

# Why Version Control?

Version control (also called *source control* or *revision control*) is a software program that helps you keeping track of changes made to files:

- A version control system remembers the *history* of your files. If you stuff something up, you can get an earlier version back again.
- A version control system helps you *share* changes. It makes things easier to manage if several of you are working together, or if you are working in more than one location.

## A common scenario

Imagine that you're working on code or a paper with a colleague...

- How do you find out when they change something?
- How do you merge your changes without getting in a mess?
- How can you find out which of you introduced a bug, and when?

## What can Version Control do for you?

A version control system...

- Records your files' history for you
- Shows differences between different versions
- Handles synchronization between copies on different computers
- Allows you to go back to the exact code that allowed to produce that 'great looking plot' I had a couple of hours ago...

## But... isn't this too much trouble for my experimental program?

**No.** Setting up and using version control has possibly the best payoff, in terms of improving your research effectiveness and general happiness *straight away*, of any change you could make in your working practices.

Version control reassures you and the people you collaborate with, gives you the confidence to carry out more ambitious experimental work, and makes your everyday working processes simpler and more satisfying.

## Kinds of Version Control Systems

Centralised (ex.: Subversion, CVS)

- one server, one repository database
- every commit goes straight to the shared repository

Distributed (ex.: Mercurial, git)

- every working copy has complete repository in it
- commits are local, then push/pull between computers

## Getting started with Version Control

Find a hosting service:

- your IT department
- SoundSoftware.ac.uk (UK researcher)
- GitHub/Bitbucket

Create your project

- commit/push your code
- ... that's it!

Read the full article: <http://soundsoftware.ac.uk/why-version-control>