

# Salle Benoît MANDELBROT Martial Mancip



## Mur d'image Benoît Mandelbrot à la **Maison de la Simulation**



USR CEA CNRS (INRIA)  
UPSaclay depuis 2011

Inauguration salle  
Mandelbrot 2014

Equipex DIGISCOPE

[www.digiscope.fr](http://www.digiscope.fr)

<http://www.maisondelasimulation.fr/support/support-en-visualisation>

# Salle Benoît MANDELBROT



**Travail collaboratif** dans la salle Benoît Mandelbrot.

Photos 1

# TiledViz – Tiled Visualization



**TiledViz** is Tiled Visualization with genericity and remote access (work in progress)

<http://www.maisondelasimulation.fr/actualite/presentation-braintwister-tileviz>

<https://github.com/mmancip/TiledViz>





## Objectifs

### BrainVisa :

- Établir un **dictionnaire** de tous les **motifs observés** fréquemment dans la population.
- Définition opérationnelle de l'**anormalité des motifs** : diagnostic précoce.



Context :

**UNATI laboratory from Neurospin :**

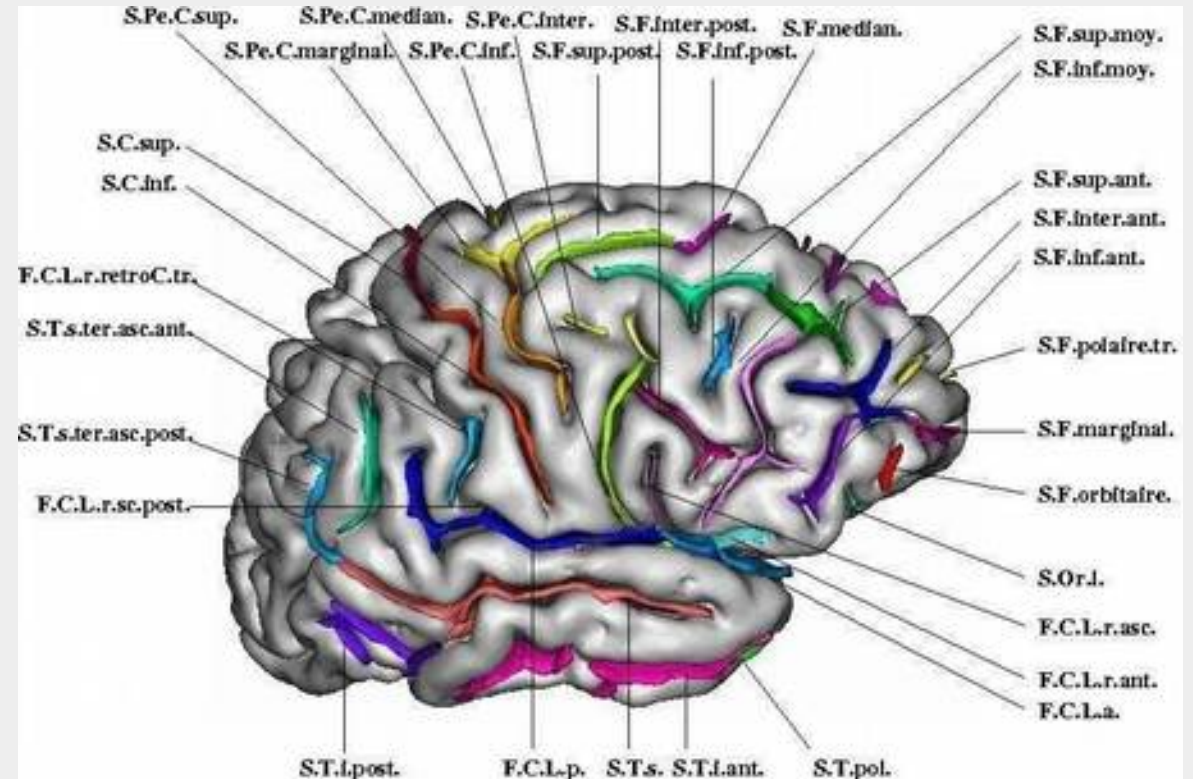
**BrainVisa and its Morphologist toolbox :**

