



Open Source Physics Collection

 Indicates a research-demonstrated benefit

Overview

Open source code libraries, tools, and compiled simulations. Collection includes curriculum resources for physics, computation, and computer modeling.






Type of Method

Curriculum supplement, Computer simulations




Level

Designed for: Intro College Calculus-based  , Intro College Algebra-based  , Intermediate, Upper-level Undergraduate, Graduate School

Can be adapted for: High School  , Teacher Prep Course, Teacher Professional Development



Setting

Designed for: Lecture - Small (<30 students)  , Lab, Homework, Studio

Can be adapted for: Lecture - Large (30+ students)



Coverage

Few topics with great depth, Many topics with less depth



Topics

Mechanics, Electricity / Magnetism, Waves / Optics, Thermal / Statistical, Modern / Quantum, Mathematical, Astronomy



Instructor Effort

Low



Resource Needs

Projector, Computers for students





Skills


Designed for: Conceptual understanding  , Problem-solving skills 

Can be adapted for: Lab skills



Research Validation

Based on research into: theories of how students learn  , student ideas about specific topics 

Demonstrated to improve: conceptual understanding 



Compatible Methods

[Peer Instruction](#), [PhET](#), [UW Tutorials](#), [JiTT](#), [Ranking Tasks](#), [ILDs](#), [CGPS](#), [Physlets](#), [Context-Rich Problems](#), [RealTime Physics](#), [Workshop Physics](#), [TIPERs](#), [ABP Tutorials](#), [SCALE-UP](#), [Modeling](#), [SDI Labs](#), [OST Tutorials](#), [ISLE](#), [Thinking Problems](#), [Workbook for Introductory Physics](#), [LA Program](#), [PET](#), [PSET](#), [LEPS](#), [CAE TPS](#), [Lecture-Tutorials](#), [Astro Ranking Tasks](#), [MBL](#), [New Model Course](#), [CPU](#), [SCL](#), [TEFA](#), [CU Modern](#), [CU E&M](#), [CU QM](#), [QuILTs](#), [IQP](#), [Thermal Tutorials](#), [Mechanics Tutorials](#),

[Energy Project](#), [SGSI](#), [Paradigms](#), [PUM](#), [EiP](#), [Tools for Scientific Thinking](#), [M&I](#),
[Tutorials](#), [Clickers](#), [MOP](#)



**Similar
Methods**

[PhET](#), [Physlets](#), [CPU](#)



Developer(s)

Wolfgang Christian, Douglas Brown, Fransisco Esquembre



Website

<https://www.compadre.org/OSP/>