



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

Thursday,  
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1:00pm  
GMCS 405

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# Lakshmi Vijayachandran

*Convert sdo\_geometry objectS to esri shapefiles*

## Abstract

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SDO\_GEOMETRY is a spatial database object type that can be used to store a wide variety of spatial data like points, lines, polygons etc. Different mapping tools like Shape Objects, Shape Viewer etc., or full featured GIS products like ArcGIS, are used to visualize spatial data. These mapping tools for visualizing and analyzing spatial data primarily expect the input to be in the form of ESRI shapefiles. Shapefiles provide a simple, non-topological file format for storing geographic and attribute data. It is comprised of three main files with extensions .shp, .shx and .dbf. The .shp file has geodetic descriptions, the .shx file is an index into the shape file, and the .dbf file contains the descriptive attributes of the spatial object, such as name, area, length, population, etc. This thesis concentrates on developing a software tool to convert Oracle spatial tables, which contain an SDO\_GEOMETRY column, into ESRI shapefiles to achieve the inverse functionality of shp2sdo, available on Oracle website.

To be precise, the SDO\_GEOMETRY column in an Oracle spatial table has the locational information, and this is transformed to .shx and .shp files; the non-locational information in the table is translated into a .dbf file.

## Thesis Committee

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Carl Eckberg, Thesis Chair, Department of Computer Science  
Roger Whitney, Department of Computer Science  
Michael O'Sullivan, Department of Mathematics & Statistics