Brain segmentation  
and sulcal analysis for disease diagnosis  
(with machine learning)

**Anatomist :** Data picture from RMI,  
brain meshes, and cortical sulcal

Thousand of brains to be analysed

Improve Anatomist's algorithms





## Other projects with TileViz :

Astro-chemistry simulations and  
Visualisations with VMD



## Climate change simulations

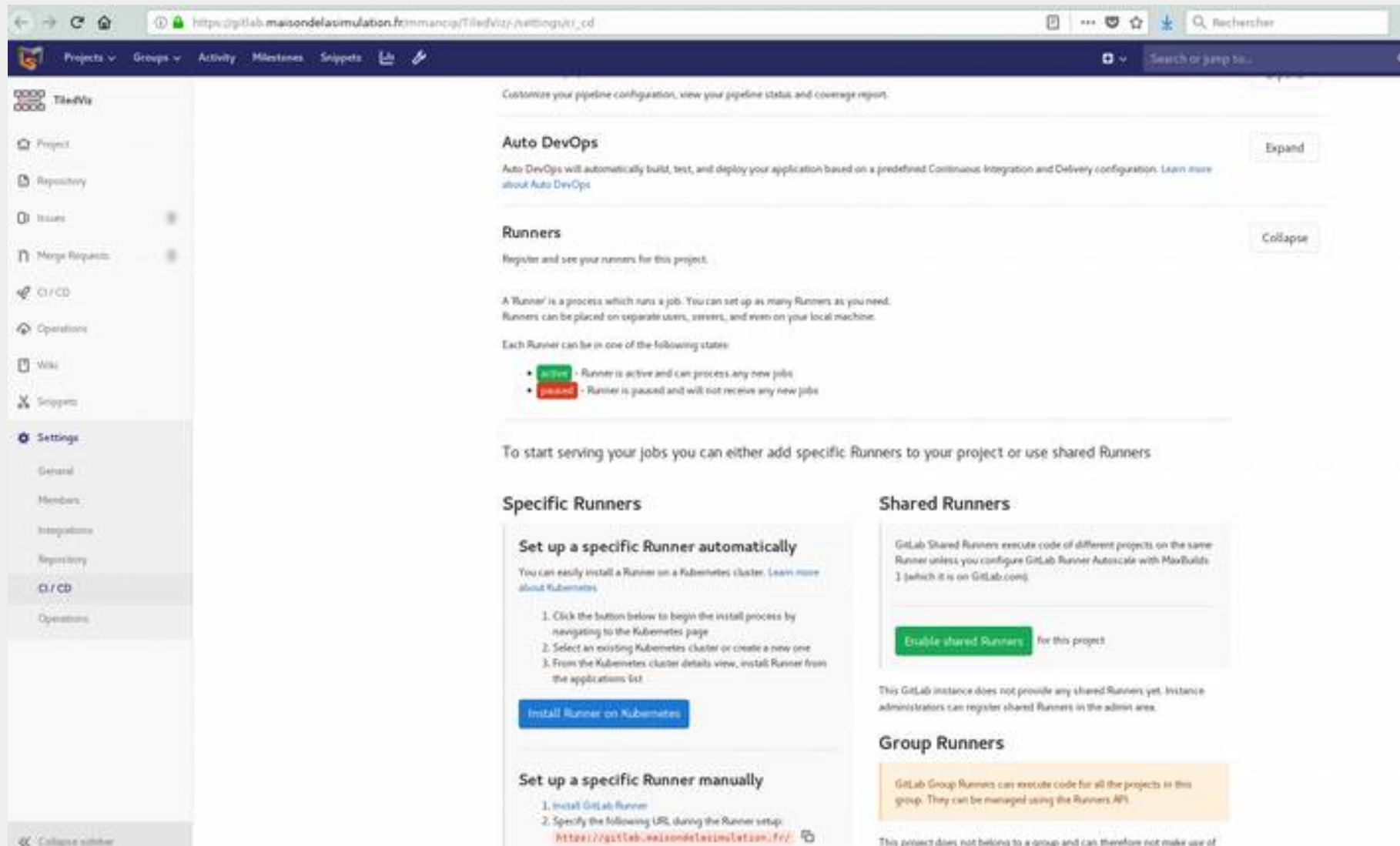


## VMD : Visualisation tuilée générique

Riccardo Spezzia (Sorbonne Université) et Yannick Jeanvoine (Evry / Paris-Saclay) visualisent leurs simulations en astro-chimie : origines spatiales des molécules du vivant.



