Tiley Lab Manual

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Preface

This is a Quarto book.

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1 Introduction

This is a book created from markdown and executable code.

See Knuth (1984) for additional discussion of literate programming.

2 HPC

2.1 Logging in and directory structures

FIRST, use a terminal window to log into the HPC with the OIT instructions. Now, set that window aside for later.

I typically find it helpful to create an ssh key for saving time. First, I navigate to my *.ssh* directory on the local machine and provide a unique name to the output to help manage the multiple keys for different organizations. When prompted for a passphrase, do not provide one as this will cause some issues with the MFA system of the HPC. After creating the key pair, you can edit the config file to provide a shortcut name.

```
cd ~/.ssh
ssh-keygen -t rsa -f ncsursa
vim config
```

In the config file, add the following lines, replacing UNITY_ID with your real one.

```
Host ncsu
     User UNITY_ID
     HostName login.hpc.ncsu.edu
```

You will now have two files appear in the directory, *ncsursa* and *ncsursa.pub*. You will need to add the contents of your **public (*.pub)** file to your list of authorized keys on the HPC (remote). Simply open the *~/.ssh/authorized_keys* file on the HPC and copy-paste the public key line there. Save all files and close both terminal windows. You should now be able to prompt a login with `ssh ncsu`.

2.2 For lab server

```
ssh-keygen -t ed25519
```

This time, you will need to create a passphrase ...

3 Summary

In summary, this book has no content whatsoever.

References

Knuth, Donald E. 1984. "Literate Programming." *Comput. J.* 27 (2): 97–111. https://doi.org/10.1093/comjnl/27.2.97.