



## 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/>