

# Editorial

Dear Readers,

I am delighted to welcome you all to our newest journal edition, Volume 17 Issue 4 for winter 2016. This specific edition includes seven articles and a Research Brief. Starting this issue we are pleased to introduce an additional venue for STEM researchers to disseminate their research ideas to the community in the form Research Briefs. The Research Briefs would essentially be short write up on ongoing research to bring quick awareness on their significance and impact on the STEM community. The Research Briefs will not go through the regular peer review process but will be reviewed by me and my editorial staff for quick publication. There will be a nominal page charge for publication.

With that being said, this particular issue focuses on the importance of diversifying STEM programs and majors throughout the United States when it comes to choosing the different type of approaches to teaching STEM curriculum and design.

In the first article in this issue, author Calvin Briggs discusses the importance of involving more underrepresented minority students with STEM programs across the country and exposing them to the unique curriculum it offers in his article “The Policy of STEM Diversity: Diversifying STEM Programs in Higher Education”.

Next, in the article “Bridging the Valley: Recruiting and Retaining STEM Majors”, authors Robert Kolvoord, Robyn Puffenbarger, Raymond McGhee, Roman Miller, Kenneth Overway, Kenneth Phillips, Lynne Ryan, Jennifer Sowers, Jordan Brown, all collaborate in order to share the importance of the BTV project which was established to generate a greater desire to major in STEM disciplines in effort to obtain a degree in this field.

In the following article, “Foundations for Validating a Critical Thinking Rubric”, authors Paul Golter, Bernards Vanwie and Gary Brown analyze a study that is used to determine if there is a trend toward students giving low ratings and alumni giving high ratings in regards to how relevant the rubric is to a certain set of stakeholders, which is also comprised of the future employers of chemical engineering students.

Next, authors Matthew Franchetti and Sonny Ariss discuss the creation of several capstone projects that are used in order to better understand Engineering curriculum and expectations in their article “The Implementation of Senior Design Capstone Projects Combining Engineering and Business Students”.

Next, in the article “Using the Five Whys Method in the Classroom: How to Turn Students into Problem Solvers”, authors Saeed Moaveni and Karen Chou present an engineering practice used in civil engineering classes that is used to get students to figure out what problems or assignments they did incorrectly and be able to fix them on their own, thus developing successful engineers for the future.

In the following article, authors Saeed Moaveni, Supachard Krudtong and Karen Chou write about the finite element program, ANSYS, which is used to look at bolted connections and their failure modes in “Finite Element Modeling of Bolted Connections for a Steel Sculpture”.

Next, in the article “The Current Status of STEM Education Research 2013-2015”, authors Staci Mizell and Sue D. Brown analyze a STEM research project that originated from a paper written by Josh Brown in 2013.

Finally in the RESEARCH BRIEF, Boris Kiefer and Elba Serrano discuss their current and on-going efforts to investigate the impact that the New Mexico Nanoscience Education Network will have on future endeavors.

On behalf of myself and my editorial staff, we hope that this journal edition truly helps you all in understanding the importance of STEM Education and how to get more awareness about its benefits. As always your suggestions and comments are valuable and please do not hesitate to email me at [jestemed@gmail.com](mailto:jestemed@gmail.com) with your input. Wishing you every Happiness this Holiday Season and Throughout the Coming Year.

Regards,  
P.K. Raju  
Editor-in-Chief