

## EDUCATION

8]ggYfhUjcb. [Ei Ubh a hfYUha Ybhcz]bhYfa i 'hd'YhfUbg]h]cbg Xi f]b[ BY\* (2d<sup>5</sup> 3p) + He collisions  
Uh\Yfa U' YbYf[ m Dc`Uf]nUjcb YZYWg. ]bhYfdFYhUjcb cZYI dYf]a Ybtrg.]  
Honors: Dissertation passed with the Distinction: [7cb[ fUhi `Uh]cbg cZh\Y ↑ fm]

H\Yg]g. [UgYf dfcXi WX-plasma on Aluminum targets using radiation from a CO<sub>2</sub> UgYf]

Areas of Concentration: Atomic, Molecular, Optical, and Laser Physics

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## ACADEMIC AWARDS

## TEACHING EXPERIENCE

Undergraduate: College Physics,

scratch a laboratory facility for the Optics course; Leading honors thesis (Joey Hunt). ]

[Development of courses and labs in physics.]

[Teaching physics labs and one course Modern Physics.]

Teaching recitations at the University Physics and College Physics levels.

- teaching recitations

- Development of on-line material. Please see the <http://sethi.lamar.edu/bahrim-cristian/cristian.html>.
- Peer-instruction as part of the STAIRSTEP sponsored program.
- I led more than 100 honors projects (contracts/thesis) while at Lamar.
- Faculty Collaborative for the College Career Readiness Initiative in Texas.
- Co-organizer of educational workshops. For example: (1) the workshops

ACADEMIC ADMINISTRATIVE & RELATED HIGHER EDUCATION EXPERIENCE

- Co-supervisor (with Dr. Rafi Tadmor, from Chem E) of one Ph.D. candidate in Chem. Engr., Mr. Ken Pepper. Ph.D. degree awarded in December 2015;
- Advisor of the Ph.D. candidate Hiraku Matsukuma from Kyoto University,

Physical Society: given at other meetings than those organized by the American



held in New Orleans (Sep. 11, 2015): Talk [7ci d]b[ two lasers on

- \_\_\_ Doerschuk, P., Bahrim, C., Daniel, J., Kruger, J., Mann, J., and Martin, C., "STAIRSTEP: An interdisciplinary program for retention and outreach in STEM," October 2011, pp.F4H-1 to F4H-6, doi: 10.1109/FIE.2011.6142757 (A peer reviewed international conference paper).
- \_\_\_ Matsukuma H., Bahrim, C., G\]\_Ua U H., UbX <Ugi c A., [8Ydc`Uf]nUh]cb cZYa ]gg]cb `]bYg Zfca dc`Uf]nYX bYcb 2d10 atoms due to radiation re-UVgcfdh]cb ]b [ `ck X]gV\Uf[ Y d`Uga U], (ISBN 2-914771-62-2) of 37<sup>th</sup> EPS Conference on Plasma Physics (Dublin, Ireland 2010) paper P4.408 (4 pages) (see <http://ocs.ciemat.es/EPS2010PAP/pdf/P4.408.pdf>)
- \_\_\_ Khadiilkar V., and Bahrim, C., [8]gcf]YbhUh]cb cZBY\*(2d<sub>i</sub>;J =1) atoms due to He atom collisions in glow discharges at 10 K <T O 3000 ?I, , art# 235209 (2010).
- \_\_\_ Prigmore, J., Tcheslavski, G., and Bahrim, C., "An IGCT-based Electronic Circuit Breaker design for a 12.47kv distribution system," pp.1-5 (5 pages) doi: 10.1109/PES.2010.5588055 (<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5588055>)
- \_\_\_ Bahrim, C., UbX ?\UX]\_Uf J., [5] ] ba YbhFY`Ul Uh]cb cZBY\*(2p<sub>i</sub> [J=1]) atoms induced by collisions with He(1s<sup>2</sup>) Urc a g ]b X]gV\Uf[ Yg UhY a dYfUh fYg Zfca 10 hc 3000 ?I, , art# 042715 (2009).
- \_\_\_ Bahrim, C., and Hsu W.-H., [DFYW]gY a YUgi rement of the refractive indices for dielectrics using an improved 6fYk ghYf Ub[ `Y a Y\cX], , (4), pp. 337-343 (2009).
- \_\_\_ Matsukuma H., Bahrim, C., UbX <Ugi c A., [8Ydc`Uf]nUh]cb cZYI W]hYX BY\* (2d<sup>5</sup>3p; J=1) atoms due to He atom Wt` ]g]cbg], , pp. 169-173 (2009)
- \_\_\_ Hsu W.-T. and Bahrim, C., [5VWVfUH] a YUgi fYa Ybhg cZfYZUW]j Y ]bX]Wg Zc f X]Y`YWf]Vg ]b Ub undergraduate optics laboratory for science and Yb[ ]bYYf]b[ ghi XYbhg], pp. 1325-1336 (2009).
- \_\_\_ Doerschuk, P.; Bahrim, C.; Daniel, J.; Kruger, J.; Mann, J.; Martin, C., "Work in progress - STAIRSTEP - a program for YI dUbX]b[ h`Y ghi XYbh d]dY`]bY, I 2, doi: 10.1109/FIE.2009.5350566.
- Bahrim C., ?\UX]\_Uf J., A Uhgj \_i a U <, UbX <Ugi c A., [5] ] ba YbhFY`Ul Uh]cb cZBY\* (2d<sub>i</sub>

