**Deidra R. Hodges, Ph.D.**

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**(a) Professional Preparation**

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| Dillard University | New Orleans, LA | Physics | B.S., 1982 |
| Columbia University | New York, NY | Electrical Engineering | B.S., 1983 |
| Columbia University | New York, NY | Electrical Engineering | M.S., 1984 |
| University of South Florida | Tampa, FL | Electrical Engineering | Ph.D., 2009 |

**(b) Appointments**

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| 2014-present | Assistant Professor, The University of Texas at El Paso, El Paso, TX, Department of Electrical and Computer Engineering |
| Summers 2016-2019 | Visiting Faculty Fellow, Brookhaven National Laboratory (BNL), Upton, NY, Center for Functional Nanomaterials (CFN), and Nonproliferation and National Security Gamma Ray Room Temperature Radiation Detectors |

**(c) Products**

1. Castro-Colin, M., L. Banuelos, C. Diaz-Moreno, D. Hodges, E. Ramirez-Homs, D. Korolkov, N. Sharmin, and J. A. Lopez. "Temperature Effects in the Composition of Metal Halide Perovskite thin Films." (2018).
2. Rosales, C. A. G., Duarte, M. F. G., Kim, H., Chavez, L., Hodges, D., Mandal, P., ... & Tseng, T. L. B. (2018). 3D printing of shape memory polymer (SMP)/carbon black (CB) nanocomposites with electro-responsive toughness enhancement. *Materials Research Express*, *5*(6), 065704.
3. Giraldo, L. Ocampo, et al. "A linear array of position-sensitive virtual Frisch-grid CdZnTe for low-energy gamma rays." *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* 903 (2018): 204-214.
4. L. O. Giraldo, A. Bolotnikov, G. Camarda, G. De Geronimo, J. Fried, R. Gul*, et al.*, "Study of sub-pixel position resolution with time-correlated transient signals in 3D pixelated CdZnTe detectors with varying pixel sizes," *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment,* 2017.
5. Irakli Chakaberia ; Mircea Cotlet ; Merlin Fisher-Levine ; Diedra R. Hodges ; Jayke Nguyen ; Andrei Nomerotski; Time stamping of single optical photons with 10 ns resolution. Proc. SPIE 10212, Advanced Photon Counting Techniques XI, 102120Q (May 8, 2017); doi:10.1117/12.2262212
6. L. Ocampo Giraldo, A.E. Bolotnikov, G.S. Camarda, S. Cheng, G. De Geronimo, A. McGilloway, J. Fried, D. Hodges, A. Hossain, K. Ünlü, M. Petryk, V. Vidal, E. Vernon, G. Yang and R.B. James, Using a pulsed laser beam to investigate the feasibility of sub-pixel position resolution with time correlated transient signals in 3D pixelated CdZnTe detectors, *Nuclear Inst. and Methods in Physics Research, A,* http://dx.doi.org/10.1016/j.nima.2017.04.030
7. Aleksey Bolotnikov, Kim Ackley, Giuseppe S. Camarda, Carly Cherches, Yonggang Cui, Gianluigi De Geronimo, Jack Fried, Deidra Hodges, Anwar Hossain, Wonho Lee, George Mahler, Maxwell Maritato, Matthew Petryk, Utpal Roy, Cynthia Salwen, Emerson Vernon, Ge Yang, and Ralph James, "An array of virtual Frisch-grid CdZnTe detectors and a front-end ASIC for large-area position-sensitive gamma-ray cameras", *Review of Scientific Instruments*, 2015.
8. E. M. Deemer, P. K. Paul, F. S. Manciu, C. E. Botez, D. R. Hodges, Z. Landis*, et al.*, "Consequence of oxidation method on graphene oxide produced with different size graphite precursors," *Materials Science and Engineering: B,* vol. 224, pp. 150-157, 2017.
9. A. Mishra, J. Catalan, D. Camacho, M. Martinez, and D. Hodges, "Evaluation of physics-based numerical modelling for diverse design architecture of perovskite solar cells," *Materials Research Express,* vol. 4, p. 085906, 2017.
10. A. Mishra, D. Hodges, and R. Misra, "Influence of processing temperature and precursor composition on phase region of solution processed methylammonium lead iodide perovskite," *Materials Research Express,* vol. 4, p. 096201, 2017.
11. A. Mishra, A. Kumar, D. Hodges, and R. Misra, "Tunable TiO2–pepsin thin film as a low-temperature electron transport layer for photoelectrochemical cells," *Materials technology,* vol. 32, pp. 829-837, 2017.
12. Manuel Martinez, Shaimum Shahriar, Donato Kava, Cheik Sana, Vanessa Castañeda, Jose Galindo, Deidra Hodges**,** "Effects of Processing Parameters on Zinc Oxide Thin Films Prepared by Single Solution Deposition," *MRS Advances,*  2016 (DOI: 10.1557/adv.2016.328).
13. N. Sharmin, J. Lopez, D. Hodges, S. Shahriar, V. Castaneda, and M. Aditya, "Degradation of perovskite samples over time," *Bulletin of the American Physical Society,* vol. 61, 2016.
14. Jose Galindo, Chiek Sana, Shaimum Shahriar, Donato Kava, Manuel Martinez, Vanessa Castañeda, Deidra Hodges, “Room Temperature Processed CuSCN Hole Transportation Layers for the Use in Perovskite Based Solar Cells,” MRS Spring Meeting, Phoenix, Arizona, 2016.
15. Shaimum Shahriar, Cheik Sana, Jose Galindo, Donato Kava, Deidra Hodges, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen, “Characterization and Analysis of Structural and Optical Properties of Perovskite Thin Films” in *42th IEEE Photovoltaic Specialists Conference* *Proceedings*, New Orleans, LA, 2015.
16. Jose Galindo, Donato Kava, Shaimum Shahriar, Cheik Sana, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen and Deidra Hodges, “Low Cost Spin Coating Fabrication of Efficient Perovskite Thin Film Layers” in *42th IEEE Photovoltaic Specialists Conference* *Proceedings*, New Orleans, LA, 2015.
17. Deidra Hodges, Cheik Sana, Shaimum Shahriar, Jose Galindo, Donato Kava, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen “Earth Abundant and Nontoxic Material for Low Cost, Thin Film Solar Cells” *in* *Technologies for Sustainability (SusTech), 2015 IEEE Conference on*, Ogden, Utah, 2015.
18. Hasanul Karim, MD Rashedul Sarker, Shaimum Shahriai, Mohammad Shuvo, Diego Delfin, Deidra Hodges, Tzu-Liang Tseng, David Roberson, Norman Love, and Yirong Lin, "Feasibility Study of Thermal Energy Harvesting using Lead Free Pyroelectrics.", *Smart Materials and Structures*, 2016**.**

