

Overview of On-Line Course

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First of All ...

- **Please make sure that:**
 - the OS of your PC is the most updated version
 - proper anti-virus software with the most updated version is installed to your PC
 - the most recent version of Zoom is installed
- **You need to know Unix/Linux and Editors (e.g. vi, emacs), if you want to use “Supercomputers”**
 - **List of Unix/Linux Commands (Wikipedia)**
 - https://en.wikipedia.org/wiki/List_of_Unix_commands
 - **Online Manual for Emacs (Screen Editor for Linux/Unix)**
 - <https://www.gnu.org/software/emacs/manual/>
- **My e-mail: nakajima@cc.u-tokyo.ac.jp**

Information

- Access UTAS (UTokyo Academic Affairs System) and ITC-LMS (ITC Learning Management System)
 - <https://utas.adm.u-tokyo.ac.jp/> <https://itc-lms.ecc.u-tokyo.ac.jp/>
- Class Materials
 - <http://nkl.cc.u-tokyo.ac.jp/22s/>
- Most of the important information (including Zoom URL for Classes) will be given through ITC-LMS/22s
 - Please check both sites AT LEAST ONCE a WEEK
 - You can receive e-mail from ITC-LMS, if you have new “notification”
- **Please register your info. at URL in UTAS/ITC-LMS.**
 - **You receive detailed info. of lectures.**
 - **You need to register the info. just once (We use same URL)**
 - **Because I e-mail you the UID/PWD of the Supercomputer based on the registered info., EACH of you must register !**
 - **Your e-mail address is not used for other purposes**

Zoom “Manners”

- **Please install the most recent version of Zoom**
 - Please login via official account
- **Basically, please keep muted, and keep camera off.**
- **Please do not video the lectures**
 - I will record the class, and tell you the address of the recorded file (on cloud) via ITC-LMS
- **Please do not forward URL's of the classes to anybody, even if he/she is a U.Tokyo student**
- I often use “Raising Hand” (e.g. How many of you learned OpenMP before ?). Please respond.
- Q/A will be through combination of “Chat”/”Microphone”
 - I will make a break every 10-minutes
 - If you keep “space” pushing, “mute” is released temporarily.
 - You can also send me e-mail's after the class

Questions

- Q1: OS of Your PC
 - Windows: Many Win Users
 - MAC
 - Linux
- Q2: Your “Mother Tongue”
 - Fortran
 - C/C++
 - Java
 - Python
 - **Anyway, you must be familiar with Fortran or C/C++**
 - Materials for both of C and Fortran are provided, although I will show you those in C on the screen
- Q3: Do you like to use “Slack” ?
 - I will send invitation to each of you, while you can decline to join

Software to be installed

	C	Fortran
Windows	Cygwin/WSL Paraview FVM-in-C, FVMpcg	Cygwin/WSL Paraview FVM-in-F, FVMpcg
Mac	Paraview	Paraview
Linux	FVM-in-C, FVMpcg	FVM-in-F, FVMpcg

- Cygwin <https://www.cygwin.com/>
- Paraview <http://www.paraview.org>
- Target Application by Finite Volume Method (FVM)
 - FVMpcg (Fortran & C) <http://nkl.cc.u-tokyo.ac.jp/files/fvm.tar>
 - FVM-in-F (Fortran) <http://nkl.cc.u-tokyo.ac.jp/files/multicore-f.tar>
 - FVM-in-C (C) <http://nkl.cc.u-tokyo.ac.jp/files/multicore-c.tar>
 - **Default compilers in Makefile's are "cc (FVM-in-C, C)" and "gfortran (FVM-in-F, Fortran)". Please modify Makefile's according to compilers on your PC**

Environments for Windows Users

- **WSL (Windows Subsystem for Linux)**
 - Easy (much better than before !), recommended
 - Windows 10 or later
 - “Administrator Privileges” needed
- **Cygwin**
 - My favorite for a long time
 - A little bit complicated procedures for installation, which takes a long time
 - More memory and storage needed
 - NO “Administrator Privileges” needed
 - <https://www.cygwin.com/>

WSL (1/2)

Windows-Subsystem-for-Linux

- Windows 10 Ver.2004 (build 19041) or later, Windows 11
 - Win+r > type [winver] > click [OK]
- Launch “Win. PowerShell” or “Win. Command Prompt” with administrator privileges, and type as follows:
 - Essential software/tools (e.g. ssh-keygen, cc, gcc nano etc.) are installed by this command

```
$ wsl --install
```

WSL (2/2)

Windows-Subsystem-for-Linux

- Once in the WSL environment, please install necessary tools (e.g. gfortran, make) by yourself. WSL also provides instructions for installation. “make” must be installed manually.

```
$> sudo apt install gfortran  
$> sudo apt install make
```

- emacs

```
$> sudo add-apt-repository ppa:kellejk/emacs  
$> sudo apt update  
$> sudo apt install emacs26
```

- Please update/upgrade frequently

```
$> sudo apt update  
$> sudo apt upgrade
```

Please install ALL environments before April 20 (W)

- Please make sure that the following items are installed
 - Editor: vi, vim, emacs, nano
 - Compiler: c, gcc, gfortran
 - Makefile: make
 - OpenSSH: ssh, ssh-keygen