art# 022722 (2000).

— Bahrim C., Hennecart D., Kucal H. and Masnou-GYYi k g : ., [ @cb[ ]hi X]bU' U][ ba YbhHfUbgZyf VYrk YYb Z]bY gHfi Wfi fY  
levels in Ne\* (2p<sup>5</sup>)





24. Bahrim C, and

40. with Keeley Townley-Smith (physics/EE major) and Gillian Nave (Researcher at NIST) [ @YUfb]b[ UVci h the composition of stars and atomic structure through gdYVfcgVc dnf. This UG conference is organized by the Office of UG Research.
41. Galveston (March 2014) with Vogler S. (physics/MA major) and Townley-Smith K. (physics/EE major) [5bU'mg]g of Lorentzian peaks in atomic UVgcfdh]cb gdYVfU UbX g\UdYg cZ[ 'ck ]b[ cV'YVg Zfca h\Y dc'Uf]nUq]cb cZ'[ \hYa ]hYX].
- (March 2014) with Sara-jeanne Vogler (d\mj]V/A 5 a U'cf) [8cb]h; Yh6i fbYX! DfchVW]cb Zfca =7A 9 F.Y'UHYX G9D 9] Ybfg ]b =bhYfd'UbYHJfmGdUWfI H\]g I ; VcbZYfYbW' ]g gdcbgcfYX VmH\Y B5G5 GWYbW' A ]gg]cb 8]fYV'cfUHY and Lunar and Planetary Institute.
43. (April 2014) with Keeley-Townley Smith (physics/EE major) [9a ]gg]cb and Absorption Spectroscopy and Polarimetry of Glowing Objects in

a U'c'f) [@[ \h-a Uhh'f ]bh'fUW]cbI.

56. organized

thermiques et superthermiques], 6U\fa 7., ?i W' <. UbX A Ugbci -Seeuws F, Proceedings.

[Collision  $\text{Ne}^* + \text{He}$  (quantum treatment)], 6U\fa 7., ?i W' <. UbX A Ugbci -Seeuws F, Proceedings.

[Population and Alignment Transfer between the Levels of the  $2p^53p$  Ne Configuration in Collision with Rare Gases], 6U\fa 7., A Ugbci -Seeuws F., Kucal H. and Dulieu O, Proceedings.

[CO<sub>2</sub> -TE Laser Produced Cadmium Plasma in Vacuum: Experiment and Kinetics], 5dcgtr` =, 6U\fa 6., 6U\fa C. and Vasilescu C., Contributed Papers, Part III pp. 2049.

[Elementary Processes in Laser Produced Aluminum Plasma], 6U\fa 7. UbX GW\by]XYf =: ., Proceedings.