

## Shawn A. Hilbert, Ph.D.

Berry College  
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Mount Berry, GA, 30149

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### Professional Experience

#### **Berry College**, Mount Berry, GA

Assistant Professor of Physics

- Advisor Sigma Pi Sigma
- Advisor Society of Physics Students

August 2014 – present

March 2017 – present

August 2015 – present

#### **Texas Lutheran University**, Seguin, TX

Assistant Professor of Physics

- Department Chair
- Advisor Sigma Pi Sigma
- Advisor Society of Physics Students

August 2009 – May 2014

August 2014 – May 2014

August 2011 – May 2014

August 2011 – May 2014

#### **University of Nebraska—Lincoln**, Lincoln, NE

Visiting Research Professor

May-August 2010; May-August 2011

### Education

#### **University of Nebraska—Lincoln**, Lincoln, NE

*Doctor of Philosophy in Physics*

May 2009

Thesis Title: *Pulse Propagation of Sound, Light, and Electrons*

#### **University of Nebraska—Lincoln**, Lincoln, NE

*Master of Science in Physics*

May 2007

#### **Lebanon Valley College**, Annville, PA

*Bachelor of Science in Physics (minor in Mathematics)*

May 2004

### Professional Activities

**Wakonse Fellow**

Spring 2015

**Attended Assessment Conference at Texas A&M University**

Spring 2015

**Attended Vocation of a Lutheran College (VOALC) Conference**

Summer 2013

**Attended AAPT New Faculty Workshop**

Summer 2011

**Attended N-Gen Course Redesign Workshop at Univ. of North Texas**

Spring 2010

**American Association of Physics Teachers Member**

2009 – present

**American Physical Society Member**

2005 – present

## **Publications** (Italicized names emphasize undergraduate research student advisees)

8. *William Newman, Alexandria Skinner, Shawn A. Hilbert*,  
“An acoustic analog to the avoided crossing of energy levels”  
*American Journal of Physics*, accepted July 2017
7. *Marissa D’Onofrio, Mitchell Crum, Shawn A. Hilbert*, Herman Batelaan, *Timothy Canalichio, Tyler Bull*,  
“An acoustic analog for a quantum mechanical level-splitting route to band formation”  
*American Journal of Physics*, **84**, 841 (2016).
6. **Shawn A. Hilbert**, Adam Caprez, Herman Batelaan,  
“Experimental observation of time-delays associated with electric Matteucci-Pozzi phase shifts”  
*New Journal of Physics*, **13**, 093025 (2011).
5. **Shawn A. Hilbert**, *Amanda Neukrich*, Cornelius J. G. J. Uiterwaal, Herman Batelaan,  
“Exploring temporal and rate limits for laser-induced field emission”  
*Journal of Physics B*, **42**, 141001 (2009).
4. **Shawn A. Hilbert**, Cornelius J. G. J. Uiterwaal, Brett Barwick, Herman Batelaan, Ahmed H. Zewail,  
“Temporal lenses for attosecond and femtosecond electron pulses”  
*Proceedings to National Academy of Sciences, USA*, **106**, 10558 (2009).
3. **Shawn A. Hilbert**, Brett Barwick, *Mya Fabrikant*, Cornelius J. G. J. Uiterwaal, Herman Batelaan,  
“A high repetition rate time-of-flight electron energy analyzer”  
*Applied Physics Letters*, **91**, 173506 (2007).
2. **Shawn A. Hilbert**, Herman Batelaan,  
“Acoustic analog to quantum mechanical level splitting”  
*American Journal of Physics*, **75**, 1003 (2007).
1. Scott N. Walck, James K. Glassbrenner, Matthew H. Lochman, **Shawn A. Hilbert**,  
“Topology of the three-qubit space of entanglement types”  
*Physical Review A*, **72**, 052324 (2005).

## **Course Experience**

- Quantum Mechanics
- Quantum Mechanics II
- Modern Physics
- Optics
- Experimental Methods
- Advanced Experimental Methods
- Statistical Mechanics
- Classical Mechanics
- Advanced Classical Mechanics
- Introduction to Engineering (and labs)
- Engineering Physics (Fluid and Heat Flow)
- Algebra-Based Intro Physics (and labs)
- Calculus-Based Intro Physics (and labs)
- Introductory Electronics
- Senior Seminar

**Presentations** (Italicized names emphasize undergraduate research student advisees)

**17.** *Daniel Steinwachs, Andrew Lockhart, Alexandria Skinner, Shawn A. Hilbert,*

“A Classical Demonstration of Avoided Crossings with Springs,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**16.** *Alexandria Skinner, William Newman, Shawn A. Hilbert,*

