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An innovative improvement of engineering learning system using computational fluid dynamics concept.

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Summary: An innovative concept of an electronic learning system has been established in an attempt to achieve a technology that provides engineering students with an instructive and affordable framework for learning engineering-related courses. This system utilizes an existing Computational Fluid Dynamics (CFD) package, Active Server Pages programming, Hyper Text Markup Language web page, and a database in the development of a user-friendly interface for the e-learning system. The structure of this learning system includes three components: a pre-processor which creates and defines the problems, a control program which links CFD package; searches for the identical problem with previously executed results or creates a new CFD execution and then saves the results in the database, and a post-processor which yields a graphic presentation of the computational results. This system would provide engineering students with a solid comprehension of the physical phenomena by changing the input parameters of a specific problem.

Classification: M55 R35

Keywords: CFD; ASP; HTML; database; e-learning

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