment of Business (LAW 529)

(Completed courses toward an MBA)

## Teaching Experience

*Visiting Assistant Professor*, Point Loma Nazarene University – Fall 2015 - Current

- Analog & Digital Electronics - EGR 352, 422
- Mechanics of Materials Lecture – EGR 265
- Physical Science Lecture – PSC 110
- The Cosmos Lecture – PSC 105
- Analog & Digital Electronics Lab – EGR 352L, 422L
- University (calculus-based) Physics Lab – PHY 242L
- General Physics Lab – PHY 141L, 142L
- Physical Science Lab – PSC 110L

*Professor*, San Diego Miramar College

- Descriptive Astronomy Lecture – ASTR 101, Spring 2015

*Professor*, Southwestern Community College

- Introduction to Astronomy Lecture – ASTR 100, Spring 2012 – Summer 2015
- Introduction to Astronomy Lab – ASTR 109, Spring 2013 – Summer 2015
- Principles of Physics Lab, Mechanics I – PHYS 271, Fall 2013
- Principles of Physics Lab, Electromagnetics II – PHYS 273, Fall 2013

*Lead Teaching Associate*, San Diego State University

- Introduction to Astronomy Lab – ASTR 109, Spring 2011 – Spring 2012  
I supervised teaching assistants and resources in the astronomy laboratory department at SDSU and taught ASTR 109 laboratory classes.

## Research/Field Experience

*Research Assistant*, SDSU Research Foundation, San Diego, CA

2011-2014

I worked on analytical studies on the evolution of stars in open (galactic) clusters with observational data from NGC 6819 *Kepler Mission* data. This study was funded by the National Science Foundation and based on my results of my thesis research. I used mathematical modeling, computational physics, and data analysis and error estimation, with Linux/UNIX, IDL, Fortran 77/90 tools.

I worked on evolutionary studies on the Praesepe open cluster (NGC 2632) and the astrophysics of Ultra-Cool White Dwarfs, using IRAF tools (Image Reduction and Analysis Facility) for image manipulation.

*Graduate Assistant*, San Diego State University Research Foundation, San Diego State University, San Diego, 2013-2014

I assisted in the installation of the new Claud-Phillips 1.25 meter telescope, and the instrumentation maintenance and operation of the Astro Mechanics 1.1 meter research telescope at Mount Laguna Observatory, and in the maintenance of the 0.53 meter Buller Visitors' telescope.

*Summer Visitors Program Volunteer*, San Diego State University Research Foundation, San Diego, CA 2012

- Conducted tours for visitors at the Mount Laguna Observatory, gave presentations and operated the Visitors' Telescope during events.

### **Information Technology Experience**

*Service Request Management Analyst*, HP Enterprise Services, San Diego, CA 2006 – 2011

As an Input Team lead, I managed team of agents supporting Navy Marine Corp Intranet (NMCI).

- I used Active Directory to create/modify Workgroups, Users Accounts, and Machine names.
- I used Terminal Services client to create/change profile properties on Windows file servers.
- I trained and managed service request team agents, and trained newly hired agents.

### **Publications**

“The Initial-Final Mass Relation of White Dwarfs in Old Open Clusters”, December 2014 (in review) with Sandquist, E. L., Master's Thesis Defense, SDSU Astronomy Department

“Color Segmentation using Clustering in Color Wafer Images”, Society of Manufacturing Engineering, VISION '90, 1990, ISSN: 01616382

“Color Edge Detection for IC Inspection”, Master's Thesis, 200 pp, University of California, Santa Barbara Library Catalog, 1989

### **Awards/Honors/Memberships**

- Scholars without Borders Honors Society, SDSU
- San Diego Science Educators Association
- Tau Beta Pi Honors Engineering Society
- CSF Honors Graduate

### **Skills**

- Extensive experience with scientific applications programming (IRAF, IDL, FORTRAN, MATLAB, C/C++)
- Exceptional oral and written communications skills (MS Office, PowerPoint, LaTeX)
- Host communications and remote access tools
- Windows O/S, UNIX (Solaris, Linux), Apple Mac O/S

### **References**

- Dr. Gina Bochicchio, Professor of Geology, San Diego Miramar College
- Dr. Linda Woods, Professor of Chemistry Chair, Department of Physical Sciences, San Diego Miramar College
- Dr. Eric L. Sandquist, Astronomy, San Diego State University
- Dr. Richard Fielding, MSE Department, Southwestern Community College
- Dr. Douglas Leonard, Astronomy, San Diego State University
- Dr. Allen Shafter, Chair, Astronomy, San Diego State University