

Programa Tracker



PROGRAMA QUE XENERA UNHA TÁBOA DE DATOS DE TEMPO E DESPRAZAMENTO

Software libre que permite a análise de movementos e a creación de modelos deses movementos mediante a obtención de datos a partir dun vídeo.

Foi creado como ferramenta para o ensino da Física en secundaria superior e primeiros anos de grao universitario.

[Páxina web](#): descarga da versión para Windows, Linux, MacOS, versión online (precisa de JAVA), información, repositorio de actividades, etc.:

[Tracker Home](#) | [Help](#) | [Share](#) | [OSP Home](#) | [Discussion Group](#) | [Email Doug](#)

 **Tracker**
Video Analysis and Modeling Tool

 **Tracker 6 runs online!**

Over 1 million users in 26 languages. Completely free and open source.

Tracker 6.0.1 installers: [Windows](#) | [MacOS](#) | Linux soon

Mac OS users: control-click the installer and choose Open from the popup menu rather than double-clicking.
Already have Tracker? Upgrade using the installers above.

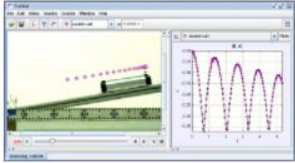
[Installer Help](#) | [Change Log](#) | [Discussion Forum](#)

Tip: save your work as a [Tracker Project](#). Easy to build and share. Easy to browse in the [Library Browser](#).

What is Tracker?

Tracker is a free video analysis and modeling tool built on the [Open Source Physics](#) (OSP) Java framework. It is designed to be used in physics education.

Tracker **video modeling** is a powerful way to combine videos with computer modeling. For more information see [Particle Model Help](#) or AAPT Summer Meeting posters [Video Modeling](#) (2008) and [Video Modeling with Tracker](#) (2009).



Installing and using Tracker

To install Tracker, download and run the appropriate installer using the links at the top of the page. Tracker comes with its own Java VM and Xuggle video engine. For help see [Installer Help](#).

Supported languages: english, arabic, czech, danish, german, greek, spanish, finnish, french, hungarian, indonesian, italian, hebrew, korean, malaysian, dutch, polish, portuguese, slovak, slovenian, swedish, thai, turkish, vietnamese, simplified chinese, traditional chinese. Interested in translating to another language? Please contact [Doug Brown](#).

If you're new to Tracker, see [Help Getting Started](#) for a step-by-step beginner's guide or [Getting Started with Tracker](#) for a video tutorial. For general help, use and search the built-in help files in Tracker, the online help in [English](#) or [Slovensčina](#), or the downloadable pdf help files in [English](#), [Español](#), [Eλληνικά](#), [Italiano](#) or [Português](#).

You can run Tracker from a USB drive without installing it on the host computer. See [Installing Tracker on a USB or other portable drive](#) for more information.

Tracker Features

Tracking:

- Manual and automated object tracking with position, velocity and acceleration overlays and data.
- Center of mass tracks.
- Interactive graphical vectors and vector sums.
- RGB line profiles at any angle, time-dependent RGB regions.

Modeling:

- Model Builder creates kinematic and dynamic models of point mass particles and two-body systems.
- External models animate and overlay multi-point data from separate modeling programs such as spreadsheets and [Easy Java Simulations](#).
- Model overlays are automatically synchronized and scaled to the video for direct visual comparison with the real world.

Video:

- Free Xuggle video engine plays and records most formats (mov/avi/flv/mp4/wmv etc) on Windows/OSX/Linux.
- Video filters, including brightness/contrast, strobe, ghost trails, and deinterlace filters.
- Perspective filter corrects distortion when objects are photographed at an angle rather than straight-on.
- Radial distortion filter corrects distortion associated with fisheye lenses.
- Export Video wizard enables editing and transcoding videos, with or without overlay graphics, using Tracker itself.
- Video Properties dialog shows video dimensions, path, frame rate, frame count, more.

Data generation and analysis:

- Fixed or time-varying coordinate system scale, origin and tilt.
- Multiple calibration options: tape, stick, calibration points and/or offset origin.
- Switch easily to center of mass and other reference frames.
- Data include units (SI metric units by default, settable length and mass units).
- Protractors and tape measures provide easy distance and angle measurements.
- Circle fitter tool fits circles to 3 or more points, steps or tracks.
- Define custom variables for plotting and analysis.
- Add editable text columns for comments or manually entered data.
- Data analysis tool includes powerful automatic and manual curve fitting.
- Export formatted or raw data to a delimited text file or the clipboard.

Os datos obtidos a partir do vídeo por Tracker permiten o programa xerar un modelo do movemento.

Pero tamén poden exportarse eses datos a GeoGebra e obter nese programa un modelo matemático.

Videotutoriais de inicio ó uso de Tracker en combinación con GeoGebra

(xeración con GeoGebra dun modelo matemático e “real” a partir dos datos suministrados por Tracker)

Iniciación ó uso de Tracker:

<https://www.youtube.com/OqODkcww8>

Determina-la función de axuste en GeoGebra a partires de datos suministrados por Tracker:

<https://youtu.be/2bla7F79IkQ>

Videotutoriais de Débora Pereiro Carbajo

Movemento dun coche de xoguete. Movimiento rectilíneo uniforme (MRU). Axuste automático da función:

https://youtu.be/_70ukhp_Qq8

Tiro parabólico dunha pelota. Movimiento rectíneo uniformemente acelerado (MRUA). Axuste da función con deslizadores: <https://youtu.be/JzCg-vV8gVo>

