Home Page text

The Miami Engineering and Computing Review (MECR) is committed to the development of undergraduate research excellence at the College of Engineering and Computing at Miami University in Oxford, Ohio. MECR publishes undergraduate senior design projects and research to provide publication opportunities for engineering students, to promote a community of research, and to serve as an educational tool for prospective students. MECR aims to publish superb senior design projects after a peer-review process. The selection of papers reflects the wide range of topics related to design project analysis and variety of engineering disciplines. Miami University prides itself in its undergraduate engineering research, and an online journal provides recognition for hard working senior design teams and highlights their accomplishments.

Letter from the Editor

Abstract

Miami Engineering and Computing Review (MECR) is a student peer-review online journal focused on highlighting exceptional senior design teams and student accomplishments. Beginning in May 2012, MECR is the first student peer review journal produced by Miami Universities College of Engineering and Computing.   MECR strives to strike a balance of conforming the senior design project papers into journalistic format while preserving both the differences among engineering disciplines and the reflective senior experience. To this end the articles include reflections written by senior design team members and the reference style has been adjusted to reflect modern footnote style. The editors for the 2012-13 papers consist of six senior engineers with the expectation of publishing in the fall of 2013. The goal was to include work from all departments. Hopefully MECR will continue to grow and highlight exceptional projects and students.

Letter

In 2012 Miami University engineering students in conjunction with B.E.S.T Library began producing the Miami Engineering and Computing Review (MECR), an online journal where achievements and exceptionally senior design projects could be published. The organization continues to evolve with each iteration to better represent students and their accomplishments. This is the second iteration of the grass roots organization and there have been a few changes from the first year. The focus of the journal continues to be senior design projects, highlighting achievements of Miami University students. The 2013 editors set goals to find and publish five articles and at least one article from each of the department in the School of Engineering and Applied Sciences (SEAS); chemical engineering, mechanical engineering, electrical engineering and computer science departments.

Senior design is the year long Capstone experience for Miami University Engineers. Engineering students under the direction of a faculty advisor apply what they have been learning in their time at Miami to tackle a real world problem through the design process. The papers written at the end of this year long experience have distinct flavors based upon which discipline of engineering was the focus. Most departments hold to a traditional journal article core while added reflection sections where the students elaborate on the experience and impact of their projects. Other departments, such as computer science, use a distinct style tailored to specifically to the field. Professional journals homogenize each article to have a uniform style and appearance, however the 2013 editors felt it was important to retain the characteristics making departments distinct and the reflection portions as they tie explicitly to how the experience affected students. Previously the 2012 editors chose to homogenize the citation styles using parenthetical citations. The 2013 editors opted to standardize citations with a footnote style in order of appearance that has been adopted by most large professional journals, such as Nature, to better reflect modern journals and to facilitate the reader as this style is most convenient. MECR has attempted to preserve the senior design nature of each paper while standardizing some aspects to balance staying true to the scope of the project and resembling a professional journal.

The timetable for the publication is problematic. The papers are received at the end of the second term of the senior design class. The majority of students graduate after completing their senior design class and can be difficult for the editors to contact. In 2012 the editors worked from the mid-term versions of each paper, finishing the editing before the end of the senior design classes. The 2013 editors elected to collect final papers for selection at the end of the second term of senior design classes, edit during the fall semester then publish. Each approach has advantages and disadvantages, with more iterations MECR will find a timetable that works well.

The editors are engineering students and have or were in the process of completing their own senior design projects while editing and reviewing the final papers of the previous year. An effort was made in the selection was the editors to have at least one representative from each of departments of SEAS.   Reviewing the final papers of peers for potential publication put the editors in a position that allowed for a different perspective on the work that they have or will do, which encouraged personal growth while enhancing perspective. Involvement in MECR has been an education and rewarding experience for all of the editors. Hopefully, the organization will continue to grow and become an integral part of the College of Engineering and Computing.

Best,

Matthew Hagen
MECR Editor-in-Chief