Title:
Use of a Genetic Algorithm for class scheduling in a large Physics Department

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Abstract:
In this talk, work in implementing a Genetic Algorithm (GA) to create teaching schedules for ~50 professors into ~200 classes in a university physics department is discussed. This will include how a scheduling "fitness function" was developed, followed by a look at interpretability and performance of the algorithm. Emphasis will be placed on how the GA is very natural in assigning, assessing, and adapting class placement as it optimizes the overall fitness. This helps to demonstrate transparency and fairness in the highly visible result, which is very important when scheduling people. This will be followed by a short discussion on how the Prolog language is used to further refine the resulting schedule. Lastly, I'll discuss how a "physics professor" came to be interested in AI and visiting with your group.