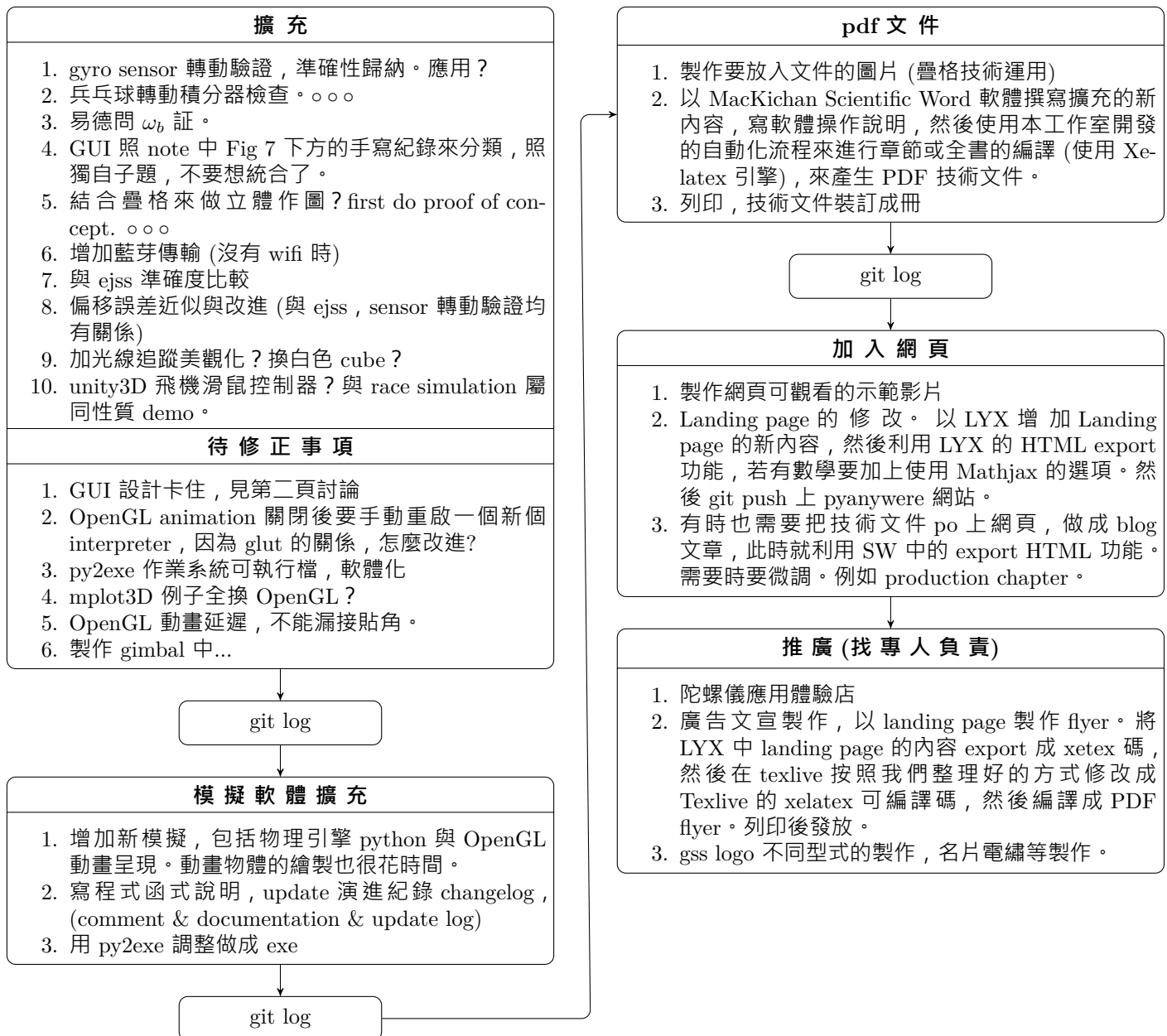
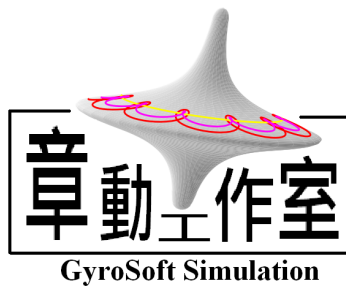