[https://mygitlab.fr/login/project/-/settings/ci\\_cd](https://mygitlab.fr/login/project/-/settings/ci_cd)



The screenshot shows the GitLab CI/CD settings page for a project. The left sidebar contains navigation options: Project, Repository, Issues, Merge Requests, CI/CD, Operations, Wiki, Snippets, Settings (General, Members, Integrations, Repository, CI/CD, Operations), and Collapse sidebar. The main content area is titled "Customize your pipeline configuration, view your pipeline status and coverage report." It features sections for "Auto DevOps" (with an Expand button), "Runners" (with a Collapse button), and instructions on how to start serving jobs. The "Runners" section lists two states: "active" (green) and "paused" (red). Below, there are two columns: "Specific Runners" with instructions on how to set up a runner automatically on Kubernetes (including a blue "Install Runner on Kubernetes" button) and manually, and "Shared Runners" with a green "Enable shared Runners" button for this project. A note states that this GitLab instance does not provide any shared runners yet. The "Group Runners" section is partially visible at the bottom.



```
gitlab-runner register
gitlab-runner run
gitlab-runner list
```

```
sudo cat /etc/gitlab-runner/config.toml
```

```
concurrent = 1
check_interval = 0
```

```
[[runners]]
  name = "TiledViz-docker"
  url = "https://gitlab.maisondelasimulation.fr/"
  token = "-----"
  executor = "docker"
  [runners.docker]
    tls_verify = false
    image = "docker:stable"
    privileged = true
    disable_cache = false
    volumes = ["/cache"]
    shm_size = 0
  [runners.cache]
```

Micro-services et image de test

services:

- postgres:9.6-alpine
- docker:1.13-dind

connect:

image: mmancip/ubuntu:18.04-dind-18.09.6-ce

## Installation des dockers dans la VM du CI :

```
> sudo docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
postgres	9.6-alpine	081f71293264	2 weeks ago	37.9 MB
docker	dind	5768e15eefd1	2 months ago	230 MB
mmancip/ubuntu	18.04-dind-18.09.6-ce	abc50fca1978	5 months ago	476 MB
ubuntu	18.04	7698f282e524	5 months ago	69.9 MB
gitlab/gitlab-runner-helper	x86_64-081978aa	bc5d3bfff2091	15 months ago	43.1 MB
joyzoursky/python-chromedriver	3.7-alpine3.8-selenium	547de0f70b34	15 months ago	369 MB
teracy/ubuntu	16.04-dind-17.06.0-ce	085cb17e1819	2 years ago	491 MB
docker	1.13-dind	0534a070b830	2 years ago	99.1 MB



## Détail du .gitlab-ci

### variables:

```
POSTGRES_HOST: postgres
POSTGRES_DB: TiledViz
POSTGRES_USER: tiledviz
POSTGRES_PASSWORD: "m_test/  3"
DOCKER_HOST: tcp://docker:2375
DOCKER_DRIVER: overlay2
SECRET_KEY: "Gmifwo4rxPk33Cs4P4N9ViULrhDlC40i"
```

### connect:

```
image: mmancip/ubuntu:18.04-dind-18.09.6-ce
```

#### script:

```
- apt-get update
- apt-get install -y python3-pip postgresql-client libpq-dev
- apt-get clean

