

#### **SDSU**

presents
a thesis defense for
Master of Science
degree in
Computer Science

Tuesday, October 13, 2015

> 10:30am GMCS 405

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## BioBranch An Interactive, Web-based Tool for Building Decision Tree Classifiers

### Abstract

BioBranch is a visual analysis tool for building the decision trees using genomic expression datasets. This tool enables us in capturing the complex interactions between biological variables and phenotypes in a that would otherwise need an extensive computational sophistication. It also enables us to manually intervene in building the decision tree using the prior knowledge of biology in the course of construction. In addition, it allows experts to participate directly with the high-throughput datasets without a need for intervention for a team of bioinformaticians. This tool can inform the biological researchers and help to produce more accurate and meaningful classifiers.

### Thesis Committee

Carl Eckberg, Thesis Chair, Department of Computer Science Mary Thomas, Department of Computer Science Janusz Supernak, Dept. of Civil, Construction & Environmental Engineering