## 作業流程





## GS 軟體資料夾一覽

- 📁 Demo\_Examples
  - ReadMe.txt
  - User\_interface.py
- 📁 GUIs
  - GUI\_test.py
  - GUI\_TryMe\_v3.py
  - GUI\_TryMe\_v4.py
  - GUI\_TryMe\_v5.py
- 📁 mechanical\_gyro\_design
  - centripetal\_mass\_spring.py
- 📁 MEMS\_gyro\_sensor
  - Gyro\_Ring\_Test.py
  - MEMSinVR\_demo.py
  - MEMS\_rotation\_control\_in\_python.py
  - NoisyTest.py
  - StillTest.py
- 📁 RigidBody\_rotation\_integrator
  - gyro\_ring\_test\_1.py
  - pingpong.py
  - pingpong\_2.py
  - self\_energized.py
  - self\_energized\_check\_Lcentering.py
- 📁 spinning\_top\_gyroscope
  - F\_contact\_force.py
  - Gyroscope-TeachDemo-custumed\_parameters.py
  - Gyroscope\_SpaceBodyCone.py
  - Hercules\_explain.py
  - L\_not\_circle.py
  - Spinning\_cube\_swinging\_under\_g\_with\_gyroscopic\_effect.py
- 📁 comparing\_integration\_methods
  - AngularVelocityTrail\_in\_body\_frame\_compare\_ABmethods.py
- 📁 four\_classical\_motions\_demo
  - 📁 OpenGL\_animation
    - circle\_GL.py
    - circle\_GL\_with\_B\_method.py
    - curly\_ring\_GL.py
    - cusp\_GL.py
    - wave\_like\_GL.py
  - 📁 python\_animation
    - circle.py
    - curly\_ring.py
    - cusp.py
    - wave\_like.py

## last 10 git commits

2017-11-29 Debuging omgega times dt, previous\_angle issue. Still no clue.

2017-10-28 Rename two mems gyro noise tests.

2017-10-23 finally created .gitignore succesfully on windows XP using "touch .gitignore" command in git bash. Took me an hour to figure it out. Nothing mentioned in git manual. At first I tried saving from notepad but even if it can be saved, it wasn't applied to the repo. Tracking .gitignore file.

2017-10-19 circle and wave\_like py animation done. All four OpenGL classic motions done. Also added circle\_GL\_with\_B\_method.py but need to add to GL module B and C drawing capacity.

2017-10-19 Angular L animation seems broken. Need to fix.

2017-10-18 1. Proof of concept of rotation control of gyro sensor + a DIY race seat.  
 A. need to document the ASUS xyz direction and 3D world xyz direction.  
 B. match the driving direction of wheel to that of 3D world y direction.

2. Adding DrawOption['draw\_pingpong\_ball']  
 A. when this option is set true, a wire frame ball instead of cube will be drawn. Also the openGL window will enlarge a bit to better observe the change in angular momentum.  
 A. pingpong2.py corrected.  
 B. still need to fix pingpong.py

3. Changed a few files to use the new Toolbox path logic.

4. cusp and curly\_ring py animation finished up.  
 A. Still need to better document the parameter settings for four classic motions.

2017-10-15 rename Jzwiener\_abstration to MEMS\_rotation\_control\_in\_python move other files around.

2017-10-15 still organizing

2017-10-15 organizing files in OpenGL\_demos elsewhere.

2017-10-15 rename 3D\_scenery.py

2017-10-15 organizing four classics python animation.

2017-10-15 rename to cusp\_GL.py.

2017-10-15 organizing cubegyro\_opengl\_animation\_1.py location.

## 思考

1. GUI 使用者自訂參數程式有進展但未完成，GUI module 加說明
  - (a) 想把 GUI 弄成方便驗證 self-energized finger spinner，但這樣的話需要能夠以 GUI 方式給力矩，不太可能歐... 這裡連問題都不知道是甚麼，不需要做 GUI，等到知道問題後再為了方便性做 GUI 才較好。
  - (b) GUI 的目的是將目前所有功能統整呈現，方便操作方便探索，所以應是針對現有已完成的例子。
  - (c) 所以應該是先將 gyro demo 做成可輕易更改參數，然後可方便觀看 AB 法的差異。
  - (d) 然後 C 法應該是姿態估測的，或許應該跟 gyro demo 做切割？所以 ABC 三法應該要切割一下？
  - (e) 2017 十月中，有了一點進展，將 demo folder 檔案做分類，此分類就是設計軟體使用的基礎，接下來可試將 user interface 照相同分類切割類似區域，每個區域也可獨立在該分類資料夾中運行。
2. 階段任務算告一段落。事實上 py 檔都可獨立跑，GUI 實在有點太難，不做了，放下。
3. 將目前東西完整記錄，整理，建檔就已經很花時間，做不完了。