**(d) Awards and Honors**

1. UTEP College of Engineering Dean’s Award for Excellence in Teaching.
2. UTEP Electrical and Computer Engineering Class of 2016 Best Professor Award.
3. USF Presidential Leadership Award.
4. Alfred P. SLOAN and F.E.F. McKnight Doctoral Fellowships Awards.
5. Martin Marietta Manned Space Systems Thomas Jefferson Cup Award and Independent Research and Development of the Year Award.

**(e) Professional and Other Synergistic Activities**

1. National Renewable Energy Laboratory (NREL) Hands-on Photovoltaic Experience (HOPE) and Faculty Development Workshops, July 2019, July 2016 and June 2014.
2. NSF Panelist Reviewer and Journal Referee for Thin Solid Films Journal, Solar Energy, SPIE Optical Engineering and Journal of Applied NanoScience.
3. Conference Session Chairs for the 5th Southwest Energy Science and Engineering Symposium, and the College of Engineering Research Forum.
4. Professional Memberships: Institute of Electrical and Electronics Engineer (IEEE), Materials Research Society (MRS) and American Society for Engineering Education (ASEE).
5. User’s and Research Conference Participation and Presentations:
   1. 46nd IEEE Photovoltaics Specialists Conference, Chicago, IL, Perovskite poster presentations, 2019.
   2. 11th International Conference on Inelastic X-ray Scattering (IXS2019), Stony Brook University, NY, Perovskite posters presentations, 2019.
   3. AVS 64th International Symposium, Tampa, FL, “Synchrotron-Based X-ray Spectroscopy Studies of Inorganic-Organic Hybrid Perovskite Materials Surfaces and Properties”, 2017.
   4. DOE/ NREL HOPE, Golden, CO, “Understanding the power of PV and how our research will be used”, 2016.
   5. BNL Visiting Faculty Program (VFP), Upton, NY, “Perovskite PV, X- and γ–ray Detectors”, 2016.
   6. BNL CFN, Upton, NY, “Perovskite Photovoltaics and Gamma-ray Radiation Detectors Research Highlights”, 2016.
   7. IEEE Technologies for Sustainability, Ogden, Utah, “Earth Abundant and Nontoxic Material for Low Cost, Thin Film Solar Cells”, 2015.
   8. AVS 62nd International Symposium, San Jose, CA, “Spin Coating Thin Film CZTS for Efficient, Low-Cost Solar Cells on Flexible Glass Substrates”, 2015.
   9. 42nd IEEE Photovoltaics Specialists Conference, New Orleans, LA, Perovskite poster presentations, 2015.
   10. MRS 2016 Spring Meeting, Phoenix, AZ, Perovskite and CZTS poster presentations, 2016.
   11. Synchrotron User’s Conference at Brookhaven National Labs, Upton, NY
   12. Hopps Defense Scholars Conference at Morehouse College, Atlanta, GA