

Dr. Jeffery A. Spirko

Texas A&M University-Corpus Christi

Science & Engineering, Physical & Environmental Sciences

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Education

PhD, Lehigh University, 2001.

BS, Lehigh University, 1995.

Professional Employment

Professional Assistant Professor, Texas A&M University - Corpus Christi. (September 2013 - Present).

Physics program coordinator, TAMUCC representative for the Texas Physics Consortium, and instructor of introductory Physics classes.

Research Consultant, Lehigh University. (January 2007 - Present).

Continued to collaborate, in part-time consultantion, with previous research group. Maintained Wien2k and VASP software and performed electronic structure calculations of novel semiconductor materials.

Instructor of Physics, East Stroudsburg University. (January 2007 - May 2013).

Taught introductory and upper-level Physics classes for undergraduate students. Taught one graduate-level Physics class.

Visiting Research Scientist, Lehigh University. (January 2002 - December 2006).

Post-doctoral research supervised by Chemistry Prof. Kamil Klier, in collaboration with Electrical Engineering Prof. M. Hatalis. Simulated electronic states and energies of novel semiconductor materials, performed measurements including fluorescence spectroscopy, SEM, and AFM.

Administrative Appointments

Department

Program Coordinator (2013 - Present)

Physics Program Coordinator in the PENS Department.

Professional Memberships

Texas Section - American Physical Society

American Physical Society

Sigma Xi, The Scientific Research Society

Tau Beta Pi

TEACHING

Teaching Experience

PHYS 1401, GENERAL PHYSICS I

PHYS 1402, GENERAL PHYSICS II

PHYS 2425, UNIVERSITY PHYSICS I
PHYS 2426, UNIVERSITY PHYSICS II
PHYS 3312, MODERN PHYSICS
PHYS 3331, MECHANICS I
PHYS 3332, ELECTROMAGNETIC FIELD THEORY
PHYS 3333, THERMODYNAMICS
PHYS 3334, MODERN PHYSICS I
PHYS 3490, SELECTED TOPICS: Radiation Detection
PHYS 4161, PHYSICS RESEARCH PROJECT
PHYS 4162, PHYSICS RESEARCH SEMINAR
PHYS 4330, MATH METHODS PHYSICISTS&ENGINE
PHYS 4335, QUANTUM PHYSICS
PHYS 4337, NUCLEAR PHYSICS
PHYS 4340, PHYSICS ADVANCED LAB

Non-Credit Instruction

PHYS-3331 Mechanics, Texas Physics Consortium. (August 2016 - December 2016).
PHYS-4330 Math Methods for Physics, Texas Physics Consortium. (January 2015 - May 2015).
PHYS-4340.100 Physics Advanced Laboratory, Texas Physics Consortium. (January 2015 - May 2015).
PHYS-3490.001 Radiation Detection, Texas Physics Consortium. (January 2015 - May 2015).
PHYS-4162 Physics Research Seminar, Texas Physics Consortium. (January 2015 - May 2015).
PHYS-3332 E&M, Texas Physics Consortium. (August 2014 - December 2014).
PHYS-3333 Thermodynamics, Texas Physics Consortium. (August 2014 - December 2014).
PHYS 3490.301 Astronomical Methods, Texas Physics Consortium. (August 2014 - December 2014).
PHYS-4335 Quantum Mechanics, Texas Physics Consortium. (August 2014 - December 2014).
PHYS 4161 Phys Research Project, Texas Physics Consortium. (August 2014 - December 2014).
PHYS-3331 Mechanics, Texas Physics Consortium. (August 2014 - December 2014).
PHYS-3312 Modern Physics, Texas Physics Consortium. (January 2014 - May 2014).
PHYS-3490 Medical Imaging, Texas Physics Consortium. (January 2014 - May 2014).
PHYS-3490.303 Thermodynamics, Texas Physics Consortium. (August 2013 - December 2013).
PHYS-3490.302 Quantum Mechanics, Texas Physics Consortium. (August 2013 - December 2013).