- pip3 install virtualenv
- mkdir testTVWeb
- virtualenv testTVWeb
- source testTVWeb/bin/activate
- pip3 install -r requirements.txt
- sqlacodegen postgres://${POSTGRES_USER}:${POSTGRES_PASSWORD}
  @${POSTGRES_HOST}/${POSTGRES_DB} --outfile=TVDatabase/TVDb/models.py
- docker build -t flaskimage -f TVWeb/FlaskDocker/Dockerfile.web .
```

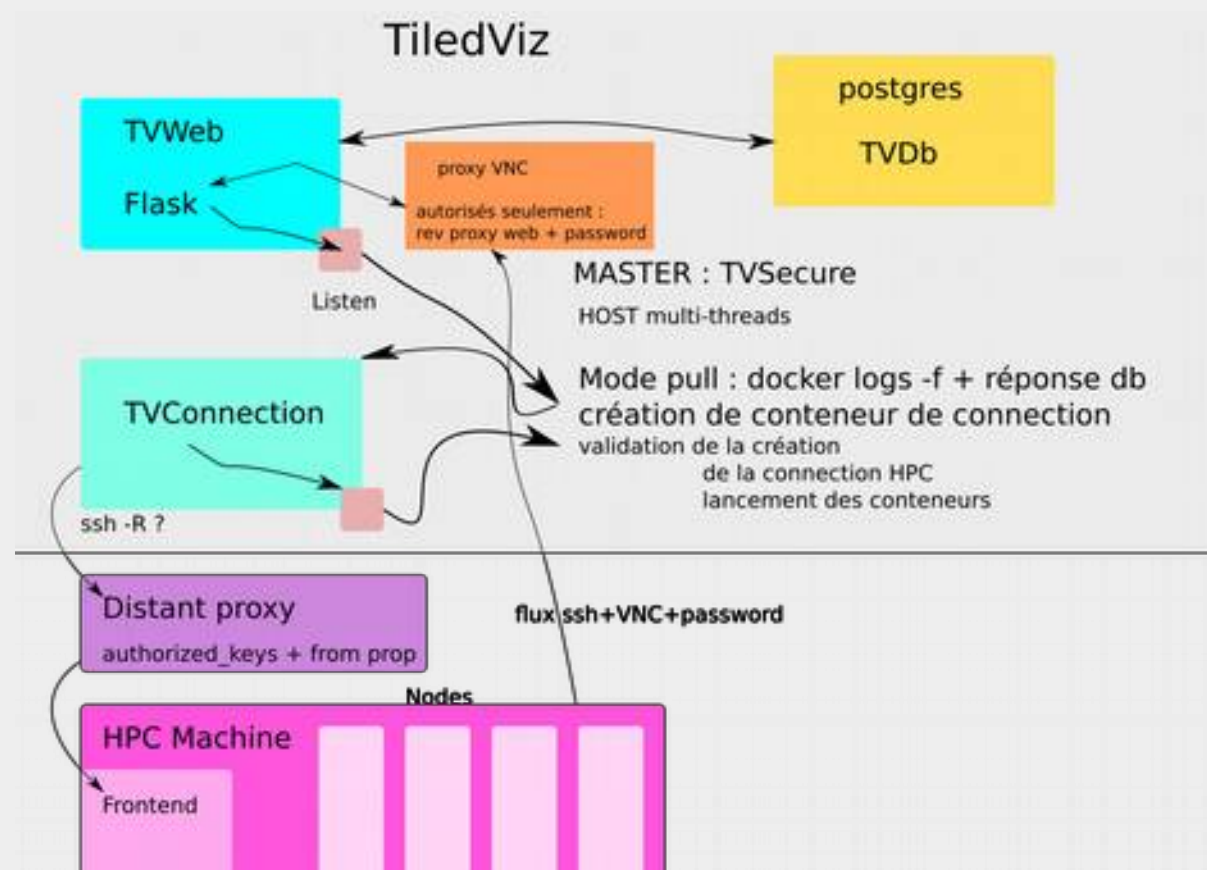
## Détail du .gitlab-ci

```
- TVSecure/tvsecure.sh ${DOCKER_HOST} ${POSTGRES_HOST} ${POSTGRES_DB} ${POSTGRES_USER}
  ${POSTGRES_PASSWORD} ${SECRET_KEY} /tmp/out_TVSecure testTVWeb_${DATE}
```

