

# Editorial



Dear reader:

Welcome to the inaugural electronic issue of the *Journal of STEM Education: Innovation and Research*, Volume 5, Issues 1&2, accessible through our website: [www.jstem.org](http://www.jstem.org). In this issue, we present six articles that you can now download as pdf files and print for your own use. We expect the electronic journal to make it possible for you to access the information in these papers more quickly and efficiently than in the past. As you use the articles, please be aware of the copyright restrictions stated in the table of contents page. You are encouraged to make a copy of the article for academic use, but if you intend to distribute a large number of copies to individuals you need to contact [editor@jstem.org](mailto:editor@jstem.org) to obtain permission.

The first article in this issue, contributed by Robert Pinsker, describes the EXtensible Business Reporting Language (XBRL) a non-proprietary, computer language that allows corporate entities to report their business information (i.e., financial statements, announcements, etc.) on the Internet and communicate with other organizations' computer systems, regardless of the specific hardware or software used. The second article, by James Newell and Doug Cleary, describes how undergraduate research projects can be used to address the growing industrial demand for solving problems using multidisciplinary teams. The next article, by Michael Marcus and Dixie Winters, describes a teaching methodology for collaborative problem solving that will especially benefit instructors from engineering technology programs. The article by Yusuf Mehta and Fazil Najafi illustrates a method by which the complex concepts involved in flexible pavement systems can be explained in a very organized manner that is easy to understand and visualize. The next article, by Janet Sharp and Loren Zachary, describes the use of theory to move students toward success as they learn to recognize and draw diagrams requiring complex spatial thinking. The final paper, written by Katherine Burgess, discusses the concept of problem-based learning and how it is particularly suited to teaching technological content.

All these papers are both interesting and thought provoking. We hope you will be inspired to try out some of these new methods of teaching STEM in your own classroom after perusing these papers. Please give us your feedback on the accessibility and usefulness of our electronic journal by sending us an e-mail to [litee@eng.auburn.edu](mailto:litee@eng.auburn.edu). We will be delighted if you are able to show your appreciation by sending a tax-free donation to the Institute for STEM Education and Research. You can do so by using the forms available at the journal website: [www.jstem.org](http://www.jstem.org). We are proud to inform you that Mr. George Hairston, President and CEO of Southern Nuclear, continues to be a leader in sponsoring the journal. In addition, we have received donations from the Hon. Vernon J. Ehlers, a member of the U.S. House of Representatives from Michigan, and faculty members from several different institutions. We thank them for these donations and sponsorships. Your donations, added to our sponsorship from industrial partners, allows us to maintain the high quality of this journal. We look forward to hearing from you.

We wish you a happy and productive summer break, so that you will return to the classroom refreshed and renewed for the new academic year.

Sincerely

P.K. Raju and Chetan S. Sankar