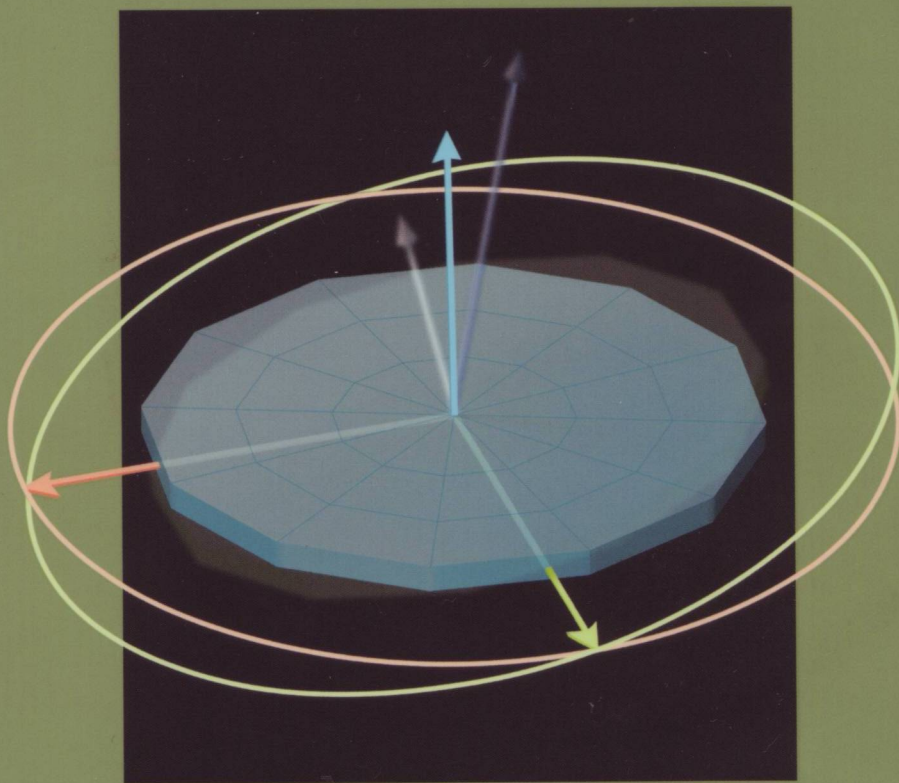


CD of Source Code
and Examples Included

OPEN SOURCE PHYSICS

A User's Guide with Examples



Wolfgang Christian

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Project Management and Composition: Techsetters, Inc.
Cover Illustration: Blake Kim
Cover Designer: Lisa Devenish
Text Printer: R.R. Donnelley, Crawfordsville
Cover Printer: Phoenix Color

Library of Congress Cataloging-in-Publication Data

Christian, Wolfgang.

Open source physics : a user's guide with examples / Wolfgang Christian.—1st ed.
p. cm.

ISBN 0-8053-7759-X (alk. paper)

1. Physics—Data processing. 2. Physics—Simulation methods. 3. Physics—Computer simulation. 4. Object-oriented methods (Computer science) 5. Open source software. I. Title.

QC52.C57 2006

530.01'13—dc22

2005030859

(ISBN) 0-8053-7759-X

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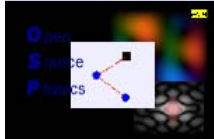


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Open Source Physics Examples

OSP is an NSF-funded curriculum development project that is developing and distributing a code library, programs, and examples of computer-based interactive curricular material. Follow the links in the table of contents to see these examples:

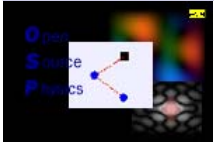
- **Screenshots**
shows visualizations that can be created with the OSP library.
- **Guide** contains material from *Open Source Physics: A User's Guide with Examples* by Wolfgang Christian.
- **CSM** contains material from *An Introduction to Computer Simulation Methods* 3rd Edition by Harvey Gould, Jan Tobochnik, and Wolfgang Christian.
- **Physics**
contains examples of advanced physics curricular material developed at Davidson College by Mario Belloni and Wolfgang Christian. This material is described in Chapter 15 of the *Open Source Physics: A User's Guide with Examples*.
- **QuILT**
contains Open Source Physics examples developed to support Quantum Interactive Learning Tutorials (QuILT) written by Chandralekha Singh.
- **STP**
contains examples of statistical and thermal physics (STP) curricular material developed at Kalamazoo College and Clark University by Jan Tobochnik and Harvey Gould.
- **EJS**
contains examples built using the Easy Java Simulations modeling program by Francisco Esquembre.
- **Humenne** contains examples from the Humenne, Slovakia physics club.

The `source`

directory on this CD contains zip files with code for the examples in this section. The `projects` directory on this CD contains additional material but the source code for these projects is not included in the CD because the code is large and requires additional non-OSP packages. Binary (compiled) versions are included in the `projects` directory and source code is available from the project authors/developers.

The Open Source Physics CD is distributed with the book *Open Source Physics: A User's Guide with Examples*.

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Humenne

Overview

Feynman's wobbling plate

Millikan experiment

Electric fieldlines of an accelerated charge

Satellite orbits

General relativistic orbits

Java 3D required

Gyroscope in gimbals

Double pendulum

Hypercube projections

The OSP website

Humenne Physics Club

These programs (applications and applets) were written by Slavomir Tuleja and Jozef Hanc and their Slovakian students using the Open Source Physics code library and were presented at the 2004 Open Source Physics workshop at Eckerd College. This material demonstrates the flexibility of the OSP approach to computational and theoretical physics, curriculum development, and teaching.

Source code is available in the in the [/examples/humenne/source](#) directory.

Note that three programs in this section require that the Java 3D library be installed. Java 3D can be obtained from the Java 3D developer website: <https://java3d.dev.java.net/>.

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