Aspect-Oriented Programming compliments Object-Oriented Programming by modularizing code that would otherwise be scattered and tangled throughout a system. Since its inception in the last decade, it has made a substantial impact in both academia and industry, with many Aspect-Oriented languages emerging. It has influenced many new language features, such as method interceptors in .NET and categories in Objective-C, as well as application frameworks, such as Spring and JBoss.

While providing many benefits, however, Aspect-Oriented programs can experience other complications as software evolves. Because the paradigm relies on queries over the program’s dynamic execution, certain program changes can adversely effect to function. Deciding which queries have broken is a daunting venture, especially in large and complex systems. In this talk, Dr. Khatchadourian will present his ongoing, joint work on an automated approach that recommends likely modifications to aspects due to a certain code change. The approach has been implemented as an open-source extension to the popular Mylyn Eclipse Integrated Development Environment plugin, which maintains focused contexts of entities relevant to the task at hand.

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