```
- $(pwd)/TVWeb/Selenium/selenium_tests.sh
```

```
#!/bin/sh
tmpDIR=/tmp/tests_Selenium
mkdir ${tmpDIR}

docker run -t --rm -v /dev/shm:/dev/shm
           -v ${tmpDIR}:/tmp/tests:rw
           -v $(pwd)/TVWeb/Selenium:/usr/local/Selenium
           --add-host="flaskdock:$IPFlask"
           --name selenium
           joyzoursky/python-chromedriver:3.7-alpine3.8
           python3 ../Selenium/test_script.py
```



## Démo de Selenium IDE

Quelques lignes du XML :

```
{  
  "id": "73460185-2cf3-4735-85b2-f5cfdbbd903e",  
  "comment": "",  
  "command": "click",  
  "target": "id=option4",  
  "targets": [  
    ["id=option4", "id"],  
    ["css=#menu999 > #option4", "css:finder"],  
    ["css=#option4", "css"],  
    ["xpath=//div[@id='option4']", "xpath:attributes"],  
    ["xpath=//div[@id='menu999']/div[5]", "xpath:idRelative"],  
    ["xpath=//div[3]/div[5]", "xpath:position"]  
  ],  
  "value": ""  
},
```



Conversion de la sortie IDE en python.

```
from selenium import webdriver
from selenium.common.exceptions import NoSuchElementException
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.support.ui import Select
from selenium.webdriver.common.action_chains import ActionChains
from selenium.webdriver.support.events import EventFiringWebDriver, AbstractEventListener
from selenium.webdriver.firefox.firefox_binary import FirefoxBinary

class MyListener(AbstractEventListener):

class TestTemplate(unittest.TestCase):
    def setUp(self):
        chrome_options = webdriver.ChromeOptions()
        chrome_options.add_argument('--no-sandbox')
        self.driver = webdriver.Chrome(options=chrome_options)
        firefox_profile = webdriver.FirefoxProfile()
        self.driver = webdriver.Firefox(firefox_profile=firefox_profile)
```

Conversion de la sortie IDE en python.

```
def test_case_3(self):
    """Find and click login more button"""
    thedriver=self.driver
    finddriver=self.finddriver
    try:
        thedriver.get(self.URL)
        el = finddriver.find_element_by_partial_link_text('login')
        el.click()

        assert "Login TiledViz" in thedriver.title

        el = finddriver.find_element_by_id("username")
        #xpath("//form[@id='loginForm']/input[1]")
        el.clear()
        el.send_keys("ddurandi")
        el.send_keys(Keys.RETURN)
        #el.send_keys(" and some", Keys.ARROW_DOWN)

        inputElement = finddriver.find_element_by_id("password")
        inputElement.clear()
        inputElement.send_keys("0therP@ssw/31d")

        thedriver.save_screenshot('/tmp/tests/test-password1_screenshot.png')
```

Conversion de la sortie IDE en python.

```
thedriver.execute_script("document.body.style.transformOriginX=0;  
document.body.style.transform = 'scale(.25)';")
```

```
hitbox0=finddriver.find_element_by_id('hitbox0')  
move = ActionChains(thedriver)  
move.move_to_element(hitbox0)  
move.click(hitbox0)  
move.click_and_hold(canvas[0])  
move.move_by_offset(70, -55)  
move.perform()
```

```
time.sleep(2)
```

Possibilité de l'utiliser directement en ligne de commande avec Chromedriver ou Geckodriver.

Attention aux temps de chargement des pages...

Action chains impossible avec l'API python de Selenium 3 : upgrade dans quelques temps...

Vers la version Selenium 4 !



<https://selenium-python.readthedocs.io/index.html>

<https://hub.docker.com/r/joyzoursky/python-chromedriver/tags/>  
<https://github.com/joyzoursky/docker-python-chromedriver>

[http://www.zvon.org/comp/r/tut-XPath\\_1.html#intro](http://www.zvon.org/comp/r/tut-XPath_1.html#intro)