

**Association of Teacher Educators /  
NASA STEM Educator Professional Development  
Collaborative**

***Joint Commission  
on STEM Education in the Future (2017-2020)***

**Final Report**

**Submitted to the ATE Board of Directors**

**Leslie Huling, Commission Chair  
Karen Embry-Jenlink, ATE President (2017-2018)**

**February 2020**

**Report of the ATE/ NASA STEM Educator Professional Development Collaborative (EPDC)  
Joint Commission on**

***STEM Education in the Future***

**December 2019**

**Overview:**

In 2017, ATE President Karen Embry-Jenlink worked with the NASA STEM Educator Professional Development Collaborative (EPDC) to appoint a joint commission on STEM Education in the Future for the purpose of exploring and framing issues related to STEM Education in which ATE has a stake and has the potential to impact positive change. The Commission commenced its work at the 2018 ATE Annual Meeting in Las Vegas, NV, and is on track to conclude its work at the 2020 ATE Annual Meeting in Atlantic City, NJ.

**Commission members:**

**Chair, Dr. Leslie Huling**, senior advisor of the LBJ Institute for STEM Education and Research and Project Director in the NASA STEM Educator Professional Development Collaborative project

**Dr. Barbara Buckner**, educator professional development specialist, Armstrong Flight Research Center, NASA

**Dr. Lori Fulton**, asst. professor, University of Manila at Honolulu, HI

**Dr. Harvey Henson**, joint appointment, Geology and Curriculum and Instruction, and director, STEM education center, Southern Illinois University, Carbondale, IL

**Dr. Romena Garrett Holbert**, associate professor, AYA science education director, Wright State University, Dayton, OH

**Dr. Laveria Hutchison**, associate professor, University of Houston, Houston, TX

**Dr. Ute Kaden**, associate professor, University of Alaska, Fairbanks, AK

**Dr. John R. McConnell III**, Associate dean of accreditation and assessment, associate professor, Austin Peay University, Clarksville, TN

**Dr. Araceli Ortiz**, director of the LBJ Institute for STEM Education and Research, assistant professor, Curriculum and Instruction, College of Education, Texas State University, and Principal Investigator, NASA STEM Educator Professional Development Collaborative

**Dr. Samuel Garcia**, educator professional development specialist, Kennedy Space Center, NASA

**Summary of Commission Activities and Contributions**

## **Commission Activities**

Over a three-year period (2017-2020), the ATE / NASA Commission met face-to-face at ATE annual meetings and online throughout the year to plan and evaluate Commission activities. The ATE/NASA Commission co-sponsored a two-day professional development STEM Learning Lab at each of the 2018, 2019, and 2020 ATE Annual Meetings and also at the 2018 Summer Conference in Pittsburgh, PA.

Commission Activities were further enhanced by contributions and in-kind support provided by the NASA STEM EPDC, which facilitated a keynote speaker for the 2018 ATE Annual Meeting presented by Dr. David Seidel from the NASA Jet Propulsion Laboratory.

The NASA STEM EPDC also funded program ads and conference bag inserts promoting the STEM Learning Lab during the three years of the Commission.

The Commission also engaged in several other publishing and conference pursuits as described below.

## **Commission Meetings**

- Feb. 18, 2018—Organizational Meeting at 2018 ATE Annual Meeting, Las Vegas NV
- Aug. 4, 2018—Commission Meeting at Summer 2018 ATE Meeting, Albuquerque, NM
- 2018 Online Commission Meetings—April 20, June 1, Oct. 12, and Dec. 14
- Feb. 17, 2019—Commission Meeting at 2019 ATE Annual Meeting, Atlanta, GA
- 2019 Online Meetings—Apr. 26, June 21, Aug. 16, Oct. 11 & Jan. 24 (2020)
- Feb. 16, 2020—Commission Meeting at 2020 ATE Annual Meeting, Atlantic City, NJ

## **ATE/NASA STEM Learning Labs & Commission-Sponsored ATE Events**

- **2018—Las Vegas, NV**
  - National press release for the launch of the Commission (02/06/2108)
  - Feb. 18—ATE Keynote presentation—Dr. David Seidel, NASA Jet Propulsion Laboratory
  - Feb. 18-19—ATE/NASA STEM Learning Lab (8 sessions over 2 days)
  - Full page program ad & conference bag insert
- **2018—ATE Summer Meeting—Albuquerque**
  - Aug. 5-6—Commission-sponsored STEM sessions (10 sessions over 2 days)
  - Full page program ad & conference bag insert
  - Participant evaluation of STEM Learning Lab
- **2019—Atlanta, GA**
  - Feb. 18-19—ATE/NASA STEM Learning Lab (10 sessions over 2 days)
  - Feb. 19—Featured Forum on STEM Education in the Future
  - Full page program ad & conference bag insert
  - Participant evaluation of STEM Learning Lab

- **2020—Atlantic City**
  - Feb. 17-18-- ATE/NASA STEM Learning Lab (10 sessions over 2 days)
  - Feb. 17—Featured Forum on Sustainability: A STEM Forum for Teacher Educators
  - Full page program ad & conference bag insert
  - Participant evaluation of STEM Learning Lab

**Research, Publishing and Other Related Pursuits:**

As a result of the Commission, several scholarly projects have been proposed and are under development. These are described as follows.

- Commission members developed and submitted a grant proposal in April, 2019, to Houston Endowment to support a STEM PD initiative in conjunction with the 2020 WFATE Conference. The submission was not selected for funding.
- Commission proposed a special theme issue of *Action in Teacher Education* (under review)
- Commission members were invited to submit chapters to a Handbook titled *Cultivating a Scientific Mindset in the Age of Inference* (edited by Philip Short, John McConnell and Harvey Henson). Several submissions have been accepted.
- Planning is underway for Commission members to deliver Professional development and/or sponsor an excursion to the NASA Space Center Houston during the 2020 World Federation of Teacher Educators (WFATE) Conference in Houston, TX on Nov. 13-15, 2020.
- Araceli Ortiz has invited proposal submissions for a research monograph / edited book titled *STEM Teacher Preparation at the Intersection of Innovation and Diversity*. The edited book will be published by Rowman and Littlefield.