



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

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5:15pm  
GMCS 418

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*Formal Automata*

## Abstract

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In this project, a web-based deterministic finite automata support system was developed. The goal was to provide online technical support for either teaching formal language classes or studying by referring to this material. All the concepts underlying automata technology were explored and are hereby discussed in detail. These include formal languages, high-level programming languages, database systems, web servers, web synchronization languages and libraries, web-based application development and automata generation from formal grammars. Finally a web-based deterministic finite automata system was developed and deployed on an Apache Tomcat web server using MySQL data base management system. The problems were addressed but still a challenge remains. This report recommends future research and work that can improve the technology further, especially in terms of the range of recognized languages.

## Thesis Committee

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Carl Eckberg, Thesis Chair, Department of Computer Science  
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Carmelo Interlando, Department of Mathematics & Statistics