SCHOLARLY AND CREATIVE ACTIVITIES

Publications

Refereed

Journal Articles

Klier, K., Spirko, J. A., Landskron, K. (2015). Optical absorption anisotropy of high-density, wide-gap, high-hardnes SiO₂ polymorphs seifertite, stishovite, and coesite. *American Mineralogist*, 100(1), 120-129. <http://www.degruyter.com/view/j/ammin.2015.100.issue-1/am-2015-4890/am-2015-4890.xml>

Klier, K., Novak, P., Miller, A. C., Spirko, J. A., Hatalis, M. K. (2009). Electronic Structure of CeF₃ and TbF₃ by valence-band XPS and theory. *Journal of Physics and Chemistry of Solids*, 70(9), 1302-1311. www.sciencedirect.com/science/article/pii/S0022369709001917

Presentations

Spirko, J. A. (Author & Presenter), "Computer Modeling in Introductory Physics," PENS Faculty Meeting. (March 26, 2015).

Cohen, R. (Author & Presenter), Moore, M. A. (Author), Spirko, J. A. (Author), "Think Your Students' Math Skills Are Bad? Well, They're Worse!," AAPT 2012 Summer Meeting, American Institute of Physics Teachers, Philadelphia, PA. (July 31, 2012).

Cohen, R. (Author & Presenter), Moore, M. A. (Author), Spirko, J. A. (Author), "What Math is required for Physics?," 60th Annual Conference of the Pennsylvania Council of Teachers of Mathematics, Pennsylvania Council of Teachers of Mathematics, State College, PA. (November 10, 2011).

Contracts, Grants and Sponsored Research

Grant

Spirko, Jeffery A (Principal), "PHYS Lab Equipment," Sponsored by SOAR University Betterment, Texas A&M University-Corpus Christi, \$11,347.00. (May 2016).

Spirko, Jeffery A (Principal), Maloney, Brian (Co-Principal), "PHYS Lab Data Interfaces," Sponsored by SOAR University Betterment, Texas A&M University-Corpus Christi, \$12,000.00. (July 2014).

SERVICE

Department

Acalog scribe, Physics Program. (October 2013 - Present).
Program Coordinator, Physics Program. (September 2013 - Present).
BANNER Maintainer, Physics Program. (September 2013 - Present).
Faculty Advisor, Physics Advanced Laboratory. (January 2017 - May 2017).
Committee Member, PENS Lab Coordinator Hiring Committee. (July 2015).
de facto Laboratory Coordinator, Physics Program. (October 2014 - July 2015).
Faculty Advisor, Physics Advanced Laboratory. (January 2015 - May 2015).
Committee Member, PENS Lab Coordinator Hiring Committee. (March 2015).
Emergency Substitute, PHYS 1401.102 Lab. (August 2014 - December 2014).
Emergency Substitute, PHYS Lab. (February 2014 - May 2014).

College

Committee Member, Curriculum Committee. (October 2014 - Present).
Committee Member, Grade Appeal Committee Pool. (June 2014 - Present).
Committee Member, Grade Appeal Committee. (July 2014).

University

Committee Member, Core Curriculum Resource Group. (November 2013 - Present).
Student Recruiter, TAMUCC Island Day. (April 2017).
Student Recruiter, TAMUCC Island Day. (February 2017).
Student Recruiter, TAMUCC Island Day. (November 2016).
Student Recruiter, TAMUCC Island Day. (October 2016).
Committee Member, Calendar Committee. (August 2014 - August 2016).

Student Recruiter, TAMUCC Island Days. (April 2016).
Student Recruiter, TAMUCC Island Days. (February 2016).
Guest Speaker, CASA Writing Center. (February 2016).
Student Recruiter, TAMUCC Island Days. (November 2015).
Student Recruiter, Island Days Planning Meeting. (November 2015).
Student Recruiter, TAMUCC Island Days. (October 2015).
Student Recruiter, TAMUCC Island Days. (April 2015).
Student Recruiter, TAMUCC Island Days. (February 2015).
Committee Member, Student Lab Safety Training. (August 2014 - January 2015).
Student Recruiter, TAMUCC Island Days. (February 2014).
Student Recruiter, TAMUCC Island Days. (November 2013).

Professional

Committee Member, Texas Physics Consortium Faculty Council. (September 2013 - Present).

Public

Judge, Coastal Bend Regional Science Fair. (January 2017).
Judge, Coastal Bend Regional Science Fair. (February 2016).
Judge, Flour Bluff Intermediate Science Fair. (January 2016).
Judge, Flour Bluff Primary Science Fair. (December 2015).
Guest Speaker, Cyber Security Camp. (July 2015).
Mentor and Judge, Coastal Bend Engineering Competition. (March 2014).
Task Force Member, Corpus Christi Regional Science Olympiad. (March 2014).