

# ***The Mathematics Computing Facility***

Department of Mathematics  
Washington State University  
Pullman, WA 99164-3113

# *The Site*

- Over 200 devices
  - ~30 servers
  - ~80 faculty and grad workstations
  - Four labs, with ~100 workstations
  - Another dozen utility machines and printers
  - Laptops for classroom use
  - Dynamic addresses
  - Many virtual machines

# ***The Network***

- 10 Gbit backbone
- 100 Mbit to Math servers
- K20 connection to Internet
- 10 Mbit switched from closets to offices
  - ... it is an old building
- Firewall between department and world

# *Operating Systems*

- We prefer Linux
  - Free
  - Multitasking
  - Remote use/administration
  - Many many apps
  - Mathematics standard
- Windows available in labs
  - Single user
  - Virtual

# *Accounts*

- You have an NID
- ... and a Math account
- Single sign-on
  - Account creation on W2k server
  - Authentication via Kerberos on all systems
  - Info via LDAP for Windows
  - Info via NIS for Unix
  - Guest accounts on virtual machines

# *Passwords*

- Your password is all that stands between you and giving away tests, results, email...
- Choose a password **at least** seven characters long.
- Should contain numbers, letters, and/or special characters
- Never tell anyone your password!!
- Never tell anyone your password!!

# ***Change your password***

- Unix (e.g. thetahat)
  - kinit
  - kpasswd
- Just ask Terry or Kevin for help

# *Email*

- Use WSU email
- We have no control nor influence...
- Web mail at `office365.wsu.edu`→Outlook

# *Browsers*

- Firefox
  - Supports MathML and SVG
  - Supports W3C standards
  - Platform-independent
  - Patched ~~regularly~~ every freakin' week

# *Department Forums*

- <http://math.wsu.edu/Forums>
- Use to request help/advice
- Use to coordinate courses
- Use to discuss other mathematical/departments issues

# *Remote Access*

- You can use ssh from outside the department
  - thctahat.math.wsu.edu
  - pingora.math.wsu.edu
  - These are the only machines facing outward.
- Most machines open to WSU VPN -
  - <https://its.wsu.edu/ssl-vpn/>
- We do not run telnet or FTP
- To transfer files, use SFTP
- **Filezilla** works well

# *Web Sites*

- You have a Math Dept. web site
- Request info from systems personnel
- Your URL is:  
`http://math.wsu.edu/students/youraccount`
- Get to it from thetatahat as  
`/pub/math/students/youraccount`
- Get to it from laptops using SFTP client

# *Printing*

- Printers on each floor
- Printers:
  - hpr1 – 1<sup>st</sup> floor
  - hpr2 – 2<sup>nd</sup> floor
  - hpr3 – 3<sup>rd</sup> floor
  - xcolorpr – 2<sup>nd</sup> floor color

- TeX is the standard mathematical typesetting language
- Supported on all Unix machines
- Texstudio

# *Other Apps*

- Libre Office
  - Word processor, with math
  - Spreadsheet
  - Presentation
  - Drawing

# *Other Apps*

- Xfig – vector drawing – Linux
- Dia – vector diagram editor – Linux
- Gimp – like photoshop, but free – Linux

# ***Math Software***

- Maple – symbolic manipulation and graphics (all Linux)
- Matlab – matrices and graphics (all Linux)
- Octave – matrices and graphics (all Linux)
- Python – with Numpy, Matplotlib, Sympy
- R – statistics

# *Web Software*

- Available for all students in Math classes
- <http://my.math.wsu.edu>
- Use WSU NetID to log in.
- Some classes track student MLC use there.
- Maple, Matlab, and Octave available.
- Also notes and grades for courses
- [Contact Cooper to be identified as instructor](#)

# *Programming*

- C
- C++
- Fortran95
- Perl
- Python
- MPI
- CUDA

# ***Scanning***

- Best scanner is copy machine – can email pdf files to you.

# *Installing Software*

- **DO NOT INSTALL SOFTWARE ON MATH MACHINES!**
  - Could install trojans, viruses
  - Multiple copies...
  - Cost for backup
- If you need software, tell systems personnel
- Installing software without permission could result in loss of account privileges

# ***Your Laptop Computer***

- You are permitted to bring a laptop.
- Wireless is universal – outside our firewall
- Also DHCP for wired connections inside firewall – register
- Can only print using wired connection
- We can help you get connected, but we do not work on personal machines in general.

# ***Labs***

- 120 – Statistics and Math 300
- 3 – Statistics & open hours
- 101W – Calculus
- Thompson 1 – Developmental math
- Deprecated...

# *Help*

- [http://www.math.wsu.edu/helpdesk/on\\_line\\_help](http://www.math.wsu.edu/helpdesk/on_line_help)
- <http://www.math.wsu.edu/Forums>
- Email to [systems@math.wsu.edu](mailto:systems@math.wsu.edu)
- Call K. Cooper at 5-4771 or T. Wagoner at 5-3131