

## Editorial

---

We are pleased to publish our first issue for the year 2005 and include four articles and a case study for your perusal.

In the first article, M.A. Matin discusses optoelectronics devices and systems that are essentially electronic in nature but involve light, such as light-emitting diodes, photodetectors, and lasers. He integrates a laboratory segment with the lectures, forming the basis of an effective learning strategy in order to teach optoelectronics to undergraduate engineering students.

Vincent Wilczynski, Gregg Dixon, and Eric Ford highlight the use of a comprehensive activity based course to introduce second year students to mechanical engineering design. They report that the use of rapid prototyping kits enables sophisticated electro-mechanical systems to be developed and remotely controlled using wireless communications.

Teresa Larkin and Sarah Belson discuss how Blackboard Learning Systems can be used to encourage on-line chatting among students in an introductory physics course. They note that instruction that is responsive to individual learning styles is especially critical as the pool of students becomes more and more diverse.

Arif Sirinterlikci, Kayne Toukonen, Steve Mason, and Russel Madison describe an animatronic robot that was constructed for a senior design project. The project provided a useful opportunity for the students involved to apply the theories they had learned in the classroom to an interesting and practical real world application.

Guy Tchibozo brings to the readers highlights of the education system of STEM teachers in France. He also discusses the competitiveness of the program and analyses the determinants of successful performance of STEM teachers preparing for these assignments.

A case study on See-Saw Jeans by Charlotte Sutton describes a company that manufactures clothing for children. The case study examines the problems frequently encountered when technologically sophisticated “techies” try to implement changes that affect those who may be more technologically challenged (“non-techies”). The case highlights the gap in interests, knowledge, and perspectives between the two groups.

The innovative educational experiments reported by the authors in this issue provide us with a valuable information base that we can learn from and improve upon to make us better teachers of science and technology, allowing us to excel in our chosen profession. Please share your innovative instructional materials with us by contributing articles and case studies for future issues of our journal. We look forward to exchanging ideas for new approaches with you and hearing what you have to say.

**P.K. Raju and Chetan S. Sankar**  
Editors-in-Chief