

# Tom Withee

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## **Academic**

**Master of Science**, 2009, Southern Illinois University at Edwardsville, Edwardsville, Illinois.  
Thesis Title: Physics Articulation Impact on Success of SIUE Engineering Students. Thesis  
Committee Chair: Dr. Tom Foster.

**Bachelor of Science**, 2003, University of Illinois at Urbana/Champaign. Major: Engineering  
Physics, Minor, Mathematics.

## **Professional**

**Research Associate**, Goshen Education Consulting, Inc., May 2019 – current,  
Edwardsville, IL. Goshen Education provides education related data support and project  
evaluation services to universities, k-12 schools, and non-profits.

**Adjunct Instructor**, Southern Illinois University, Aug 2019 – current, Edwardsville, IL. Physics  
Department.

**Research Assistant**, Goshen Education Consulting, Inc., May 2011 – May 2019,  
Edwardsville, IL.

**Science Department Chair**, Collinsville High School, Aug 2013 – May 2019, Collinsville, IL.

**Secondary Science Educator**, Collinsville High School, Aug 2004 – May 2019, Collinsville,  
IL.

## **Honors/Awards/Service**

**External Advisory Board Member**, SIUE STEM Center, August 2017 – May 2019,  
Edwardsville, IL. Advised STEM Center Director on engaging with K-12 educators.

**Science Vertical Team Chair**, Collinsville CUSD#10, January 2015 – May 2019, Collinsville,  
IL. Aligned district curriculum to Next Generation Science Standards.

**Curriculum Council Member**, Collinsville CUSD#10, August 2012 – May 2019, Collinsville,  
IL. Assisted in developing teacher training to implement new standards and align curriculum.  
Advised administration on proposed curriculum changes.

## **Peer Reviewed Publications**

“Different Views on Inquiry: A Survey of Science and Mathematics Teachers”, Physics  
Education Research Conference Proceedings, 2005.

“Meeting the Needs of Our Future and In-Service Teachers: The Development and Implementation of a PER-Based Course to Teach Instructional Strategies in Astronomy, Physics Education Research Conference Proceedings, 2005.

### **Scholarly Activity**

Reviewer, Physics Education Research Conference Proceedings, 2005 Issue

### **Peer Reviewed Presentations**

“Online Homework or Paper and Pencil for High School Students?”, AAPT Winter Meeting 2009, Chicago, IL.

### **Professional Organizations**

American Evaluation Association (AEA), current member

Evaluation Association of St. Louis (EASL), founding and current member

American Association of Physics Teachers (AAPT), 2004 - 2019

National Science Teachers Association (NSTA), 2004 - 2019

Illinois Section of the American Association of Physics Teachers (ISAAPT), 2004 - 2019

St Louis Area Physics Teachers (SLAPT): Local affiliate of AAPT, 2004 - 2019

### **Current Projects** (Programs are listed by earliest to latest)

**StellarGirls.** January 2012 – August 2018. [After school program](#) and teacher workshop evaluation with the iBIO Institute [EDUCATE](#) Center focused on providing STEM experiences to middle school girls in Chicago Public Schools. Funded by Astellas Pharma US.

**National Science Foundation Noyce Science & Math Scholarship Programs.** September 2013 – August 2019. Project evaluation of two pre-service teacher [Noyce programs](#) at Southern Illinois University Edwardsville (SIUE) focused on preparing teachers to teach STEM and Math in underrepresented schools. Funded by the National Science Foundation.

**Swarovski Water School,** June 2016 – December 2019. Supporting the development a [Swarovski Water School](#) in the Southwestern Illinois communities near the Mississippi and Missouri rivers. Program funding from Swarovski Foundation.

**IARSS Teacher Shortage Survey.** IARSS. September 2015 – Current. Survey process and analysis to further understand the increasing challenges of filling licensed teaching positions and the perceived quality across the pool of applicants. See the following reports: [2015](#), [2017](#), [2018](#).

**iBIO EDUCATE STEMGirls Camp,** June 2016 –. Annual evaluation leadership and support for two one-week summer camps in Red Bud Illinois and Waukegan, Illinois that introduces girls to STEM concepts.

**National Science Foundation SIUE REU.** March 2017 – September 2019. Southern Illinois University at Edwardsville [STEM Center](#), Research Experiences for Undergraduates. Program evaluation for a summer-based undergraduate research immersion program. Funded by the National Science Foundation. See an article [here](#).

**Mascoutah Making Sense of Mathematics and Teaching**, September 2016 – December 2022. A program evaluation of an intensive K – 8<sup>th</sup> grade math program project that involves teacher professional development, summer school, and the development of parent resources. Program funding from the [Department of Defense Education Activity](#).

**Mascoutah STEM Project Lead the Way**, September 2017 – December 2023. A program evaluation of a implementation of Project Lead the Way in the middle and high schools. Program funding from the [Department of Defense Education Activity](#).

**OTHS MARS-CCR** (Mathematics for At-Risk Students for College and Career Readiness), September 2017 – December 2023. A program evaluation of a supplemental math program to support at risk students at O’Fallon Township High School District #203. Program funding from the [Department of Defense Education Activity](#).

**National Science Foundation Quincy University S-STEM**. January 2018 – December 2022. A management-oriented evaluation approach applied to a scholarship program that promotes science degrees for underrepresented rural students.

**National Science Foundation SIUE STEM+C**. January 2018 – December 2021. A research evaluation project focused on a program that further develops the Stellar Girls approach originally developed by the iBIO Institute EDUCATE Center. Read more [here](#).

**O’Fallon MSMT**. October 2018 – June 2023. The Making Sense of Mathematics and Teaching in O’Fallon CCSD #90 aims to deepen kindergarten through eighth military-connected students’ understanding of mathematics.

**OTHS ST<sup>2</sup>**. October 2018 – June 2023. O’Fallon Township High School District (OTHS) Science Today 4 Success Tomorrow (ST)<sup>2</sup>, will better outfit OTHS high school laboratories to mirror university laboratories, prepare students to complete college laboratory and course expectations with fidelity, and better equip military connected students to complete college science degrees.

**Middletown Public Schools MAP**. The Makerspaces Accelerating Project Lead the Way (MAP) project will improve science proficiency for kindergarten – 8th grade Middletown (RI) students using Makerspaces in two school libraries.

### ***Completed Projects***

**Create Music STEM Camp**. January 2017. One day workshop hosted by PEERS Foundation through the Maritz Arts and Education Fund for Teachers.

**St. Louis Science Center Focus Group**, October 2017. A series of two focus groups to help determine which special exhibitions to include.