

Visions and Voices and the USC Libraries have collaborated to create a series of resource guides that allow you to build on your experiences at many Visions and Voices events. Explore the resources listed below and continue your journey of inquiry and discovery!

LEARNING and INNOVATION

21st-Century Model Making and Prototyping

USC LIBRARIES RESOURCE GUIDE

VISIONS AND VOICES presents a discussion with **DR. ZOZ BROOKS** of the **DISCOVERY CHANNEL'S PROTOTYPE THIS**. The event includes a panel discussion featuring **MARTY DOSCHER**, IT/CAD manager at **MORPHOSIS**; **SCOTT EASLEY**, assistant director of **USC'S GAMEPIPE LABORATORY**; **MARK GANTER**, a 3-D graphics and mechanical engineering professor at **UNIVERSITY OF WASHINGTON**; and **NEIL LEACH**, professor of architecture at **USC**.

SARA TOMPSON, associate dean for public service at the **USC LIBRARIES** and **EMILY ROSS**, a civil engineering student and library assistant, have selected the following resources to help you further explore this topic. Please visit libguides.usc.edu/prototyping for additional resources.

INTRODUCTION

The 21st century has inspiring new tools for fabrication, design, and production that facilitate the creation of 3-D models and prototypes across all disciplines. This technology can speed up the process of innovation and learning through the rapid and accurate actualization of 3-D graphics.

DEFINITIONS

- The *three (3) dimensions* in our universe are height, width, and depth.
- A model is a representation of something else, usually an object or a process.
- A prototype most often means a full-scale model of an object, particularly in engineering.

SELECTED PRINT BOOKS

Luftwaffe X-Planes: German Experimental and Prototype Planes of World War II

By Manfred Griehl

Doheny Memorial Library D787.G75 2004

Rapid Prototyping and Engineering Applications: A Toolbox for Prototype Development

By Frank W. Liou

Science & Engineering Library Reference TS171.8.L56 2008

Prototype-Based Programming: Concepts, Languages, and Applications

By James Noble

Science & Engineering Library QA76.64.P78 1999

Presence: The Inherence of the Prototype within Images and Other Objects

By Rupert Shepherd

Architecture & Fine Arts Library N7430.5.P74 2006

SELECTED ELECTRONIC BOOKS

The following e-books are available through the eBrary Electronic Library, which you can access by clicking on the Databases link from the USC Libraries' home page at www.usc.edu/libraries. If you are visiting the site from off-campus, you must first authenticate with your USC username and password.

Responsive Production and the Agile Enterprise

By Paul Forrester

Rapid Prototyping of Digital Systems

By James O. Hamblen and Michael D. Furman

Rapid Tooling: Technologies and Industrial Applications

By Peter D. Hilton and Paul F. Jacobs

Systems Approach to Engineering Design

By Peter Sydenham

Chapter 11 is titled "Prototyping and Modeling in Design."

RECOMMENDED ARTICLE CITATION DATABASES

Engineering Village 2 includes the Compendex and Inspec article citation databases, which cover most fields of engineering and computer science. EV2 has direct links to all the articles in journals to which the USC Libraries subscribe. This database is a great place to start your research.

The multidisciplinary **ProQuest** suite of databases also cites numerous articles dealing with prototyping and modeling topics. ProQuest contains thousands of full-text articles in PDF format, as well as links to the articles. If you are interested in prototyping in specific disciplines, you may want to search for journal articles via these citation databases as they contain a great deal of relevant content:

- **ACM Digital Library** (all of the Association for Computing Machinery journal publications)
- **Aerospace and High Technology Database**
- **Earthquake Engineering Abstracts**
- **IEEE Xplore** (journals, conference proceedings, and some standards)