“An Acoustic Analog to Avoided Crossing of Energy Levels,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**15.** *Parker Roberts, Alexandria Skinner, Shawn A. Hilbert, Scott Carr,*

“Band Structure for Atomic Orbital Analogs,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**14.** *Tadan Cobb, Daniel Steinwachs, Scott Carr, Shawn A. Hilbert,*

“Band Structure in Coupled Oscillators,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**13.** *Andrew Lockhart, Erin Bassett, Shawn A. Hilbert,*

“Progress Report on Exciting Non-Harmonic Resonances,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**12.** *Rachel Bibbey, Eric Vanderwolf, William Newman, Shawn A. Hilbert,*

“Slow Sound Via Dispersion in a Closed Tube,” poster,  
American Association of Physics Teachers Winter Meeting, February 2017

**11.** *Mitchell Crum, Marissa D’Onofrio, Shawn A. Hilbert,*

“Acoustic Analog to Level-Splitting Route to Band Gaps,” poster,  
American Association of Physics Teachers Winter Meeting, January 2016

**10.** *Shawn A. Hilbert, William Newman, Alexandria Skinner,*

“An Acoustic Analog to Avoided Crossing of Energy Levels,” poster,  
American Association of Physics Teachers Winter Meeting, January 2016

**9.** *Shawn A. Hilbert,*

“Active Reading Documents in Introductory Physics,” talk,  
American Association of Physics Teachers Winter Meeting, January 2015

**8.** *Timothy Canalichio, Tyler Bull, Shawn A. Hilbert, Herman Batelaan,*

“Acoustic Analog to Level-Splitting Route to Band Gaps,” poster,  
American Association of Physics Teachers Winter Meeting, January 2013

**7.** *Jessica White, Shawn A. Hilbert, Herman Batelaan,*

“Femtosecond Electron Switches via Plasmonic Antennae,” talk,  
Fall Meeting of the Texas Section of American Physical Society, October 2010

**6.** *Shawn A. Hilbert, Herman Batelaan,*

“Acoustic Analogs for Advanced Labs,” poster,  
Gordon Research Conference, July 2010

5. **Shawn A. Hilbert**, Herman Batelaan,  
 “Acoustic Analogs to Quantum Mechanical Level-Splitting,” talk,  
 Spring Meeting of the Texas Section of American Physical Society, March 2010
4. **Shawn A. Hilbert**, *Amanda Fricke*, Cornelis Uiterwaal, Herman Batelaan  
 “Femtosecond Electron Sources and Attosecond Electron Foci,” poster,  
 Division of Atomic, Molecular, Optical, and Plasma Physics Meeting, May 2008
3. **Shawn A. Hilbert**, *Noah Weiss*, Herman Batelaan  
 “Experimental Analog to Time-Independent Solutions to Schrödinger Equation,” poster,  
 Division of Atomic, Molecular, Optical, and Plasma Physics Meeting, May 2006
2. **Shawn A. Hilbert**, Brett Barwick, Herman Batelaan,  
 “Taking Stroboscopic Techniques to the Femtosecond Domain,” talk,  
 Nebraska Section of American Association of Physics Teachers Meeting, March 2006
1. **Shawn A. Hilbert**, Scott Walck  
 “Quantum Entanglement of Three Qubits,” poster,  
 Regional Meeting of American Association of Physics Teachers, March 2004

### **Grant Funding**

|  |                |
|--|----------------|
| Berry College Summer Research Stipend, \$5,000     | December 2016  |
| Thornton Fellowship, \$1,250                       | September 2016 |
| Berry College Travel Grant, \$1,300                | September 2016 |
| Thornton Fellowship, \$1,250                       | September 2015 |
| Berry College Travel Grant, \$1,300                | September 2015 |
| Berry College Travel Grant, \$2,500                | September 2014 |
| Texas Lutheran University Equipment Grant, \$3,400 | June 2013      |
| Summer Research Grant, \$7,000                     | May 2013       |
| Faculty Development Grant, \$1,200                 | April 2013     |
| Faculty Research Grant, \$1,100                    | September 2012 |
| Summer Research Grant, \$5,500                     | May 2012       |
| Brown Endowment Recipient, \$500                   | August 2012    |
| Brown Endowment Recipient, \$500                   | August 2011    |
| Faculty Research Grant, \$1,200                    | October 2010   |