

Editorial

THIS IS our second special issue on mechanics initiated at Penn State University. The interest in mechanics education is experiencing a renaissance. Gone are the days of dry presentations of poorly digestible theory by lecturers at the blackboard. The immanent computer has an entrenched position in both delivery and analysis in all mechanics courses.

Trends in curriculum reform triggered by the National Science Foundation's sponsored Foundation Coalition are of fundamental importance in the reform of mechanics as well all other fundamental courses in engineering science subjects. In this issue **Cornwell** and **Fine** describe one such reform implemented at the Rose-Hulman Institute of Technology. In the last issue (Volume 16 number 4) **Lagoudas et al.** described reform on similar lines at Texas A&M University. The framework of the revised undergraduate engineering curriculum rests on the incorporation of conservation principles and their application to engineering science as a foundation for all engineering disciplines. The conservation of mass, linear momentum, angular momentum, energy and charge are introduced as accounting principles under a unified mathematical methodology. The introduction of these reforms has provided a basis for a new concept and a unified approach in the engineering sciences including mechanical, aerospace, electrical and civil engineering. Moreover, the reforms were instituted using new curriculum management approaches aimed at reducing resistance to curriculum change—the traditional obstacle to reform. The methodology of curriculum change management will be described in a forthcoming paper by **Fournier-Bonilla et al.** (to be published).

Renata Engel is the guest editor responsible for this issue. She has provided us with a valuable resource on trends in mechanics education. I am most grateful to her for her resourcefulness and the time she spent over and above all regular commitments as a member of the academic staff at Penn State University.

In addition to our planned special issues on varying subjects such as Engineering Design, Learning Styles and Virtual Universities, we are also extending our web resources with an interactive learning links collection. The initial links provide resources in electrical engineering, activated as tutorials and interactive laboratories. You are cordially invited to visit our website at <http://www.ijee.dit.ie> to view and comment on the new features.

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