INSTALLATION

Installation of *XPPAUT* is done either by downloading the source code and compiling it or downloading one of the binary versions. I will give sample installations for Linux, Windows, and MacOS X. If you are totally clueless at compiling source code, it is best to either have your system administrator install it for you or download a precompiled binary for your computer. There are compiled versions available for Linux, SUN, HP, Windows, and Mac OSX.

1 Installation on UNIX.

1.1 Installation from the source code.

Create a directory called `xppaut` and change to this directory by typing:

```
mkdir xppaut
cd xppaut
```

Step 1. Download the compressed tarred source code `xppaut_latest.tar.gz` into this directory from:

- http://www.math.pitt.edu/*sim*bard/xpp/xpp.html

Step 2. Uncompress and untar the archive:

```
tar zxvf xppaut_latest.tar.gz
```

This will create a series of files and subdirectories.

Step 3. Type

```
make
```

and lots of things will scroll by including occasional warnings (that you can safely ignore). If you get no errors, then you probably have succeeded in the compilation. If the compilation stops very quickly, then you probably you will have to edit the Makefile according to the architecture of your computer. Look at the README file and the Makefile which has suggestions for many platforms.

Step 4. If you successfully have compiled the program, then you should have a file `xppaut` in your directory. To see, type

```
ls xppaut
```

If you see something like `xppaut*` listed then you have succeeded. If you don't see this, then the compilation was unsuccessful. Consult the README file for a variety of possible fixes. Also, there are many comments in the Makefiles that are included with the package. I have not yet found a computer on which I cannot compile the program. Common problems are the wrong path to the X Windows libraries, nonexistence of `ranlib` among others.

Step 5. Get rid of all the debug info

```
strip xppaut
```

Step 5. Once you have compiled it, just move the executable to someplace in your path. (The usual is `/usr/local/bin` but you must have root privileges to do this.) *XPPAUT* needs no environment information.

1.2 Installation from binaries.

I maintain recent binaries for Linux, Mac, and Windows. These are generally available at the above URL. The binary distribution comes with the documentation (although I have been lax in maintaining it!) and the example ODE files etc.

2 Linux

1. Download the linux/ubuntu version and stick it into this folder
2. Uncompress it and the `xppaut` folder will appear. You can then click directly on `xppaut` to start it up or make a shortcut.
3. The best thing is to move `xppaut` to a convenient location (such as `/usr/local/bin` so that you can access it from the command line. You will need Administrator privileges to do this

There are many flavors of Linux and they all seem to use different versions of libraries like `glibc` so there is a good chance the binary won't even run on your computer. The best thing to do with Linux is to compile it yourself.

3 Native MS Windows NT/95/98/2000

I include this because I recently found out, there are still people that use `winpp` a reduced version of `xppaut` that was made with the native Windows GUI. Just download the program `winpp.zip` into a folder, say **wpp** and then use Winzip or a similar program to unzip the file. Create a shortcut to `winpp`. This version does not have all the features of the full version. Furthermore, the interface is quite different. Most of the equation files will work for this version and some

of the standard features are extant. There is a binary X version for Windows which is identical to the full UNIX version which is the recommended version. (See the next section.)

4 X-windows version on Windows.

This is the recommended way to run the program in the Windows environment. It is only slightly more difficult to install. It does not use the Windows API, but works identically to the UNIX version.

Here are the steps to install *XPPAUT* in Windows:

1. If you don't already have an X-server, download and install

   `http://www.math.pitt.edu/~bard/bardware/binary/Xming-20050131-setup.exe`

   It is very easy to install and run! You will know if it is running when you see the little X icon on the task bar.

2. Download the latest xppwin installation

   `http://www.math.pitt.edu/~bard/bardware/binary/latest/xppwin.zip`

   xppwin.zip is a zipped file. Unzip it in the C:
   drive. Don't stick it in Programs or anywhere else unless you want to screw with the batch file. Unzipping it as recommended will produce a new directory called `C:`
   `xppall`. Open this folder and make a shortcut to the Desktop of the file xpp.bat It is now installed

Here is how to run/test it

1. Start your X-server if it is not started
2. To use an example file:
   (a) Open the xppall folder on your C-drive
   (b) Open the ode folder. There will be many examples
   (c) With your mouse pick up, say, `lecar.ode` and drop it into the `xpp.bat` file on your Desktop. XPP should fire up with this ODE
3. To write your own:
   (a) Open Notepad or some other plain text editor. Set it to *p*lain text. **Do not use RTF!**
   (b) Type in an ODE.
   (c) Save it as test.ode in the xppall/ode folder or anywhere else
   (d) Drag and drop it into xpp.bat

4. To run from the command line (my favorite way)

   (a) Under the *Search Programs and Files* section on the lower left, type in `command` and click on `command prompt`

   (b) Within the terminal window type

   ```
   cd C:\xppall\ode
   ```

   The type

   ```
   ..\xpp lecar.ode
   ```

   and this will start it up. You can put your own files wherever you want.

5 Installation on MacOSX

1. Download the Mac `DMG` file.
2. Click on it to produce a folder called `xppmac`.
3. Open this folder and drag `xppaut` to your Applications folder
4. Drag `xpp` to your toolbar or Desktop.
5. Test it by dragging an `ode` file from the `ode` folder onto the xpp icon. XPP should start up. If it doesn't you may not have an X11 server running or may not have one installed. Check the Applications→Utilities folder. You can download the server directly form Apple or from

   ```
   http://xquartz.macosforge.org/trac/wiki
   ```

6. Older versions of the Mac OS may not be compatible with the version that is the default. Tp rectify this, in the `xppmac` folder, there are zip files `xpp6.10-os10.4.zip`, `xpp6.10-os10.5.zip` which were compiled on 10.4, 10.5. Unzip whichever and place the `xppaut` file in thr Applications directory as above. It should work. (Apparently, 10.x is compatible with 10.y if $x \leq y$ so 10.4 will work on all subsequent OS versions.)
7. Once you have loaded an ODE file, a window will appear that gives you information and points out mistakes. This window will remain after you quit XPP, but you can continue to drag and drop ODE files into it.
8. To run XPP from a command line, get a Terminal running via Applications→Utilities→Terminal
9. Then type `/Applications/xppaut` to start it up.