CURRICULUM VITAE

Chris Gabler

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Education

M.S., Astronomy, San Diego State University
M.S., Electrical & Computer Engineering, University of California, Santa Barbara
B.S., Chemical Engineering, cum laude, California State Polytechnic University, Pomona

Teaching Experience

Adjunct Professor of Science and Engineering,
Cuyamaca College – 2018 – current

- Descriptive Astronomy – ASTR 110
- General Astronomy Lab – ASTR 112L
- Digital Design with Lab – ENGR 270

Adjunct Professor of Physics and Engineering,
Point Loma Nazarene University – 2018 - current

- General Physics Lab – PHY 141L, 142L

Associate Faculty, Astronomy,
MiraCosta College -

- Descriptive Astronomy Lab – ASTR 101L 2017 – current
- Principles of Physics II - PHYS 152, 152L 2018 spring

Physics & Astronomy Teacher
Bayfront Charter High School - 2018 spring

- Introduction to Physics - 549 Physic-1, 2
- Introduction to Astronomy - 549 Astro-1, 2

Visiting Assistant Professor of Physics and Engineering,
Point Loma Nazarene University – 2015 - 2017

- Physics - Physical Science Lecture and Lab – PSC 110, PSC 110L
- University (calculus-based) Physics Lab – PHY 242L
- Classical Mechanics/Dynamics – PHY 341 (Fall 2017)
- General Physics Lab – PHY 141L, 142L
- The Cosmos (Introduction to Astronomy) Lecture – PSC 105

Visiting Assistant Professor of Physics and Engineering (continued)
Point Loma Nazarene University –

- Computational Methods for Engineers & Scientists II – EGR 110/120
- Engineering Mechanics, Mechanics of Materials – EGR 215, EGR 265
- Analog & Digital Electronics, Lecture and Lab - EGR 352, 422, EGR 352L, 422L
- Computer Interfacing, Mobile Robotics and Lab – EGR 432, 442, EGR 432L, 442L

Adjunct Professor of Astronomy
San Diego Miramar College 2015

- Descriptive Astronomy Lecture – ASTR 101

Adjunct Professor of Astronomy
Southwestern Community College 2012 - 2016

- Introduction to Astronomy Lecture – ASTR 100
- Introduction to Astronomy Lab – ASTR 109
- Principles of Physics Lab, Mechanics I – PHYS 271
- Principles of Physics Lab, Electromagnetics II – PHYS 273

Lead Teaching Associate
San Diego State University 2011-2012

- Introduction to Astronomy Lab – ASTR 109

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.

Research Publications

- Thesis (M.S. Astronomy, SDSU)
  "The Initial-Final Mass Relation of White Dwarfs in Old Open Clusters"
  http://astronomy.sdsu.edu/wp-content/uploads/2016/02/20141204_gabler.pdf
  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
  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

- "Color Segmentation using Clustering in Color Wafer Images", Society of Manufacturing Engineering, VISION '90, 1990, ISSN: 01616382
- **"**Color Vision System for Automated Inspection of Solar Panels**",** EEE/CHMT International Electronic Manufacturing Technology Symposium.

- "An Optical Alignment Robot System", Volume 703 of Proceedings of SPIE, International Society for Optical Engineering, Integration and packaging of optoelectronic devices.

Awards/Honors Memberships

- Scholars without Borders Honors Society, SDSU Astronomy
- Best Conference Paper Award: "Color Segmentation using Clustering in Color Wafer Images", Society of Manufacturing Engineering, VISION '90, 1990, ISSN: 01616382
- Center for Robotic Systems in Microelectronics Student, UC Santa Barbara
- Tau Beta Pi Honors Engineering Society, Cal Poly University, Pomona
- Cum laude graduate, Cal Poly Pomona, BS in Chemical Engineering
- Recipient of the Stauffer Chemicals Grant for academic achievement, Cal Poly Pomona
- Honors at Entrance, Dean's List & Honor Roll, Cal Poly University, Pomona